



**A GIS-BASED DECISION SUPPORT SYSTEM FOR TOURISM PLANNING
AND DEVELOPMENT**

PINAR YILDIRIM

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**A GIS-BASED DECISION SUPPORT SYSTEM FOR TOURISM PLANNING
AND DEVELOPMENT**

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Submitted by **Pınar YILDIRIM**

Approval of the Graduate School of Natural and Applied Sciences, Çankaya University



Prof. Dr. Can ÇOĞUN
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master Science.



Prof. Dr. Erdoğan DOĞDU
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science.

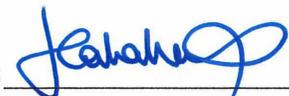


Assoc. Prof. Dr. Hadi Hakan MARAŞ
Supervisor

Examination Date : 05.02.2018

Examining Committee Members :

Assoc. Prof. Dr. Hadi Hakan MARAŞ (Çankaya University)



Assist. Prof. Dr. Abdül Kadir GÖRÜR (Çankaya University)



Assist. Prof. Dr. Shadi AL SHEHABI (University of Turkish Aeronautical Association)



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Name, Last Name : Pınar YILDIRIM

Signature :



Date

: 05 / 02 / 2018

ABSTRACT

A GIS-BASED DECISION SUPPORT SYSTEM FOR TOURISM PLANNING AND DEVELOPMENT

YILDIRIM, Pınar

M.Sc., Department of Computer Engineering

Supervisor: Assoc. Prof. Dr. Hadi Hakan MARAŞ

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In the past twenty years, pioneering developments in information technology and communication systems worldwide have not only offered many opportunities in the fields of marketing, management and the promotion of tourism and recreational areas to businesses interested in tourism, but have also provided a sustainable advantage in competition with other businesses. Turkey has more potential for tourism and more resources than many countries, thanks both to its natural beauty and its historical and cultural wealth. The aim of this thesis is to build a web portal that is able to enhance its attractiveness through photographs or videos taken in all regions of Turkey, increase interest from domestic and foreign tourists through detailed articles about the country, and improve the accessibility of the country's resources through a system based on GIS. Developed within the scope of this thesis, the Turkey Tourist Portal can promote the country to tourists by presenting both its natural beauty and its historical and cultural wealth on a map, together with images and articles.

Keywords: Web-Based GIS, Tourism Decision Support System (TDSS), Multimedia, Information Technologies.

ÖZ

TURİZM PLANLAMA VE GELİŞTİRME İÇİN CBS TABANLI BİR KARAR DESTEK SİSTEMİ

YILDIRIM, Pınar

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Geçtiğimiz 20 yıl içinde, dünya genelinde bilgi teknolojisi ve iletişim sistemlerindeki çığır açan gelişmeler sadece turizmle ilgilenen işletmelere turistik ve rekreasyon alanlarının pazarlama, yönetim ve tanıtım alanlarında birçok fırsat sunmakla kalmamış aynı zamanda diğer şirketlerle sürdürülebilir rekabet avantajı da sağlamıştır. Hem doğal güzellikleri hem de tarihi ve kültürel zenginlikleri sayesinde, Türkiye birçok ülkeden daha fazla turizm potansiyeline ve kaynaklarına sahiptir. Bu tezin amacı Türkiye'nin dört bir yanından çekilen fotoğraflar ya da videolar ile ülkenin çekiciliğini, ülke hakkındaki ayrıntılı makaleler ile yerli ve yabancı turistlerin ilgilerini ve CBS tabanlı bir sistem ile ülke kaynaklarına erişebilirliğini arttıran bir web portalı geliştirmektir. Bu tez kapsamında geliştirilen Türkiye Turistik Portalı, bir harita üzerinde resimler ve yazılar ile hem doğal güzellikleri hem de tarihi ve kültürel zenginlikleri sunarak turistlere ülkeyi tanıtmaktadır.

Anahtar Kelimeler: CBS Tabanlı Web, Turizm Karar Destek Sistemi, Çoklu Ortam, Bilgi Teknolojileri.

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Danışmanımın yanı sıra, sadece yorumları ve beni cesaretlendirmeleri için değil aynı zamanda farklı bakış açıları ile tezimi genişletmem için beni teşvik eden güzel soruları için tez komitesine teşekkür ederim: Doç. Dr. Hadi Hakan MARAŞ, Yrd. Doç. Dr. Abdül Kadir GÖRÜR ve Yrd. Doç. Dr. Shadi Al SHEHABI.

Altı aylık .NET Yazılım Uzmanlığı Kursu'nda öğretmen olan Engin CEYLAN'a tez projemdeki sonsuz desteği için teşekkürlerimi sunarım. Her zaman sonsuz bilgisi ve sabrı ile bana yardımcı olmuştur.

Son olarak, hayatımda maddi ve manevi desteklerini esirgemeyen aileme özellikle anneme ve kız kardeşime minnettirim.

TABLE OF CONTENTS

STATEMENT OF NON PLAGIARISM.....	iii
ABSTRACT.....	iv
ÖZ.....	v
ACKNOWLEDGEMENTS.....	vi
TEŞEKKÜRLER.....	vii
LIST OF FIGURES.....	xi
LIST OF TABLES.....	xvi
LIST OF ABBREVIATIONS.....	xvii

CHAPTERS:

1. INTRODUCTION.....	1
1.1. Background.....	1
1.2. Organization of the Thesis.....	3
2. GEOGRAPHICAL INFORMATION SYSTEMS.....	4
2.1. Definition of GIS.....	4
2.2. Components of GIS.....	4
2.3. Benefits of GIS.....	5
2.4. Applications of GIS.....	6
3. DECISION SUPPORT SYSTEMS.....	9
3.1. Definition of DSS.....	9
3.2. Benefits of DSS.....	10
3.3. A GIS-Based DSS For Tourism.....	10
4. METHODOLOGY OF THE SYSTEM.....	13
4.1. Design of the Database.....	13
4.2. Design of the System.....	17
4.3. Auxiliary Tools Used in This System.....	18

4.3.1	Google Maps Application.....	19
4.3.2	Summernote Editor.....	20
4.3.3	DataTable.....	21
4.3.4	ImageResizer.....	21
4.3.5	FancyBox.....	22
4.3.6	SweetAlert2.....	23
4.3.7	Bootstrap Validator.....	23
4.3.8	Timeout Dialog.....	24
5.	USAGE OF THE SYSTEM.....	25
5.1.	Introduction to the System.....	25
5.2.	The Turkey Tourist Portal.....	25
5.3	Content Management System.....	28
5.3.1	Yayın İşlemleri Menu.....	30
5.3.1.1	Yerimi Ekle Submenu.....	30
5.3.1.2	Blog Ekle Submenu.....	31
5.3.2	Yönetim İşlemleri Menu.....	31
5.3.2.1	Menü Kategori Submenu.....	32
5.3.2.2	Roller Submenu.....	33
5.3.2.3	Kullanıcılar Submenu.....	34
5.3.2.4	Turizm Kategorileri Submenu.....	35
5.3.2.5	Yer Kategorileri Submeu.....	36
5.3.2.6	Duyurular Submenu.....	37
5.3.2.7	Anasayfa Kayan Yatay Resmi Submenu.....	39
5.3.2.8	Arka Plan Resmi Submenu.....	40
5.3.3	Onay İşlemleri Menu.....	41
5.3.3.1	Blog Onaylama Submenu.....	41
5.3.3.2	Yorum Onaylama Submenu.....	42
5.3.3.3	Yerimi Onaylama Submenu.....	43
5.3.4	Yardım Dokümanları Menu.....	44
5.3.5	Kullanıcı İşlemleri Menu.....	44
5.3.5.1	Bilgileri Gör Section.....	44
5.3.5.2	Şifre Değiştir Section.....	45
5.3.5.3	Eposta Değiştir Section.....	45

5.3.6 Mesajlar Menu.....	45
5.3.6.1 Üyelik Mesajları Submenu.....	45
5.3.6.2 Aboneler Submenu.....	46
5.3.7 Raporlar Menu.....	47
6. CONCLUSION	48
REFERENCES.....	R1
APPENDICES.....	A1
A. CURRICULUM VITAE.....	A1
B. USER INTERFACE OF THE SYSTEM.....	A2
C. ENGLISH EQUIVALENTS OF SYSTEM ITEMS.....	A30



LIST OF FIGURES

FIGURES

Figure 1	Total contribution of travel and tourism to GDP.....	1
Figure 2	Total contribution of travel and tourism to GDP in Turkey...	2
Figure 3	The five components of GIS.....	5
Figure 4	Applications of GIS.....	7
Figure 5	All entity classes can inherit properties from both the base and the auditable classes.....	14
Figure 6	The roles of the unit of work and the repository in the structure of the system.....	15
Figure 7	The Entity relationship diagram of database in the proposed system.....	16
Figure 8	The four different layers of the project.....	17
Figure 9	Historical buildings and natural environments are displayed as markers on the map.....	19
Figure 10	An HTML editor is like a word processor, and can edit text using a form.....	20
Figure 11	One method of creating a responsive table.....	21
Figure 12	DataTable has features such as pagination, grouping, and search.....	21
Figure 13	Fancybox adds navigation between the items and a drop-shadow under the zoomed item	22
Figure 14	SweetAlert2 offers alert popup boxes with a more attractive form on a web page	23
Figure 15	Bootstrap Validator quickly validates form elements.....	24
Figure 16	A warning popup of session expiry before the actual session expires	24

FIGURES

Figure 17	Turkey Touristic Portal is a dynamic site based on visual content	A2
Figure 18	As data is entered, these figures increase	A2
Figure 19	A map of Turkey using scalable vector graphics on the homepage	A3
Figure 20	The last four articles entered and approved by a system administrator	A3
Figure 21	The two sections given for each article.....	A3
Figure 22	The footer section consists of three parts: contact details, directive menu, and subscription.....	A4
Figure 23	Location displayed on the map using the Google Maps API.....	A4
Figure 24	Locations based on selected criteria, as displayed on the map.....	A4
Figure 25	Information about the marker, displayed when one of the markers is clicked.....	A5
Figure 26	Form of the link to any article.....	A5
Figure 27	Layout of the article list page, consisting of six sections	A5
Figure 28	Each section consists of a title, author, date, summary, link, and image.....	A6
Figure 29	Clickable tags for the tourism type, the location type, and the province	A6
Figure 30	A list of relevant articles, displayed when the "Mağara Turizmi" tag is clicked	A6
Figure 31	Information on how long a search took, given in milliseconds..	A7
Figure 32	Layout of the chosen article, consisting of four main sections..	A7
Figure 33	Page giving details of an article about Damlataş Cave.....	A8
Figure 34	Comment form for users to complete after reading the article ...	A8
Figure 35	Use case diagram for the Turkey Tourist Portal.....	A9
Figure 36	The two different types of users of the system.....	A9
Figure 37	Homepage of the system control panel	A10

FIGURES

Figure 38	Variation in the control panel depending on the type of user...	A10
Figure 39	Variation in submenu items of sidebar menu depending on the type of user.....	A10
Figure 40	Use case diagram of the Turkey Tourist Portal and content management system	A11
Figure 41	Location selected from list of suggestions from the search engine	A11
Figure 42	Popup window showing latitude, longitude, location name and address of chosen marker	A12
Figure 43	List of added markers.....	A12
Figure 44	After checking form elements, the article is saved.....	A12
Figure 45	Each user can view the added articles on the list and their status.....	A13
Figure 46	Sortable and searchable list of all menus.....	A13
Figure 47	After checking all form elements, the menu is saved.....	A13
Figure 48	A confirmation window asks users to confirm deletion of the menus.....	A14
Figure 49	All information is displayed in the menu detail form.....	A14
Figure 50	Sortable and searchable list of all user roles.....	A14
Figure 51	After checking all form elements, the user role is saved.....	A14
Figure 52	All information is displayed in the user role detail form.....	A15
Figure 53	Sortable and searchable list of all users.....	A15
Figure 54	After checking all form elements, the new user is saved.....	A15
Figure 55	After a user is added by administrator, the information is sent to the new user's email.....	A16
Figure 56	All information is displayed in the user detail form.....	A16
Figure 57	Sortable and searchable list of all tourism types.....	A16
Figure 58	After checking all form elements, the type of tourism is updated.....	A17
Figure 59	All information is displayed in the tourism type detail form.....	A17
Figure 60	Sortable and searchable list of all place types.....	A17

FIGURES

Figure 61	After checking all form elements, the type of place is updated..	A18
Figure 62	All information is displayed in the place type detail form.....	A18
Figure 63	Sortable and searchable list of all announcements.....	A18
Figure 64	After checking all form elements, the announcement is updated	A19
Figure 65	All information is displayed in the article detail form.....	A19
Figure 66	Sortable and searchable list of all images in the carousel slider	A19
Figure 67	Insertion form for new image for the carousel slider.....	A20
Figure 68	The saved image is located at the bottom of the list.....	A20
Figure 69	The new image is displayed within the carousel slider on the front page of the Turkey Tourist Portal.....	A20
Figure 70	Detail form for a new image for the carousel slider.....	A21
Figure 71	Sortable and searchable list of all images for the carousel slider	A21
Figure 72	Insertion form for a new background image.....	A21
Figure 73	The saved image is located at the bottom of the list.....	A22
Figure 74	The new image is displayed in the background of the Turkey Tourist Portal.....	A22
Figure 75	Detail form of new background image.....	A22
Figure 76	Sortable and searchable list of all unapproved articles.....	A22
Figure 77	Update form for unapproved article before publishing.....	A23
Figure 78	Any article confirmed in the content management system is published on the Turkey Tourist Portal	A23
Figure 79	An email is sent to the subscribers of the Turkey Tourist Portal when any article is approved.....	A23
Figure 80	Sortable and searchable list of all unapproved comments.....	A24
Figure 81	Update form for unapproved comment before publishing.....	A24
Figure 82	Any comment confirmed in the content management system is published on Turkey Touristic Portal.....	A24
Figure 83	Sortable and searchable list of all unapproved place markers.....	A24
Figure 84	Update form for unapproved place marker before publishing...	A25

FIGURES

Figure 85	Any location marker confirmed in the content management system is published on the Turkey Tourist Portal.....	A25
Figure 86	User guide for the content management system in PDF and DOC formats	A25
Figure 87	Three sections entitled “Bilgileri Gör”, “Şifre Değiştir” and “Eposta Değiştir”.....	A25
Figure 88	User information is displayed in the "Bilgileri Gör" accordion section.....	A26
Figure 89	“Şifre Değiştir” accordion section for changing a password...	A26
Figure 90	“Eposta Değiştir” accordion section for changing a password...	A26
Figure 91	User membership request form for content management system	A26
Figure 92	Sortable and searchable list of all images of carousel slider...	A27
Figure 93	Administrator response to a visitor asking to be a user of the system	A27
Figure 94	An email is sent after the administrator’s response to the user membership form	A27
Figure 95	The status of messages are displayed as CEVAPLANDI and CEVAPLANMADI.....	A27
Figure 96	Detail form for reply message to user membership form.....	A28
Figure 97	Subscription request form for articles for the portal.....	A28
Figure 98	An email is sent to a new subscriber after a subscription request is received.....	A28
Figure 99	Sortable and searchable list of all subscribers.....	A28
Figure 100	An email is sent to subscribers after publishing a new article....	A29
Figure 101	The report page is divided into two parts.....	A29
Figure 102	The first part changes dynamically depending on the chosen province.....	A29
Figure 103	The second part consists of four different lists.....	A29

LIST OF TABLES

TABLES

Table 1	Many-to-many relationships between location types and tourism types.....	38
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LIST OF ABBREVIATIONS

WTTC	World Travel and Tourism Council
GDP	Gross Domestic Product
GIS	Geographic Information System
TUCBS	Turkey's National Geographic Information System
DSS	Decision Support System
TUIK	Turkish Statistical Institute
MVC	Model View Controller
API	Application Program Interface

CHAPTER 1

INTRODUCTION

1.1 Background

Tourism involves the movements of people who travel from where they live to different places within a given period. However, tourism cannot be explained in such a simple way, since it plays a significant role in a country's culture, services, taxes, community attitudes and particularly its economy.

As a clean industry, tourism has positive impacts. It can protect historical buildings, natural environments, the cultural identity of the host and its biodiversity. It provides services through malls, restaurants, and other commercial enterprises, and can improve quality of life, relationships between communities, security, and transport infrastructure.

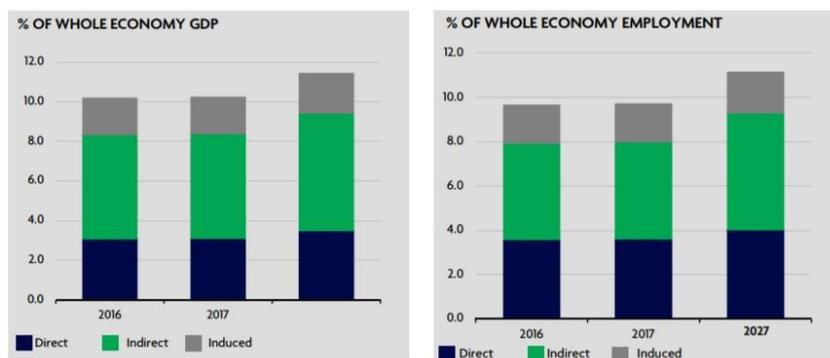


Figure 1 Total contribution of travel and tourism to GDP

Tourism has become one of the largest industries worldwide, due to its rapid growth over the last 20 years. As reported by the World Travel and Tourism Council (WTTC), it contributed 10.2% of global gross domestic product (GDP) in 2016. The WTTC predicts an increase of 3.6% in 2017, and this contribution is expected to

reach 11.4% of GDP in 2027, a rise of 3.9%. Moreover, in 2016, its total contribution to employment was 9.6%, including jobs indirectly supported by this industry. This contribution is predicted to increase by 1.9% in 2017, and to reach 11.1% of GDP in 2027, a rise of 2.5%, as illustrated in Figure 1 above [1].

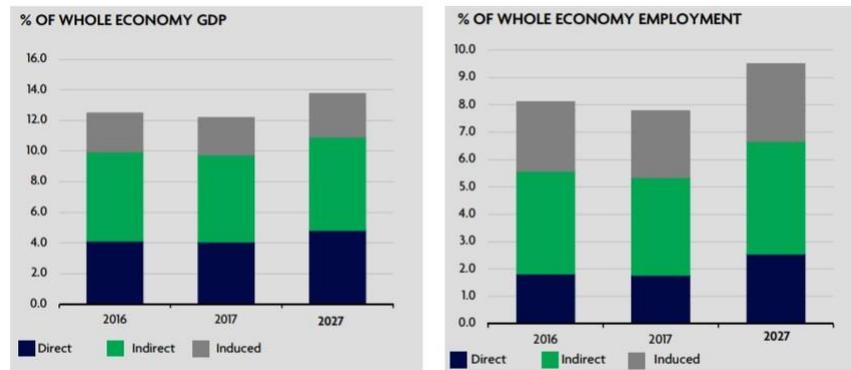


Figure 2 Total contribution of travel and tourism to GDP in Turkey

In the Turkish economy, tourism contributed 12.5% of GDP in 2016. The WTTC predicts an increase of 1.0% in 2017, and this contribution is forecast to reach 13.8% of GDP in 2027, a rise of 4.4%. Moreover, in 2016 the total contribution to employment was 8.1%, including jobs indirectly supported by this industry. This contribution is predicted to increase by 3.6% in 2017 and to reach 9.5% of GDP in 2027, an increase of 3.4%, as illustrated above in Figure 2 [2].

The boundaries of this industry are rather uncertain, as it includes many varied categories of activities involving different services, organizations, technologies, and products. As a result of these numerous and ever-growing categories, tourism has become a dynamic industry. In this year's budget negotiations, it was decided that new tourism alternatives such as health care, elder care, and sports should be added, due to the dynamic nature of the structure of tourism.

The Tourism Strategy of Turkey 2023 was implemented by the Ministry of Culture and Tourism, in order to increase the ranking of the country in terms of world tourism. As this activity plan shows, Turkey has countless possibilities for new types of tourism, such as health and thermal tourism, nature and highland tourism, cruising and yachting, and golfing, in addition to summer tourism [3].

Over the past twenty years, pioneering developments in information technology and communication systems have given rise to many opportunities in the fields of marketing, management, and promotion of tourism and recreational areas to

businesses interested in tourism. Tourism and technology are two of the most dynamic trigger sectors of the global economy; when these are combined, they provide sustainable competition and economic growth.

Underpinned by information technology, GIS offers the possibility of accessing information faster, as different kinds of information are brought together, classified and converted into visual items.

Finally, there is a need for a GIS application-based DSS that provides access to digital files and attraction maps for tourism planning.

1.2 Organization of the Thesis

This thesis contains five chapters.

Chapter 1 presents an introduction to tourism and GIS.

Chapter 2 contains an overview of GIS, and in particular its components, benefits, and applications are introduced.

Chapter 3 presents an introduction to DSS; its benefits are explained, and the importance of a GIS-based DSS is emphasized.

Chapter 4 describes the methodology of the system.

Chapter 5 explains the usage of system.

Chapter 6 concludes this thesis.

CHAPTER 2

GEOGRAPHICAL INFORMATION SYSTEMS

2.1 Definition of GIS

GIS has been described in several different ways, based on the different disciplines of the users of this system. According to some researchers, GIS can be defined as a scientific notion that involves all spatial information systems and examines geographical information; to others, it is a computer-based tool that transforms spatial information into a digital structure; and still others have described it as a database management system which assists an institution or organization in decision making.

A more general definition is that a GIS is an information system with the potential to organize the complex interrelations between different layers of information by gathering, analyzing, processing, storing, and presenting the spatial data and images available from different sources [4]. The many important properties of GIS allow us to analyze and interpret data so that the relationships and patterns in digital maps, reports, and charts can be determined.

2.2 Components of GIS

A GIS is an information system that is designed to examine data and consistently make the right decision, rather than storing data and digital maps on a computer. As reported by Prof. Dr. Tahsin Yomralioglu, there are five components that assist in establishing such an information system: hardware, software, data, people and procedures, and methods, as illustrated in Figure 3 [5].



Figure 3 The five components of GIS

Hardware appears to be the most important tool of the system, and includes information technology devices such as personal computers, scanners, digitizers, plotters and data collectors. Software such as ArcGIS, MapInfo, NetCAD, and Grass provide the tools necessary to process, analyze, and display spatial information. The data used are spatial, multimedia and topological data. However, the real power of GIS comes from people, that is, its users, technical specialists and stakeholders. The last component involves methods and procedures, including laws, regulations and other official documents from institutions or organizations.

2.3 Benefits of GIS

Although it is a new information technology and has not yet received the attention it deserves from universities, institutions, and organizations in Turkey, GIS needs to be recognized by its various target groups as a technology that is developing very rapidly worldwide. It should be noted that within the activities of many private and public institutions, and in particular the Ministry of Environment and Urbanization, the possible range of applications of GIS are infinite. GIS can solve both easy and difficult problems involving spatial data, thus assisting private and public organizations in making decisions thanks to calculating with respect to point, line, and area.

For instance:

- In which areas of Kecioren will there be floods when there is heavy rain in Ankara?
- How many tiles are needed on the roof of a Papatya apartment?
- In which area of Istanbul would an earthquake be least/most likely to occur?
- Where is the nearest petrol station to Cankaya University in Ankara?
- How has the forest or vegetation cover changed since 1900 in Istanbul?
- Where can tulips be found in Turkey?
- What is the fastest current route from Sisli to Beyoglu by car?

The above questions, which rely on geographical information, can be answered with the statistical and graphical results from GIS.

According to Fonseca et al. [6], GIS has provided many benefits in terms of quality and quantity. The quantity advantage is that in GIS technology, there is no need for data recall, and updates are easy and cheap; less time is spent in generating the requested information. Moreover, data generated from a given database can easily be transferred to another CBS. Due to these advantages, GIS provides users with the opportunity not only to make the right decision but also to save money, time and manpower. In addition, the quality advantage is that GIS can facilitate knowledge sharing, the aggregation of information, and the categorization of data.

As reported by Tecim [7], GIS intends to achieve three goals, based on its use for different purposes in different areas. The first goal is to enhance productivity through the use of maps and geographical information, while the second is to improve the management of geographic databases. Finally, it aims to enable better strategies for the usage of geographic data that can support decision making.

In summary, GIS increases labor productivity, facilitates data updates, accelerates the flow of information, enables effective and accurate analysis, and saves time and labor.

2.4 Applications of GIS

For many years, geography and geographical data have been a part of daily life. The decisions in almost all cases are not only influenced but also controlled by this data. Furthermore, software and systems such as GIS use reliable information to

investigate and learn about natural and cultural changes on Earth. As a result, it can be said that it is possible to apply GIS everywhere that geographical assets are used.



Figure 4 Applications of GIS

Figure 4 shows familiar areas of application of GIS, including computer-based mapping, traffic, military, financial and geological applications, the analysis of ground features, services for marketing, training, hospitals, police, municipal authorities and the fire brigade, planning for tourism, agriculture, land transportation, communication and traffic networks, the management and allocation of space, navigation (routing and scheduling), disaster management and mitigation, and the identification of landslide hazard zones.

It should be borne in mind that the more varied the definition of the geographical data, the more likely it is that the list of areas in which GIS can be applied will be long. One example of this is urban information systems. In several rapidly

developing cities in the world, urban information systems are used to manage urbanization, make decisions about the prediction and shaping of urban development, and carry out activities related to the city under the most suitable conditions. For example, DEVKBS is prototype software based on ArcView 3.x GIS and created with Visual Basic 6.0 and Avenue Macro Language; it aims to run on cheap, simple, and widely used computers in a selected pilot region in order to carry out the activities of Turkey's local municipal authorities in a relatively fast, economical, efficient, standardized, simple and easily traceable way [8]. Another example is the Konya Urban Information System; this is built on the Oracle 10G Standard Edition database, coded in the C# language on the .Net platform and based on the Mapxtreme library, and is intended not only to enhance the quality of all kinds of municipal services but also to enable the governor of this province to make faster and better decisions by means of a continuously updated decision support system. Such systems in Turkey are under the responsibility of the General Directorate of Land Registry and Cadastre at the Republic of Turkey's Ministry of the Environment and Urbanization, and are compatible with Turkey's National Geographic Information System (TUCBS) Project, which has been developed to determine the national standards required for an easy and effective spatial data repository, sharing and exchange system.

Examples of GIS in Turkey are not restricted to urban information systems. GIS is used so that historical sites across a very wide area of Turkey's geography can be protected, recorded and transferred to future generations sustainably. Safranbolu, a location identified by UNESCO to be preserved as a world historical heritage site and transferred to future generations, is a city with three thousand years of history and nature, as well as a culture of woodworking, a particular ethnographic structure, stone workmanship and artistic value. A web-based GIS has been established for this city, and attributes and graphic information related to the objects at different layers in terms of historical buildings and religious structures have been transferred to this GIS. Thanks to this work, the historical city of Safranbolu has been supported, and has made a significant contribution to tourism and residential services [9].

CHAPTER 3

DECISION SUPPORT SYSTEMS

3.1 Definition of DSS

Before deciding on a particular topic, research is carried out on a subject and all types of data, large and small, important and insignificant, are collected. These data are analyzed and classified, and finally, a conclusion is drawn from them. However, due to the large quantity of these data and time constraints, the decision-making process has become increasingly complicated in almost every field, meaning that it has become more difficult. In addition, inexperience, ignorance, overconfidence, inadequacy of decision-making skills and the changing roles of people in decision-making positions are also considered to be factors in this shift.

Due to this increase in collected data, the complexity of the process of decision-making and the limits of human capabilities at the decision-making stage, the use of software has become obligatory. Software has emerged that consists of two components: the database, which stores and maintains information, and the model, which contains the algorithm for processing the data.

In recent years, the use of DSS has become increasingly widespread in the process of decision making. These systems enable the end user to easily access data both inside and outside of a given institution or organization. It enhances both the productivity and the quality of the decisions taken by authorities while allowing fast and timely access to the information needed, and thus helps in making well-timed decisions within institutions.

DSS are interactive computer-based systems that assist users in the process of decision-making by compiling useful information from raw data to identify and solve problems. These systems not only provide data storage and retrieval, but improve

traditional knowledge access and retrieval operations with support for model building and model-based reasoning [10].

3.2 Benefits of DSS

When making a decision as part of clinical, laboratory, financial or risk-based applications, or forecasting and risk measurement in agriculture or construction works, employees tend to make mistakes, such as not being able to express themselves well, not keeping abreast of innovations, having incorrect priorities, making poor probability estimates and being prejudiced or overconfident. However, the outcome of these decisions involves large financial investments.

An emerging trend within the field of marketing has been the increased application of DSS technology to aid in decision-making, since these applications bring certain benefits.

In general, DSS provides many advantages in terms of decision-making support. The first is that it speeds up the process of decision making, and saves time by increasing the productivity of employees and allowing access to knowledge at the appropriate time. It also provides a capability for better and faster analysis. By analyzing the data more effectively, a business can plan for the future and control their financial investments more successfully. Another advantage is that this system has an innovative aspect; it helps in the development of innovative applications that can enhance performance. In addition, interpersonal communication is enhanced by the rapid preparation of concrete data, enabling discussion in environments where decisions are made by more than one person. Due to these benefits, this system offers a strategic advantage to the institution or the organization in competitive environments.

3.3 A GIS-Based DSS for Tourism

One of the fastest growing economic sectors in the world, tourism is defined as the movement of people who travel from the location in which they live to different locations, for a period of between twenty-four hours and six months. However,

tourism does not just concern going from one place to another, but communicating in a cultural, economic and societal way.

Due to its seasonality, tourism has an influence that may be either positive or negative on the environment, socio-cultural aspects, and the economy. In terms of the economic effect, tourism supports GDP, better services, employment, internal prices, investment, the balance of international payments and social stability.

According to research prepared by the Turkish Statistical Institute (TUIK) and the Department of Economics of Akdeniz University, every successful investment in tourism returns twice this amount to the Turkish economy. Finally, it is necessary to highlight the significance of the field of tourism through a better understanding of the importance of tourism.

Turkey has more potential for tourism and more resources than many other countries, due to its natural beauty, its historical and cultural wealth and its unique buildings. This potential is not currently being taken advantage of effectively, since the country is not being promoted efficiently and successfully, and the facilities available in the country are not easily accessible.

The recent developments in information technology and communication systems have not only had many applications in marketing, management and tourism, but have also have provided a competitive advantage to businesses. These rapidly developing information technologies have been applied in almost all institutions and organizations in the field of tourism. This is a necessity in today's fast-changing competitive environment.

With these systems, companies have the ability to reach information quickly, to process information efficiently and to draw conclusions from this information; thus, these systems support their existence and allow them to overtake other businesses in this challenging, competitive environment.

GIS offers the possibility of sustaining this advantage through faster and more effective access to information as the different types of data are brought together, classified and converted into visual items.

Topay ve Parladir utilized GIS tools to determine appropriate areas for alternative tourism activities, in terms of ecological, cultural and economic factors, that were most likely to be available in the province of Isparta[11]. According to the values of suitability class, the natural and cultural characteristics of this area were identified,

and a database was established using GIS. As a consequence of this study, it was discovered that the most popular activities for tourists were horse riding, camping, trekking, skiing, mountaineering and mountain biking. The most suitable areas for each activity were identified numerically, so that companies in the field of tourism could invest in these areas.

The system developed by Asafe et al. [12] helps in providing destination and decision information before planning a journey, for tourists to Nigeria. Its database contains historical, cultural and geographical data related to this tourism destination. It is web-based, so that every tourist who has internet access can obtain unlimited tourism information to plan their trip. Thus, the system does not only save money, time and manpower but also increases the effectiveness and quality of tourism planning.

Chu et al. [13] implemented mobile GIS and global positioning system (GPS) techniques to provide a guidance service and to more effectively and rapidly manage tourism destinations. The system contains four basic functions: queries, graphics, GPS and mobile GIS. This tour guiding system has been used in Yehliu GeoPark.

A GIS-based spatial decision support system developed by the University of Science, Malaysia, combines the functions of GIS and the designs of SDSS with a graphical user interface to provide tourism planning according to personal preference for tourists of Langkawi Island. It offers copious accessible data such as maps and multimedia, and lets users select layer types, zoom in or out, and to click on a map to access tourism information. A further function allows users to update and add their data [14].

CHAPTER 4

METHODOLOGY OF THE SYSTEM

4.1 Design of the Database

Entity Framework's 'code first' approach is adopted for the database used in this project. Entity Framework (EF) is a tool that forms a bridge between the developed application and a database. It is an object/relational mapping (ORM) framework that permits .NET developers to manage relational data which use domain-specific objects. It converts the tables in the database into classes, the columns into properties, and the entries into objects, so that the application does not have to access the database directly. Thus, developers do not need to write code to access the data.

There are three different possible approaches to development in this project: model first, database first and code first. In the model first approach, an empty model file (.edmx) is used in Visual Studio to design the database for the model, and the database is generated with the given script file after compilation. The second approach is the easiest, and is typically used if there is an existing database. The existing database is linked to the project with the model file, and the tables in the database are automatically transformed into classes by Entity Framework.

Code first is an approach which has been increasingly used in recent years. Both the classes and the mapping are generated as far as possible by coding in Visual Studio, and the database is then derived from these classes and mappings. In this approach, the relationship between the database and the programmer is minimized, and, most importantly, the programmer retains control when developing the application.

The primary reasons for using a code first approach in this project are that there is no previously existing database, and that a large amount of of autogenerated code is not produced in this technique when updating the database.

The database has two layers: TourismDSSProject.Core and TourismDSSProject.Data. TourismDSSProject.Core is a kernel layer in which the main definitions of the data are generated, and has a domain model that consists of the entity classes and enums. These entity classes are divided into base and auditable classes: the base entity class has properties which are required in all the tables, while the auditable entity class has properties which are required in only a few. Each entity class can inherit properties from both the base and the auditable classes.

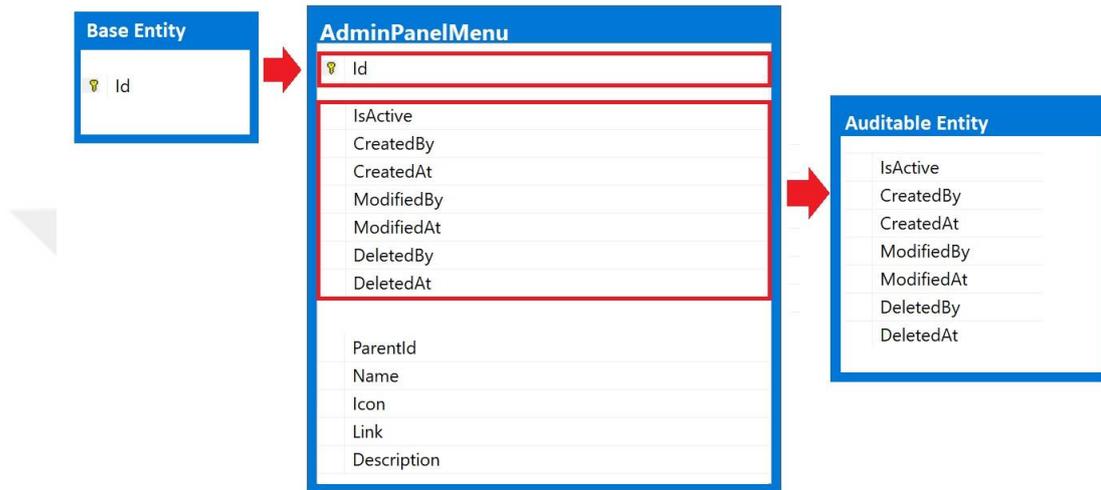


Figure 5 All entity classes can inherit properties from both the base and the auditable classes

For example, as illustrated in Figure 5, the AdminPanelMenu entity class has base properties, auditable properties, and its own properties.

In the TourismDSSProject.Core layer, there are two enums representing the provinces of Turkey and the roles within the system. The reason for enums being used here is that the types of province and the types of role are both predefined sets of constant variables.

TourismDSSProject.Data is a data layer that manages the SQL commands, and handles the definitions of context, the management of data, migration and mapping. The context contains the properties of the configuration, such as lazy loading, the collection of database sets of all entities, and the definitions of mapping generated from all entities. In the mapping structure, each entity class has one mapping, since a single mapping is generated from each entity class.

The migration structure defines whether automatic migrations can be used when migrating the database, and whether the data loss is acceptable when migrating automatically.

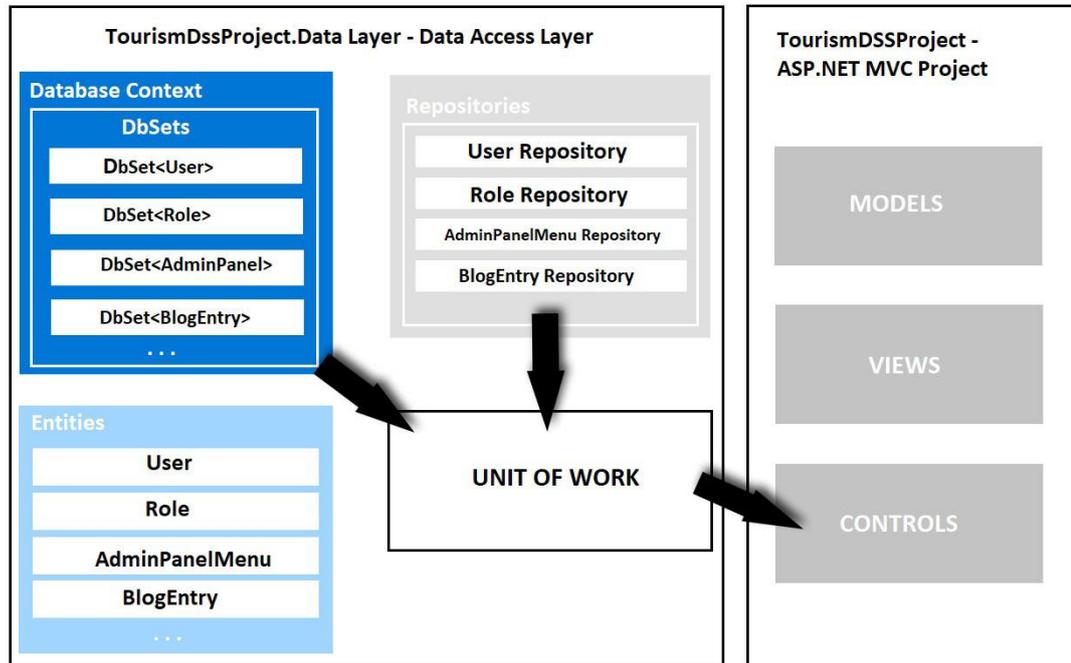


Figure 6 The roles of the unit of work and the repository in the structure of the system

The data management structure defines two approaches: the unit of work and the repository, as illustrated in Figure 6. One repository is created for each DbSet by defining the data operations of create, select, insert, update and delete. UnitOfWork is a class that encapsulates the repositories and one database context; thus, each class is isolated from the others. If it is necessary to change the repositories, there is no need to modify the controllers of the ASP.NET MVC project or the unit of work. The SaveChanges() method of the database context is only called once when committing multiple updates to the database. The most important feature of this approach is that it protects the project from failure when saving or updating data.

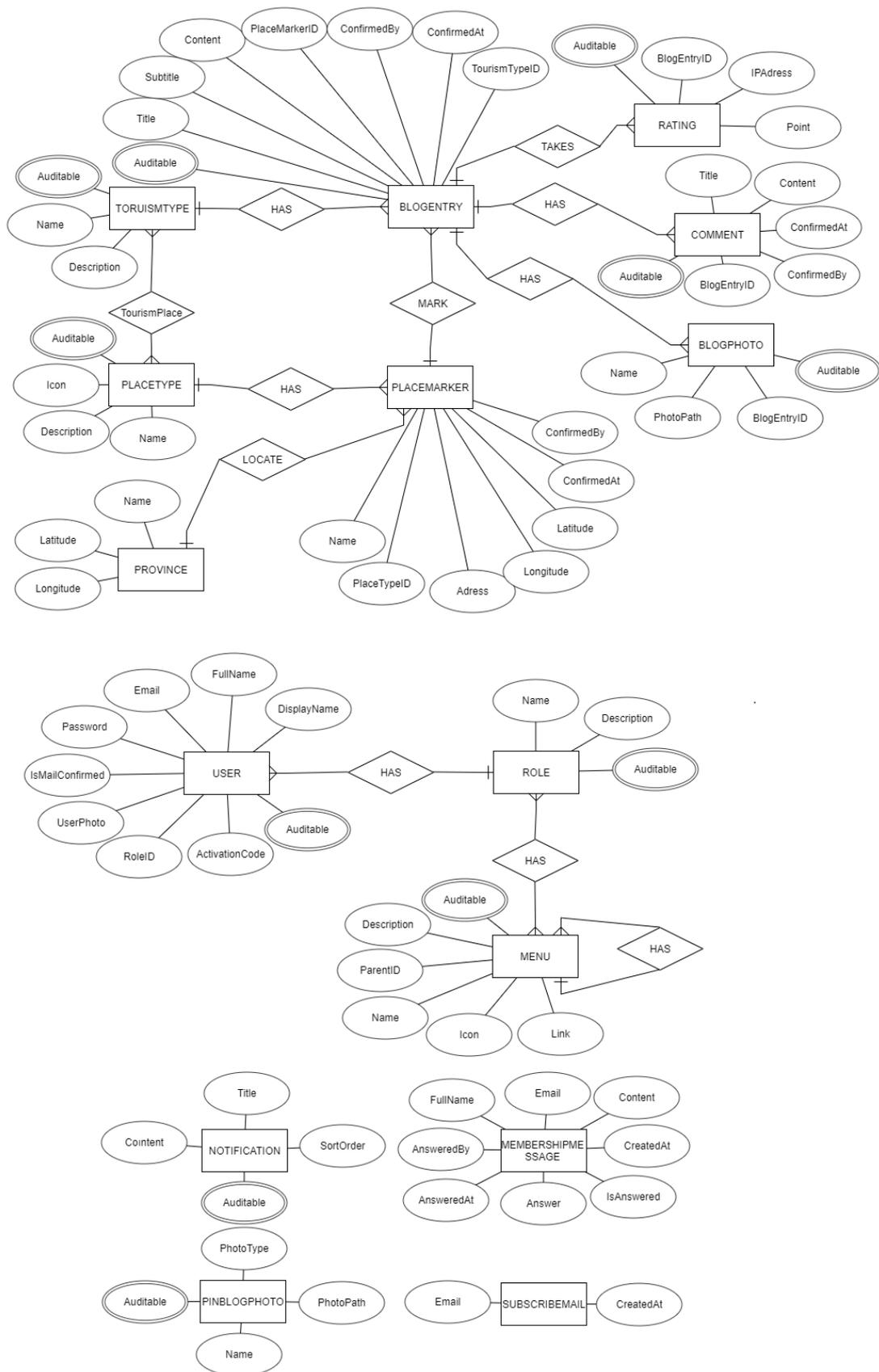


Figure 7 The Entity relationship diagram of database in the proposed system

The database for the Turkey Tourist Portal has fifteen tables, as illustrated in Figure 7. Two of these have many-to-many relationships and junction tables, and these are 'AdminMenuRole' and 'TourismPlace'; the former defines the relationship between menus and roles, while the latter defines the relationship between the types of tourism and the types of roles.

Finally, the database of system is developed using Visual Studio 2015 using Entity Framework's 'code first' approach. The system data is stored using Microsoft SQL Server 2014.

4.2 Design of the System

The system is developed using Visual Studio 2015, and the architectural pattern of ASP.NET MVC is used. This pattern is used in large-scale projects, and divides the project into three different layers (model, view and controller) to facilitate its development and management. MVC was created for ASP.NET and has been used in many languages since its emergence, such as Java and PHP [15].

The model is a set of classes that describe the data to be used, the rules of this data and the relationships between data types. The view describes how to display the user interface of the project. The controller is a structure in which requests are captured and processed by the client, and variables, methods, and functions are called; it also acts as a bridge between the model and the view.

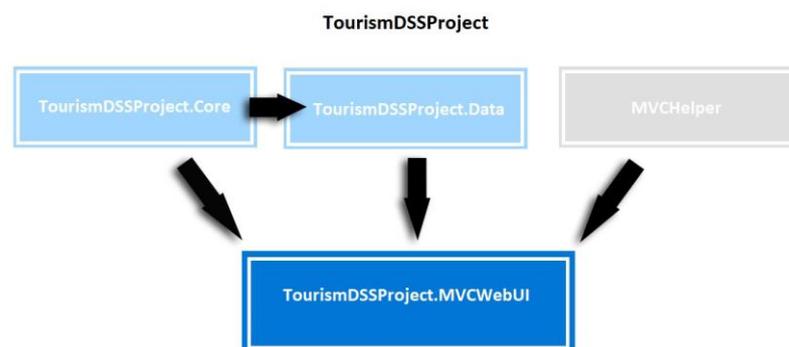


Figure 8 The four different layers of the project

This system consists of four different projects: TourismDSSProject.Data, TourismDSSProject.Core, TourismDSSProject.MVCWebUI and MVCHelper, as

illustrated in Figure 8. TourismDSSProject.Data is a data layer that manages the SQL commands. It uses the TourismDSSProject.Core component to map the entity classes to the database. TourismDSSProject.Core is a kernel layer in which the main definitions of the data are generated. TourismDSSProject.MVCWebUI is the web user interface and uses TourismDSSProject.Core and TourismDSSProject.Data to retrieve data for web forms. MVCHelper contains auxiliary classes in which methods are defined to avoid the repetition of code.

There are five classes in MVCHelper: FileUploader, FileWiper, Hashing, MailSender and RouteHelper. The FileUploader class defines the operations for uploading single and multiple files; FileWiper defines the operations for deleting previously uploaded files; RouteHelper defines the URL operation which makes the website easier for users; MailSender defines the operation which sends an email from the system; and Hashing defines the operation for encoding the user's password with MD5 or SHA1, although in this system, MD5 is preferred.

The TourismDSSProject.MVCWebUI project uses the architectural pattern of ASP.NET MVC. TourismDSSProject.MVCWebUI has two different user interfaces: the Turkey Tourist Portal and the content management portal. In other words, it can be thought of as two subprojects within the main project. Both the main project and the AdminPanel subproject have their own model/view/controller layers.

In this system, AJAX post-processing and JSON are used for all operations such as create, delete and edit. JSON, which is structurally similar to the XML language, is a standard object-oriented JavaScript language created to transport data. Although structurally similar to XML, it is faster and takes up less space in memory. It can be easily processed and accessed using JavaScript.

4.3 Auxiliary Tools Used in the System

There are several auxiliary tools used in this system: Google Maps, Summernote, DataTable, ImageResizer, FancyBox, SweetAlert2, Bootstrap Validator and Timeout Dialog.

4.3.1 Google Maps Application

An application program interface (API) is a series of protocols, definitions, methods, and procedures that permits us to create applications which access the components or data of an operating system, application, tools or services. Many APIs have been developed that beginning developers need to be aware of.

The most popular of these are the Google Maps and Google Maps Geocoding APIs, which allow developers not only to embed comprehensive Google Maps within a website but to use both satellite and map images of almost everywhere on Earth. Moreover, they enable the user to find an address, such as 'Kale Mahallesi, Kale Cd. No:84, 72350 Hasankeyf/Batman, Turkey', for a given longitude and latitude of any place. The opposite is also possible, in other words searching for either the name or the type of landmarks of any location.

The most important reason for its preferred use by developers is that Google Maps locations are constantly updated, because this API utilizes recent data from Google in real time. Thus, developers do not need to store maps, which consume a great deal of space in a database; it is sufficient to store only the coordinates and the name of the location.

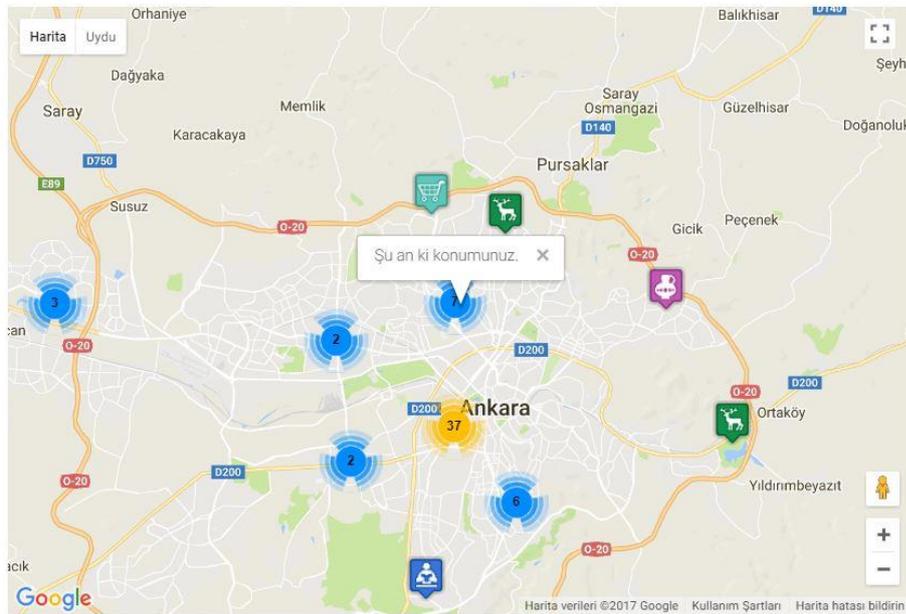
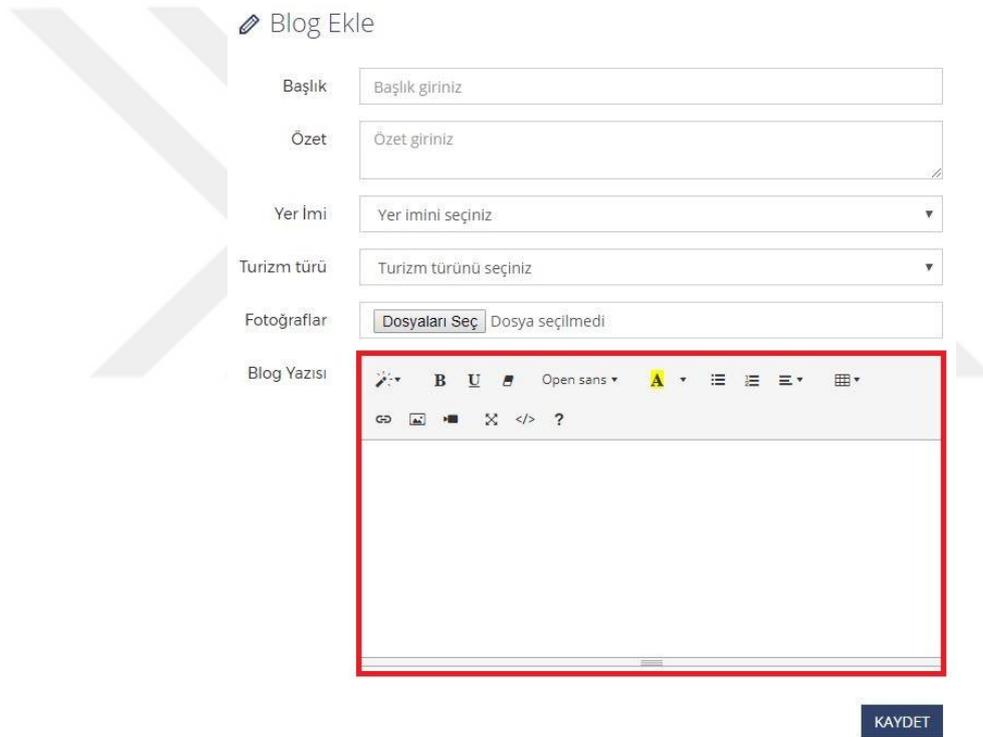


Figure 9 Historical buildings and natural environments are displayed as markers on the map

Using the Google Maps API, historical buildings and natural environments in the province to which tourist is traveling can be displayed as markers on the map, as illustrated in Figure 9. After selecting these markers, tourists can read articles about these places and view images.

4.3.2 Summernote Editor

This is a WYSIWYG ('what you see is what you get') HTML editor, in which content such as text and images can be edited for display in a certain format such as a web page. In other words, this editor is like a word processor that lets the user create something similar to the end result, as illustrated in Figure 10.



The screenshot shows a web form for adding a blog post. The form is titled "Blog Ekle" and contains several input fields: "Başlık" (Title) with the placeholder "Başlık giriniz", "Özet" (Summary) with the placeholder "Özet giriniz", "Yer İmi" (Location) with a dropdown menu showing "Yer imini seçiniz", "Turizm türü" (Tourism type) with a dropdown menu showing "Turizm türünü seçiniz", and "Fotoğraflar" (Images) with a "Dosyaları Seç" button and the text "Dosya seçilmedi". Below these fields is a "Blog Yazısı" (Blog content) field, which is a rich text editor with a toolbar containing icons for bold, italic, underline, link, unlink, list, and table. A "KAYDET" (Save) button is located at the bottom right of the form.

Figure 10 An HTML editor is like a word processor, and can edit text using a form

Several editors are preferred by web developers, such as CKEditor and TinyMCE; however, in this project, the Summernote Editor is used. This is a JavaScript library that aids web developers in integrating code easily and quickly to their websites, and JavaScript and CSS codes are attached with the bootstrap used in this project. Its most important feature is that the images added from the clipboard are saved directly in the content using base64 encoding, and thus there is no need to handle images.

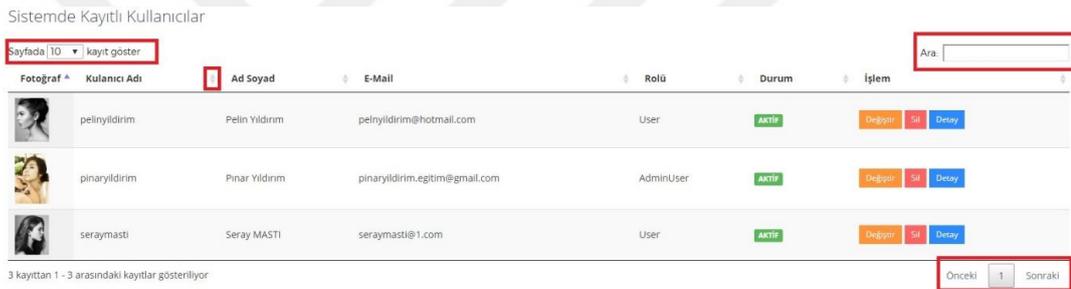
4.3.3 DataTable

An HTML table defined with the <table> tag is not responsive on all devices such as a desktop, tablet, or phone. The concept of a responsive table has therefore emerged.

```
<div style="overflow-x:auto;">
  <table>
    ...
  </table>
</div>
```

Figure 11 One method of creating a responsive table

As illustrated in Figure 11, a responsive table displays a horizontal scroll bar by resizing the browser window; to do this, the web developer adds a <div> tag with the label overflow-x:auto outside the <table> tag.



The screenshot shows a web interface titled "Sistemde Kayıtlı Kullanıcılar". It features a table with columns for "Fotoğraf", "Kullanıcı Adı", "Ad Soyad", "E-Mail", "Rolü", "Durum", and "İşlem". The table contains three rows of user data. Above the table, there is a search bar labeled "Ara:" and a dropdown menu for "Sayfada 10 kayıt göster". Below the table, there is a pagination bar showing "3 kayıttan 1 - 3 arasındaki kayıtlar gösteriliyor" and navigation buttons for "Önceki", "1", and "Sonraki".

Fotoğraf	Kullanıcı Adı	Ad Soyad	E-Mail	Rolü	Durum	İşlem
	peinyildirim	Pelin Yıldırım	peinyildirim@hotmail.com	User	AKTIF	Değiştir Sil Detay
	pinaryildirim	Pınar Yıldırım	pinaryildirim.egitim@gmail.com	AdminUser	AKTIF	Değiştir Sil Detay
	seraymasti	Seray MASTI	seraymasti@1.com	User	AKTIF	Değiştir Sil Detay

Figure 12 DataTable has features such as pagination, grouping, and searching

One alternative to using this <div> tag is DataTable, which is a useful plugin for the jQuery Javascript library that is flexible on all devices. As illustrated in Figure 12, the features of Datatable are pagination by grouping 10, 25, 50 or 100 elements, efficient and fast searching, and sorting single or multiple columns in ascending or descending alphabetical order [16].

4.3.4 ImageResizer

Every web designer working on websites should pay attention to the size of images. The most important reason for this is that web pages with images need to load easily and quickly; the larger the size of the image, the longer it will take for the web page

to load. A further reason is that it is necessary to resize these images according to the allocated space.

However, when repeatedly resizing an image, a problem arises in terms of preserving the quality of the original image without blurring or noise. Applications or tools for resizing images such as ImageResizer can be very helpful for web designers in preserving quality.

ImageResizer, which is open source software, is compatible with application frameworks such as ASP.NET, MVC, and Web API. It provides a comprehensive set of tools for photo design from powerful, simple single-command adjustments, from the correction of white balance and noise removal to cutting-edge advanced controls such as red-eye correction and object removal. When used to adapt web pages for high performance, it not only reduces the load time but also protects against DDOS and XSS attacks [17].

4.3.5 Fancybox

FancyBox is an open-source tool that provides a pleasant and elegant appearance and adds a zoom feature to images, HTML elements, SWF movies and iframes in web pages. It is built on the jQuery library and it is therefore easy to implement and can be quickly customized by means of settings and CSS. As illustrated in Figure 13, other features it adds are navigation between items by grouping them and an attractive drop-shadow under the zoomed item [18].

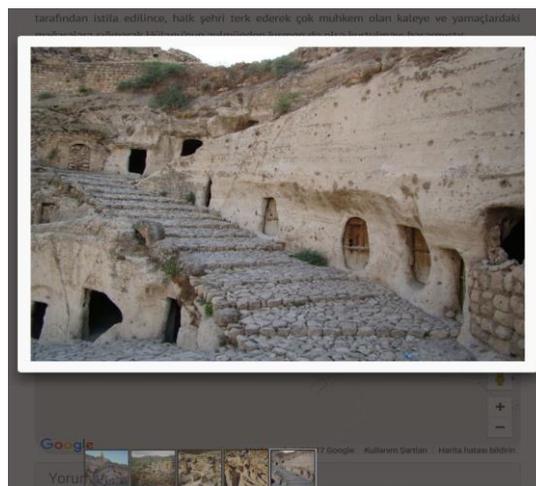


Figure 13 Fancybox adds navigation between the items and a drop-shadow under the zoomed item

4.3.6 SweetAlert2

SweetAlert2 is open source software that aims to replace JavaScript's alert popup boxes with a more attractive form, as illustrated in Figure 14. It centers itself automatically on the webpage and is flexible on all devices such as desktop computers, mobiles and tablets, as it is compatible with Bootstrap and jQuery [19].

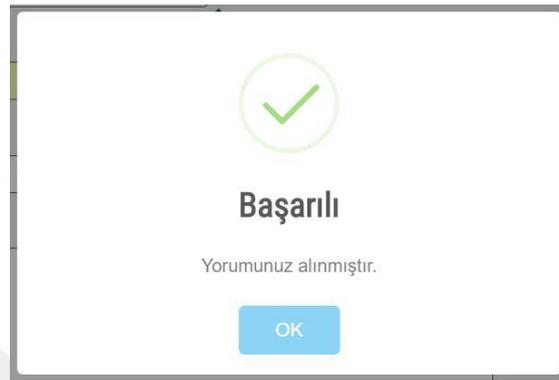


Figure 14 SweetAlert2 offers alert popup boxes with a more attractive form on a web page

4.3.7 Bootstrap Validator

This plugin is open source software that quickly validates form fields such as text fields, checkboxes, radio buttons, submit buttons, and others, as illustrated in Figure 15. It is easily integrated with web forms generated with ASP.NET, ASP.NET MVC. Despite these features, it has unfortunately not been supported since 2015. The documentation for this plugin was obtained from <https://github.com/ngphuoc/bootstrapvalidator>.

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Yorum
Mutlaka görülmesi gereken bir doğa harikası. Yukarıda bir antik havuz bulunmakta ve sabahtan gelip girmenizi tavsiye ediyorum.

Gönder

Figure 15 Bootstrap Validator quickly validates form elements

4.3.8 Timeout Dialog

Timeout-Dialog is a jQuery plugin that shows a popup warning about session expiry before the actual session expires, in an ASP.Net MVC application, as illustrated in Figure 16. This warning popup shows a countdown and offers two options: staying signed in or out of the session [20].

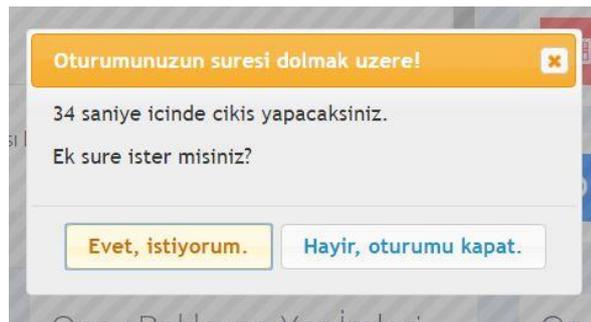


Figure 16 A warning popup of session expiry before the actual session expires

CHAPTER 5

USAGE OF THE SYSTEM

5.1 Introduction to the System

This project uses two different websites: the Turkey Tourist Portal and the content management system. The Turkey Tourist Portal is a visual website in which blog entries, images, and markers on the map are related to historical buildings and natural environments are shown. The content management system enables data such as markers, images, and blog posts to be entered. The English equivalents of Turkish words used in the system are included in 'Appendix B'.

5.2 The Turkey Tourist Portal

The front-end website of the Turkey Tourist Portal is a dynamic site based on visual content. A large-sized landscape photograph is presented when this website is opened for the first time, to prioritize the promotion of Turkey, as illustrated in Figure 17.

In addition, on each page there are directive menus in the header section entitled "Home", "Map", "Blog", "Admin Panel" and "About Us".

Several landscape photographs of Turkey are presented as the user scrolls down the main page. These images are uploaded by the content managers to the "Anasayfa Kayan Yatay Resimler" sub-menu of the "Yönetim İşlemleri" menu. In the section below the images of the carousel slider, information about the numbers of registered users, articles and markers added is given. These numbers increase as data is entered in the content management system, as illustrated in Figure 18.

In the "Haritada Keşfet" section of the homepage, there is a map of Turkey made using scalable vector graphics (SVG), as illustrated in Figure 19. On this map, each

province is outlined, and the name of the province is displayed when hovering over it on the map. In addition, when one of these provinces is clicked, all the tourist destinations in the province are displayed using the Google Maps application.

The "Haritada Keşfet" section shows the last four articles entered and approved by the users of the content management system, as illustrated in Figure 20. The first photograph, the name and an abstract of each article are shown. When one of these four articles is chosen, the full content of the article is shown.

After the articles section, there are two sections entitled "Misyonumuz/Vizyonumuz" and "Bize katılmak ister misiniz?", as illustrated in Figure 21. The "Misyonumuz/Vizyonumuz" section consists of a short paragraph. If the site visitor wants to act as a content manager, the button marked "Detayları Göster" in the "Bize katılmak ister misiniz?" section is clicked. This links to the membership form for content management.

The footer section consists of three parts: contact details, directive menu and subscription, as illustrated in Figure 22. The subscription section is aimed at readers who want to be notified of the most recent blog posts. In this section, the button marked "Abone Ol" links to the subscription form.

In the header section, there are five menus: "Anasayfa", "Harita", "Blog", "Yönetici Paneli" and "Hakkımızda". The menu entitled "Anasayfa" links back to the main page from any other page.

On the "Harita" page, the location where the tourist is staying is displayed using Google Maps, as illustrated in Figure 23. There are three form elements on the right-hand side of the map: the province, the type of tourism and the type of location. A user viewing this page cannot activate the search button without making a selection. If only the province element is selected, the search button becomes active. When this page is loaded for the first time, the list of location types is empty, while the list of tourism types is populated. After choosing from the list of tourism types, the list of place types is dynamically filled, according to the type of tourism chosen.

When the province is selected and the search button is clicked, the user is taken to the "Haritada Keşfet" page, and the important locations of the selected province are displayed on the map. When the province and type of tourism are selected, and the search button is clicked, the same page is loaded and the important locations of the selected province are displayed, based on the type of tourism chosen. If all three

elements (province, type of tourism and type of location) are selected, the user is taken to the "Haritada Keşfet" page and the markers on the map are displayed according to the selected criteria. When any of these markers is clicked, the articles belonging to this marker are displayed. Furthermore, under the "Search" section, five articles of these markers are displayed.

For example, if Ankara is selected as the province, "Doğa ve Yayla Turizmi" as the tourism type and "Tabiat Parkı" as type of location (i.e. as search for the nature parks in Ankara) then this takes the user to the page entitled "Haritada Keşfet", and the markers are displayed on the map with symbols of nature parks, as illustrated in Figure 24.

If one of these markers is clicked, the articles about this marker are shown, as illustrated in Figure 25.

When the above criteria are selected, five articles about nature parks in Ankara appear dynamically below the search section.

A link is also formed from Haritada Kesfet/TourismType/PlaceType/Province (i.e. <http://localhost:15421/HaritadaKesfet/20/51/6/Ankara>), as illustrated in Figure 26.

When the menu entitled "Blog" is clicked, the articles are listed in order, from the most recently approved article to the first article.

The page displaying the articles consists of six sections: the articles themselves, a search option, tags of the tourism types, tags of the location types, the last five articles, and pagination, as illustrated in Figure 27.

In this list, each article contains several sections: the title of the article, its author, the date the article was created, the type of location marker that the article is linked to, the province of the marker, the number of comments, and the first image of the article, a summary and a link to it, as illustrated in Figure 28.

The types of tourism and location and the province are clickable tags, as illustrated in Figure 29. When these tags are clicked, the related pages are linked.

For example, when the "Mağara Turizmi" tag is clicked, the user is taken to a list of articles on cave tourism. When the "Mağara" tag is clicked, it links to a list of articles written on all caves in Turkey, as illustrated in Figure 30.

At the right-hand side of the list of articles, there are four sections: a search option, tags of the type of tourism, and tags of the type of location. These tags were created so that articles could be searched and classified more easily. Clicking a tag of either

tourism type or location type takes the user to a list of articles on a given subject. There are five approved articles in the last section.

In addition to these tags, a search option was created for the articles so that they can be found more easily. When a word is entered in this section, it is searched for in both the content and the title of the articles, and all articles containing this word are cataloged.

For example, if the word "asthma" is entered in the search section, all articles concerning asthma are cataloged. In addition, information on how long the search took is given in milliseconds, as illustrated in Figure 31.

When any article in the list is clicked, the details of this article are shown, in four main sections: its content, its images, the location of the place on the map to which this article refers, and all comments on the article, as illustrated in Figure 32. In the comments section, visitors to the Turkey Tourist Portal can leave feedback after reading this article.

For example, the article about "Damlataş Mağarası" is chosen from the list, and this takes the user to the page containing this article, as illustrated in Figure 33.

A visitor to the Turkey Tourist Portal can then comment after reading the article about "Damlataş Mağarası". Visitors are asked to enter their name, e-mail, title, and comments, as illustrated in Figure 34, and the comment is displayed in the list awaiting comment confirmation in the "Yorum Onaylama" panel of the content management system. No unconfirmed comments are displayed under the article. Thus, a visitor can read articles on tourist attractions, view their locations on the map, subscribe to the site, or become a member of the content management system, as illustrated in Figure 35.

5.3 Content Management System

In the content management system, there are two different types of users: an administrator and user. An administrator can do three operations: entering data, approving entered data and inserting components of the system such as a menu, role, type of tourism or type of location. A user can only carry out one operation, that is, entering data. Any user of the system defined as an administrator or user can login with their own username and password, as illustrated in Figure 36.

Users defined in the content management system are asked to enter a username with fifty characters, with no Turkish characters or symbols, and a password containing between six and 10 characters. They can then access the control panel on the home page of the system, as illustrated in Figure 37.

This control panel can vary depending on the type of user, as illustrated in Figure 38. For example, a user who can only enter data can only see announcements and the overall numbers of online users, total users, registered markers and registered articles on this main page of control panel, while a user identified as an administrator can see the numbers of users, articles, markers and comments which need to be approved, in addition to the elements of the control panel of a normal user.

On the left-hand side of the main page of the control panel, a sidebar menu named AdminPanel Menu appears, which can be opened or closed. The submenu items of this sidebar menu vary depending on the type of user, as illustrated in Figure 39.

This menu consists of six different submenus: "Yayın İşlemleri", "Yönetim İşlemleri", "Onay İşlemleri", "Yardım dokümanları", "Kullanıcı İşlemleri" and "Mesajlar". The main menu entitled "Yayın İşlemleri" allows users to enter both markers and the articles concerning these markers, and to view these data and their status. The menu entitled "Yönetim İşlemleri" allows administrators to add users, types of tourism, types of location, announcements, images for the carousel slider, the background image and new users of the system. The "Onay İşlemleri" menu allows administrators to approve markers and entered articles. The "Yardım Dokümanları" menu contains a user guide that informs and directs users, while the "Kullanıcı İşlemleri" menu allows both types of users to see their own user profiles and to update their passwords or email addresses. The "Mesajlar" menu allows administrators to view messages from the members of the Turkey Tourist Portal and a list of new subscribers to the portal.

In summary, a user has only the authority to enter data in the content management system, while an administrator has the authority to both enter and confirm data. Articles and location markers are not published on the Turkey Tourist Portal without approval, as illustrated in Figure 40.

5.3.1 Yayın İşlemleri Menu

The menu entitled "Yayın İşlemleri" has two submenus: "Blog Ekle" and "Yerimi Ekle". In the "Blog Ekle" submenu, an article about a previously defined marker can be entered. In the "Yerimi Ekle" submenu, a historical location or natural landmark is marked on the map using the Google Maps application.

This section allows a user to enter an article about the marker after marking a tourist location on the map.

5.3.1.1 Yerimi Ekle Submenu

The submenu entitled "Yerimi Ekle" allows users to mark historical locations and natural landmarks on the map using the Google Maps application. These markers are cataloged according to the province, the type of location and the type of tourism in the list of markers.

When the "Yayın İşlemleri" menu in sidebar menu is clicked, the submenu entitled "Yerimi Ekle" can be chosen, and the title of the tourist location can be entered into the search engine located in the upper right-hand corner of the map. The map shows the selected location when one of the places suggested by the search engine is clicked, as illustrated in Figure 41.

When the marker shown on the map is clicked, the popup window shows the latitude, longitude, place name and address of the chosen marker. The location type of the relevant marker is chosen after this information is verified, as illustrated in Figure 42. The saved marker needs to be approved by the administrators; it is a passive marker and is not published on the Turkey Tourist Portal before being approved by an administrator.

The button marked "Eklediğiniz Yer İmlerinin Listesi" appears at the upper left-hand side of the "Yerimi Ekle" panel. As illustrated in Figure 43, a user can view the markers added to the list and their status, and can also update or delete information about the markers until they are approved. The system displays a window warning users before deleting unapproved markers.

5.3.1.2 Blog Ekle Submenu

In the submenu entitled "Blog Ekle", an article about a previously defined marker can be entered. These articles are cataloged according to the type of location and type of tourism in the list of markers.

When a marker is added, visual and literary content needs to be entered to introduce tourist locations to domestic and foreign tourists. When the "Yayın İşlemleri" menu in the sidebar menu is clicked, the "Blog Ekle" submenu can be chosen, and the name of the selected marker is automatically entered in the title field when one of the markers is chosen. A different title can also be entered in this field. A short summary of the location can be entered in the "Özet" field. The type of tourism is chosen according to the content of the article, and the photographs to be included in the article are uploaded in the "Fotoğraflar" field. These photographs are limited to *.jpg and *.png extensions. In the "Blog Yazısı" section, text including a description and the features of the marker should be entered. In Summernote Editor, the text can be aligned right or left, or justified, and images can be inserted into the text. After checking all form elements, the article is saved, as illustrated in Figure 44.

The saved article then needs to be approved by an administrator; each new article is a passive marker and is not published on the Turkey Tourist Portal before being approved by an administrator.

The button marked "Eklediğiniz Yazıların Listesi" appears at the upper left-hand side of the "Blog Ekle" panel. The user can view the articles added to the list and their status, and can also update or delete information about the articles until they are approved, as illustrated in Figure 45. The system displays a warning to the user before deleting unapproved articles.

5.3.2 Yönetim İşlemleri Menu

The menu entitled "Yayın İşlemleri" consists of eight submenus: "Menü Kategorisi", "Roller", "Kullanıcılar", "Turizm Kategorileri", "Yer Kategorileri", "Duyurular", "Anasayfa Kayan Yatay Resmi" and "Arka Plan Resmi". The "Menu Kategorisi" submenu allows administrators to insert a new main menu or submenu into the sidebar menu, and to update or delete existing menus. The "Roller" submenu allows

administrators to add, update and delete roles identifying the actions that users can perform; the "Kullanıcılar" submenu allows administrators to add, update and delete new users; the "Turizm Kategorileri" submenu allows administrators to add, update and delete types of tourism, defined according to articles about a given location; the "Yer Kategorileri" submenu allows administrators to add, update and delete types of location, defined according to historical places or natural environments; the "Duyurular" submenu allows administrators to add, update or delete announcements to inform all users about changes in the content management system; the "Anasayfa Kayan Yatay Resmi" submenu allows administrators to add or delete the landscape images for the carousel slider promoting Turkey; and the "Arka Plan Resmi" submenu allows administrators to add or delete landscape images for the background of the portal promoting Turkey.

5.3.2.1 Menü Kategori Submenu

At the left-hand side of the content management system, there is a sidebar menu that changes depending on the type of user. New submenus or main menus can be inserted into this sidebar menu, and menus can be updated or deleted. This menu takes the user to the menu management page when the "Menu Kategori" submenu in the "Yönetim İşlemleri" menu is clicked. There is a list of previously added menus on this page. Using DataTable, all menus can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 46.

In the content management system, new menus can be inserted into the sidebar menu to categorize the operations of the system and to direct all users. When the "Menu Kategori" submenu of the "Yönetim İşlemleri" menu is clicked, it links to the menu management page. When the "Yeni Menü Ekle" button at the top left-hand side is clicked, its title, purpose, link and symbol are entered using the menu insertion form. If a submenu is to be inserted, "Eklenen menü bir alt menüdür" is clicked, and the list of main menus is then displayed. One of main menus is chosen from this list, and type of user that can utilize this menu is chosen from the list of user roles. Either the active or passive option is selected after the menu is determined to be used or not. After checking all the form elements, the new menu is saved.

If there is incomplete or incorrect information in the previously entered menu, it can be selected, and the information can be changed. Clicking on the "Değiştir" button, which appears on the same line as the menu to be changed in the menu management page, allows the information in this menu can be changed via the menu update form. After checking all form elements, the menu is saved by clicking the "Güncelle" button, as illustrated in Figure 47.

If a previously entered menu is no longer used, it can be deleted. Clicking on the "Sil" button, which appears on the same line as the menu to be deleted in the menu management page, causes the system to display a warning window to the user before deleting the menu, as illustrated in Figure 48.

Administrators can see which user created a new menu, the date of creation, any user who updated this, and the date of this update. Clicking on the "Detay" button, on the same line as the menu to be deleted in the menu management page, causes all the information to be displayed in the menu detail form, as illustrated in Figure 49.

5.3.2.2 Roller Submenu

Users are taken to the user role management page when the "Roller" submenu of the "Yönetim İşlemleri" main menu is clicked. There is a list of previously added roles on this page. Using DataTable, user roles can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 50.

In the content management system, all users have different roles, and these user roles need to be entered. Clicking the "Roller" submenu of the "Yönetim İşlemleri" main menu takes the user to the user role management page. When the "Yeni Rol Ekle" button at the top left is clicked, its title and definition are entered in the user role insertion form. An active or passive option is selected after the role is determined to be used or not. After checking all form elements, the new role is saved.

If there is incomplete or incorrect information in the previously entered user role, it can be selected and the information changed. Clicking on the "Değiştir" button, on the same line as the role to be changed in the role management page, allows the information of this role to be changed using the role update form. After checking all form elements, the user role is saved by pressing the "Güncelle" button, as illustrated in Figure 51.

If a previously entered user role is no longer valid, it can be deleted. Clicking on the "Sil" button, on the same line as the user role to be deleted in the user role management page, causes the system to display a confirmation window before deleting the role.

Administrators can see the user who created a new user role, the date of creation, any user who updated this, and the date of updating. Clicking on the "Detay" button, on the same line as the user role to be deleted in the user role management page, causes all information to be displayed in the user role detail form, as illustrated in Figure 52.

5.3.2.3 Kullanıcılar Submenu

This takes the user to the user management page when the "Kullanıcılar" submenu in the "Yönetim İşlemleri" main menu is clicked. A list of previously added users appears on this page. Using DataTable, users can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 53.

All users must be registered on the content management system before logging into this system. When the "Kullanıcılar" submenu of the "Yönetim İşlemleri" main menu is clicked, it takes the user to the user management page. When the "Yeni Kullanıcı Ekle" button at the top left is clicked, the username, password, e-mail, user role and user photograph can be entered in the user insertion form. Either the active or passive option is selected after the user is determined to be used or not. After checking all form elements, the new user is saved, as illustrated in Figure 54.

When a user is added by an administrator, the information is sent to the email entered in the system for the user, as illustrated in Figure 55.

If there is incomplete or incorrect information for a previously entered user, it can be selected and the information can be changed. Clicking on the "Değiştir" button, on the same line as the user to be changed in the user management page, allows the information about this user to be changed via the user update form. After checking all form elements, the information on the user is saved by pressing the "Güncelle" button.

If a previously entered user is no longer valid in the content manager system, it can be deleted. Clicking on the "Sil" button, on the same line as the user to be deleted in

the user management page, causes the system to display a confirmation window before deleting the user.

Administrators can see which user created a new user, the date of creation, any user who updated this, and the date of updating. Clicking on the "Detay" button, on the same line as the user to be deleted in the user management page, causes all the information to be displayed in the user detail form, as illustrated in Figure 56.

5.3.2.4 Turizm Kategorileri Submenu

When an article about a tourist destination is entered, the list of tourism types is displayed according to the location type of a previously created marker; one of the types of tourism in the list is chosen according to the content of the article. Hence, tourism types need to be created according to location types.

The user is taken to the tourism type management page when the "Turizm Kategorileri" submenu in the "Yönetim İşlemleri" main menu is clicked. A list of previously added tourism types appears on this page. Using DataTable, tourism types can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 57.

When an article about a touristic destination is entered, the tourism type needs to be created in order to categorize the article. When the "Turizm Kategorileri" submenu in the "Yönetim İşlemleri" main menu is clicked, the user is taken to the tourism type management page. When the "Yeni Turizm Kategorisi Ekle" button at the top left is clicked, its title and its description are entered in the tourism type insertion form. The active or passive option is selected after the type is determined to be used or not. After checking all form elements, the new tourism type is saved.

If there is incomplete or incorrect information in a previously entered type of tourism, it can be selected and the information changed. Clicking on the "Değiştir" button, on the same line as the tourism type to be changed in the tourism type management page, allows the information on this tourism type to be changed in the tourism type update form. After checking all form elements, the type of tourism is saved by pressing the "Güncelle" button, as illustrated in Figure 58.

If a previously entered type of tourism is no longer used, it can be deleted. Clicking on the "Sil" button, on the same line as the tourism type to be deleted in the tourism

type management page, causes the system to display a confirmation window before deleting the tourism type.

Administrators can see the user who created a new tourism type, the date of creation, any user who updated this, and the date of updating. Clicking on the "Detay" button, on the same line as the type of tourism to be deleted in the tourism type management page, causes all the information to be displayed in the tourism type detail form, as illustrated in Figure 59.

5.3.2.5 Yer Kategorileri Submenu

When a marker displaying the position of a tourist attraction is entered, a location type is chosen based on the properties of this attraction. The location type is necessary to define the place markers.

The user is taken to the location types management page when the "Yer Kategorileri" submenu in the "Yönetim İşlemleri" main menu is clicked. There is a list of previously added location types on this page. Using DataTable, the location types can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 60.

When a marker displaying the position of a tourist attraction is entered, the location type also needs to be defined depending on the properties of this location. When the "Yer Kategorileri" submenu of the "Yönetim İşlemleri" main menu is clicked, it takes the user to the location type management page. When the "Yeni Yer Kategorisi Ekle" button at the top left is clicked, its title and its description are entered in the place type insertion form. An active or passive option is selected after the type is determined to be used or not. After checking all form elements, the new location type is saved.

If there is incomplete or incorrect information in the previously entered location type, it can be selected and the information changed. Clicking on the "Değiştir" button, on the same line as the location type to be changed in the location type management page, allows the information on this location type to be changed using the location type update form. After checking all form elements, the type of location is saved by pressing the "Güncelle" button, as illustrated in Figure 61.

If a previously entered type of location is no longer needed, it can be deleted. Clicking on the "Sil" button, on the same line as the location type to be deleted in the location type management page, causes the system to display a confirmation window before deleting the place types.

Administrators can see the user who created a new location type, the date of creation, any user who updated this, and the date of updating. Clicking on the "Detay" button, on the same line as the type of location to be deleted in the location type management page, causes all the information to be displayed in the location type detail form, as illustrated in Figure 62.

As shown in Table 1, there are many-to-many relationships between types of location and types of tourism. Each location type is connected to at least one tourism type, and vice versa. For instance, summer tourism includes coasts, beaches, aqua parks and islands, while the beach as type of location is connected to both yacht and cruise tourism and summer tourism. Based on this relationship, the location type is determined when a place marker is added. Later, when an article about any tourist destination is added, the list of tourism types is displayed according to the location type.

5.3.2.6 Duyurular Submenu

An announcement can be added to the list of existing announcements to inform all users about changes or innovations to the content management system.

The user is taken to the announcement management page when the "Duyurular" submenu in the "Yönetim İşlemleri" main menu is clicked. There is a list of previously added announcements on this page. Using DataTable, these announcements can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 63.

When the "Duyurular" submenu of the "Yönetim İşlemleri" main menu is clicked, the user is taken to the announcement management page. When the "Yeni Duyuru Ekle" button at the top left is clicked, its title, content and its order are entered in the announcement insertion form. An active or passive option is selected after the announcement is determined to be used or not. After checking all form elements, the new announcement is saved.

Table 1 Many-to-many relationships between location types and tourism types

TYPE OF TOURISM	TYPE OF PLACE
Sağlık ve Termal Turizmi	Kaplıca, Hamam
Kış Turizmi	Kayak Merkezi, Buz Pisti, Kış Sporları Turizm Merkezi
Yaz Turizmi	Sahil, Plaj, Su Parkı, Ada
Sualtı Dalış Turizmi	Sualtı Dalış Merkezleri
Yat ve Kruvaziyer Turizmi	Sahil, Plaj, Koy, Körfez, Liman, Ada
Kongre ve Konferans Turizmi	Hotel, Gösteri - Kongre Merkezi
Fuar, Festival ve Eğlence Turizmi	Bar, Cafe / Restoran, Gösteri - Kongre Merkezi, Tema ve Eğlence Parkı, Park, Sinema
Akarsu - Rafting Turizmi	Akarsu (Dere, Çay, Irmak), Akarsu - Rafting Merkezi
Dağcılık Turizmi	Dağ
Kuş Gözlemciliği Turizmi	Göl, Milli Park
Doğa ve Yayla Turizmi	Göl, Akarsu (Dere, Çay, Irmak), Şelale, Kanyon, Milli Park, Tabiat Parkı, Yayla, Tepe, Traverten, Bahçe, Çiftlik, Ada
Mağara Turizmi	Mağara, Obruk
Golf Turizmi	Golf Merkezi
İnanç Turizmi	Manastır, Cami, Mescit, Türbe, Kilise, Tapınak, Kümbet, Katedral, Sinagog
Kültür ve Tarih Turizmi	Hamam, Antik Kent, Harabe, Kale, Müze, Köprü, Medrese, Konak, Saat, Kervansaray, Anıt Mezar, Kütüphane, Tren Garı, Köşk, Antik Tiyatro, Saray, Sur, Yeraltı Şehri, Fener, Ören Yeri, Çeşme, Kastel, Şadırvan
Alışveriş Turizmi	Alışveriş Merkezi, Çarşı, Pazar
Kültür ve Sanat Turizmi	Müze, Kütüphane, Sanat Evi, Sanat Merkezi, Kültür Merkezi, Gösteri - Kongre Merkezi, Tiyatro, Sinema
Av Turizmi	Milli Park, Tabiat Parkı, Çiftlik, Avcılık ve Atıcılık Merkezi
Diğer	Hastane, Eczane, Turizm Danışma Bürosu, Hostels, Karakol, Berber / Kuaför, Banka, Havaalanı

If there is incomplete or incorrect information in the previously entered announcement, it can be selected and the information changed. Clicking on the "Değiştir" button, on the same line as the announcement to be changed on the announcement management page, allows the information for this announcement to be changed in the announcement update form. After checking all form elements, the announcement is saved by clicking the "Güncelle" button, as illustrated in Figure 64. If a previously entered announcement is no longer used, it can be deleted. Clicking on the "Sil" button, on the same line as the announcement to be deleted in the announcement management page, causes the system to display a confirmation window before deleting the announcement.

Administrators can see the user who created a new article, the date of creation, any user who updated this, and the date of updating. Clicking on the "Detay" button, on the same line as the article to be deleted in the article management page, causes all information to be displayed in the article detail form, as illustrated in Figure 65.

5.3.2.7 Anasayfa Kayan Yatay Resmi Submenu

The user is taken to the management page for the carousel slider images when the "Anasayfa Kayan Yatay Resmi" submenu in the "Yönetim İşlemleri" main menu is clicked. There is a list of previously added images of carousel slider on this page. Using DataTable, the images of carousel slider can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 66.

When any of the small images in the carousel slider list is clicked, the original size of this image is displayed on the screen. Clicking on the active/passive slider in the status row of the list, changes the image from active to passive and vice versa.

The landscape images in the carousel slider on the front page of the Turkey Tourist Portal are used to provide a better introduction to Turkey. When the "Anasayfa Kayan Yatay Resmi" submenu of the "Yönetim İşlemleri" main menu is clicked, the user is taken to the management page of the carousel slider image. When the "Yeni Anasayfa Kayan Yatay Resmi Ekle" button at the top left is clicked, a title can be

entered and a photograph with dimensions 1080 x 300 px can be uploaded using the insertion form for carousel slider images. Either the active or passive option is selected after the image is determined to be used or not. After checking all form elements, the new image of carousel slider is saved, as illustrated in Figure 67.

The saved image is located at the bottom of the list on the management page for the carousel slider image, as illustrated in Figure 68.

The saved image is also active, and is positioned within the carousel slider on the front page of the Turkey Tourist Portal, as illustrated in Figure 69.

If a previously entered image of the carousel slider is no longer needed, it can be deleted. Clicking on the "Sil" button, on the same line as the image to be deleted in the management page for carousel slider images, causes the system to display a confirmation window before deleting the images.

Administrators can see which user created a new image for the carousel slider, the date of creation, the user who updated it, and the date of updating. Clicking on the "Detay" button, on the same line as the image to be deleted from the management page for carousel slider images, causes the information to be displayed in the detail form for carousel slider images, as illustrated in Figure 70.

5.3.2.8 Arka Plan Resmi Submenu

Background images are used in the Turkey Tourist Portal to give a better introduction to Turkey.

The user is taken to the management page for background images when the "Arkaplan Resmi" submenu in the "Yönetim İşlemleri" main menu is clicked. There is a list of previously added background images on this page. Using DataTable, the background images can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 71.

When one of the small background images in this list is clicked, the original size of this image is displayed on the screen. Clicking on the active/passive checkbox in the status row of the list, changes the status of the image from active to passive and vice versa.

When the "Arka Plan Resmi" submenu of the "Yönetim İşlemleri" main menu is clicked, the user is taken to the management page for background images. When the

"Yeni Arka Plan Resmi Ekle" button at the top left is clicked, a title can be entered and a photograph with dimensions 1428 x 669 px can be uploaded using the insertion form for background images. Either the active or passive option is selected after the image is determined to be used or not. After checking all form elements, new background image is saved, as illustrated in Figure 72.

The saved image is located at the bottom of the list in the management page for background images, as illustrated in Figure 73.

The saved image is active, and is positioned within the carousel slider on the front page of the Turkey Tourist Portal, as illustrated in Figure 74.

If a previously entered background image is no longer needed, it can be deleted. Clicking on the "Sil" button, on the same line as the image to be deleted in the management page for background images, causes the system to display a confirmation window before deleting the background images.

Administrators can see which user created a new background image, the date of creation, any user who updated it, and the date of updating. Clicking on the "Detay" button, on the same line as the image to be deleted in the management page for background images, causes all the information to be displayed in the background image detail form, as illustrated in Figure 75.

5.3.3 Onay İşlemleri Menu

The main menu entitled "Onay İşlemleri" has three submenus: "Blog Onaylama", "Yorum Onaylama" and "Yerimi Onaylama". Location markers, articles about tourist destinations and comments on any article are published after approval by an administrator.

5.3.3.1 Blog Onaylama Submenu

When an article about a tourist destination is added to the content management system by users who have the authority to insert a location marker or article, the administrators then check whether or not the information in the article is correct. The article is then edited, deleted or approved.

The user is taken to the article confirmation page when the "Blog Onaylama" submenu in the "Onay İşlemleri" main menu is clicked. There is a list of previously added articles on this page. Using DataTable, the articles can be arranged in 10, 25 or 50 rows, sorted by each column and searched, as illustrated in Figure 76.

If there is incomplete or incorrect information in a previously entered article, it can be selected and the information changed. Clicking on the "Değiştir" button, on the same line as the article to be changed in the article management page, allows the information in this article to be changed using the article update form. After checking all form elements, the article is saved by pressing the "Güncelle" button, as illustrated in Figure 77.

A previously entered article can be deleted if necessary, due to copyright considerations, for example. Clicking on the "Sil" button, on the same line as the article to be deleted in the article management page, causes the system to display a confirmation window before deleting the article.

When an unapproved article related to a location marker is checked, administrators can approve this article. Clicking on the "Onayla" button, on the same line as the article to be approved on the article confirmation page, causes the system to display a confirmation window before approving the article.

When any article is confirmed in the content management system, it is published on the Turkey Tourist Portal, as illustrated in Figure 78.

In addition, as illustrated in Figure 79, an email is sent to subscribers of the Turkey Tourist Portal to inform them that a new article has been published. This email contains a link to the new article. Subscribers clicking on this link can immediately read the new article on the Turkey Tourist Portal.

5.3.3.2 Yorum Onaylama Submenu

Anyone reading an article can leave a comment, although this comment is not immediately published, since it needs to be approved by the administrators, who have approval authorization on the content management system.

The user is taken to the comment confirmation page when the "Yorum Onaylama" submenu in the "Onay İşlemleri" menu is clicked. There is a list of previously added

comments on this page. Using DataTable, these comments can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 80.

The icon of an open eye open needs to be clicked to determine which articles readers have commented on. Clicking this icon takes the user to the page of an article where a comment has been made.

If a comment made on any blog post is unsuitable, it can be modified. Clicking on the "Değiştir" button, on the same line as the comment to be changed in the comment management page, allows the information in this comment to be changed in the comment update form. After checking all form elements, the comment is saved by pressing the "Güncelle" button, as illustrated in Figure 81.

The comment may also be deleted. Clicking on the "Sil" button, on the same line as the comment to be deleted in the comment management page, causes the system to display a confirmation window before deleting the comments.

After a comment made on an article is checked, administrators can approve this comment. Clicking on the "Onayla" button, on the same line as the comment to be approved on the comment confirmation page, causes the system to display a confirmation window before approving the comments.

After a comment is confirmed in the content management system, it is published on the Turkey Tourist Portal, as illustrated in Figure 82.

5.3.3.3 Yerimi Onaylama Submenu

When a location marker is inserted into the content management system by a user who has the authority to insert a location marker or article, an administrator checks whether or not the information in the marker is correct. The marker can then be edited, deleted or approved.

The user is taken to the confirmation page for location type when the "Yerimi Onaylama" submenu in the "Onay İşlemleri" main menu is clicked. There is a list of previously added location types on this page. Using DataTable, the location types can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 83.

If there is incomplete or incorrect information in the previously entered unapproved marker, it can be selected and the information changed. Clicking on the "Değiştir"

button, on the same line as the marker to be changed in the marker management page, allows the information for this marker to be changed using the marker update form. After checking all form elements, the marker is saved by pressing the "Güncelle" button, as illustrated in Figure 84.

If a previously entered marker is no longer needed, it can be deleted. Clicking on the "Sil" button, on the same line as the marker to be deleted on the marker management page, causes the system to display a confirmation window before deleting the markers.

When an unapproved location marker is checked, an administrator can approve it. Clicking on the "Onayla" button, on the same line as the marker to be approved on the place marker confirmation page, causes the system to display a confirmation window before approving the place markers.

When a marker is confirmed in the content management system, it is published on the Turkey Tourist Portal, as illustrated in Figure 85.

5.3.4 Yardım Dokümanları Menu

On the help page, there is a user guide in both PDF and DOC formats, which is intended to give assistance to users of the content management system, as illustrated in Figure 86. This guide explains in detail how to use the system.

These documents can be downloaded to users' own computers by clicking on the DOC or PDF icons on the help page, as illustrated in Figure 86.

5.3.5 Kullanıcı İşlemleri Menu

Users can view or update their own information stored in the content management system. The edit page for user information consists of three sections: "Bilgileri Gör", "Şifre Değiştir" and "Eposta Değiştir", as illustrated in Figure 87.

5.3.5.1 Bilgileri Gör Section

All user information stored in the content management system can be viewed by users. When the "Kullanıcı Bilgileri" main menu is clicked, it takes the user to the

edit page for user information. When the "Bilgileri Gör" accordion section is clicked, the user's information is displayed, including photograph, username, email and the date the account was created, as illustrated in Figure 88.

5.3.5.2 Şifre Değiştir Section

Users can change their passwords in the content management system. When the "Kullanıcı Bilgileri" main menu is clicked, it takes the user to the edit page for user information. When the "Şifre Değiştir" accordion section is clicked, the user needs to enter both their current password and a new password in the relevant fields, as illustrated in Figure 89. If and only if the user enters a correct current password the new password can be changed.

5.3.5.3 Eposta Değiştir Section

Users can change their email in the content management system. When the "Kullanıcı Bilgileri" main menu is clicked, it takes the user to the edit page for user information. When the "Eposta Değiştir" accordion section is clicked, the user is asked to enter a new email in the relevant field, as illustrated in Figure 90.

5.3.6 Mesajlar Menu

A visitor who wants to be a user of the content management system needs to fill in a membership request form. If visitor wants to subscribe to new articles, they should fill in a subscription request form.

5.3.6.1 Üyelik Mesajları Submenu

In this system, a visitor who wants to be one of the two types of user (Administrator or User) needs to firstly fill in a membership form on the Turkey Tourist Portal.

To become a user of the content management system, the visitor enters their name, surname, email and background in this form. After checking all form elements, this form is submitted, as illustrated in Figure 91.

When this form has been submitted, it can immediately be seen in the "Üyelik Mesajları" administrator panel, as illustrated in Figure 92.

The user is taken to the management page for membership messages when the "Mesajlar" submenu in the "Üyelik Mesajları" main menu is clicked. There is a list of previously added tourism types on this page. Using DataTable, the messages can be arranged in 10, 25 or 50 rows, sorted by column and searched.

An administrator needs to check any unanswered messages on the management page for membership messages. If the evaluation of a form gives a negative result, an answer to this message can be sent from this management page. If the manager's response to this form is positive, the administrator first adds this user to the system. Then, user information can be sent using the same system, as illustrated in Figure 93.

When the administrator has answered positively or negatively on the "Üyelik Mesajları Yönetimi" page, the response is sent directly to the person wanting to become a member, as illustrated in Figure 94.

The status of membership messages is displayed in the list on the "Üyelik Mesajları Yönetim" page. The status of unanswered messages is marked in red with "CEVAPLANMADI", while the status of answered messages is written in green with "CEVAPLANDI", as illustrated in Figure 95.

The user who replied to this message, the date on which the message was replied to and the content of the reply are displayed in the management section for membership messages, as illustrated in Figure 96.

5.3.6.2 Aboneler Submenu

After an article is checked and approved in the content management system by an administrator, an email is sent to inform the subscribers to the portal that a new article has been added.

A person who wants to subscribe should fill out a subscription request form in the subscription section of the Turkey Tourist Portal. In this form, the person simply needs to enter their email, as illustrated in Figure 97.

If email address is entered correctly in the form, a notification that the subscription request has been received is sent to the person wanting to subscribe, as illustrated in Figure 98.

The user is taken to the subscription management page when the "Aboneler" submenu in the "Üyelik Mesajları" main menu is clicked. There is a list of previously registered subscriptions on this page. Using DataTable, subscriptions can be arranged in 10, 25 or 50 rows, sorted by column and searched, as illustrated in Figure 99. Administrators do not need to approve subscriptions, but can delete subscriptions once registered.

An email is sent to inform subscribers when a new article has been published. This email contains a link to the new article, and subscribers can read the new article at the Turkey Tourist Portal, as illustrated in Figure 100.

5.3.7 Raporlar Menu

In this system, as in every content management system, reports are generated in order to reward them and to check whether data has been entered. These reports involve the content managers or provinces which have the most data and the category with the most content.

The user is taken to the report page when the "Raporlar" menu of the sidebar menu is clicked. This page is divided into two parts, as illustrated in Figure 101. In the first part, the information in the right-hand section, including the province, total number of markers and total number of articles, changes dynamically when one of provinces shown on the map of Turkey is clicked, as illustrated in Figure 102. The "Haritada Keşfedin!" and "Blog Listesi" connections also change dynamically depending on the province selected. For example, when Ankara is clicked on the map in the right-hand section, information about this province is shown. Clicking on the "Haritada Keşfedin" link displays sixty-six locations on the map of Ankara. Clicking on the "Blog Listesi" link takes the user to the page of articles about tourist attractions in Ankara.

In the second part, the top five users who have entered the most articles and markers and the top five provinces with most articles and markers are displayed, as illustrated in Figure 103. This section is constantly changing as markers and articles are entered, so this information is always current.

From these two sections, it is possible to get an idea of how efficiently the provinces or the users are working.

CHAPTER 6

CONCLUSION

There is a robust relationship between tourism and information and communication technologies in today's competitive and dynamic world. Due to these systems, companies have the capability to access information quickly, to process information efficiently and to draw conclusions from this information; thus these systems may support their existence and allow them to overtake other companies in the current challenging environment.

The use of GIS application-based DSS in these systems has a significant role in providing influential tourism planning for domestic and foreign tourists. The Turkey Tourist Portal complements these expectations by utilizing visual images. Using the Google Maps application, historical buildings and natural landmarks in a tourist destination can be displayed as markers on a map. When these markers are selected, tourists can read articles and view images of these places.

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APPENDIX A

CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name : YILDIRIM, Pınar
Nationality : Turkish
Date and Place of Birth : 08 December 1986, Ankara
Phone : +90 506 862 4986
Email : pinaryildirim13@gmail.com
c1471002@cankaya.edu.tr



EDUCATION

Degree	Institution	Year of Graduation
M.Sc.	Çankaya Univ., Computer Engineering	2018
B.Sc.	Çankaya Univ., Computer Engineering	2010
B.Sc.	Çankaya Univ., Mathematics and Computer Science	2010
High School	Nermin Mehmet Çekiç Anatolia High School	2004

WORK EXPERIENCE

Year	Place	Position
2013- Present	REPUBLIC OF TURKEY MINISTRY OF CULTURE AND TOURISM	Computer Engineer

FOREIGN LANGUAGES

Advanced English, Upper-Intermediate Japanese, Native Turkish

APPENDIX B

USER INTERFACE OF THE SYSTEM

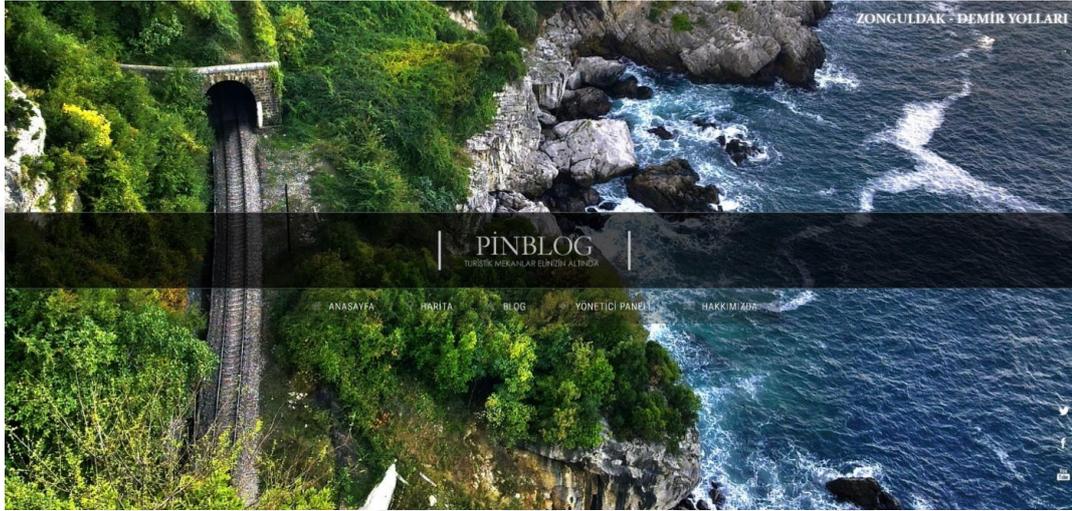


Figure 17 The Turkey Tourist Portal is a dynamic site based on visual content



Figure 18 As data is entered, these figures increase



Figure 19 A map of Turkey using scalable vector graphics on the homepage

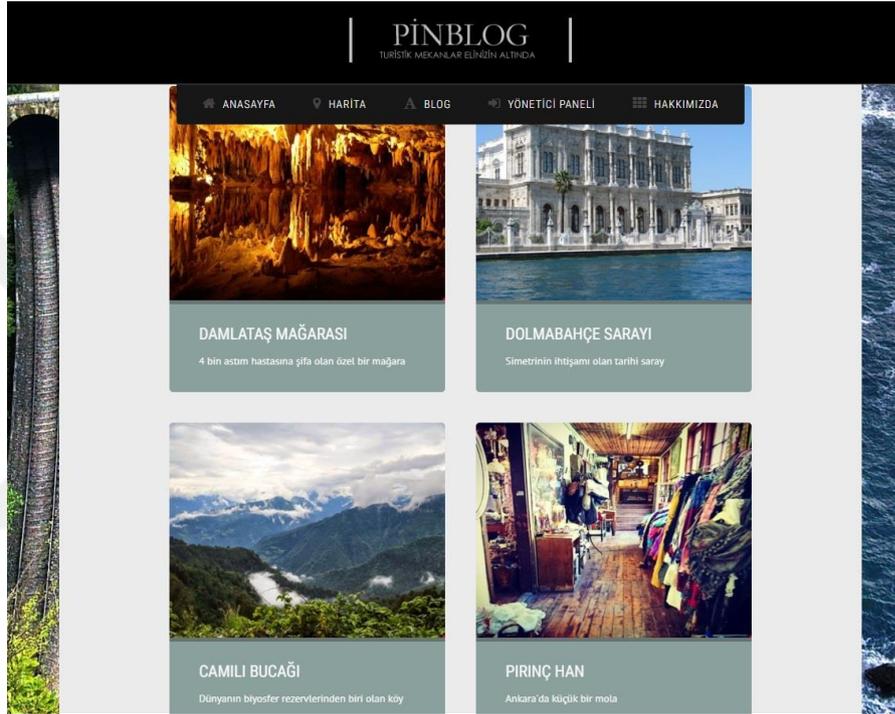


Figure 20 The last four articles entered and approved by a system administrator



Figure 21 The two sections given for each article



Figure 22 The footer section, consisting of three parts: contact details, directive menu and subscription

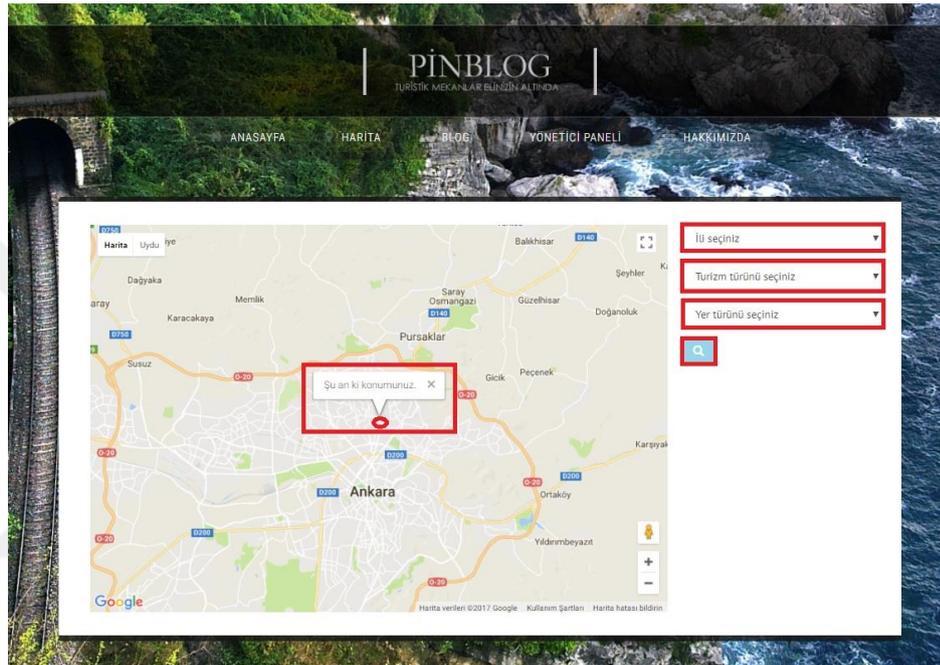


Figure 23 Location displayed on the map using the Google Maps API

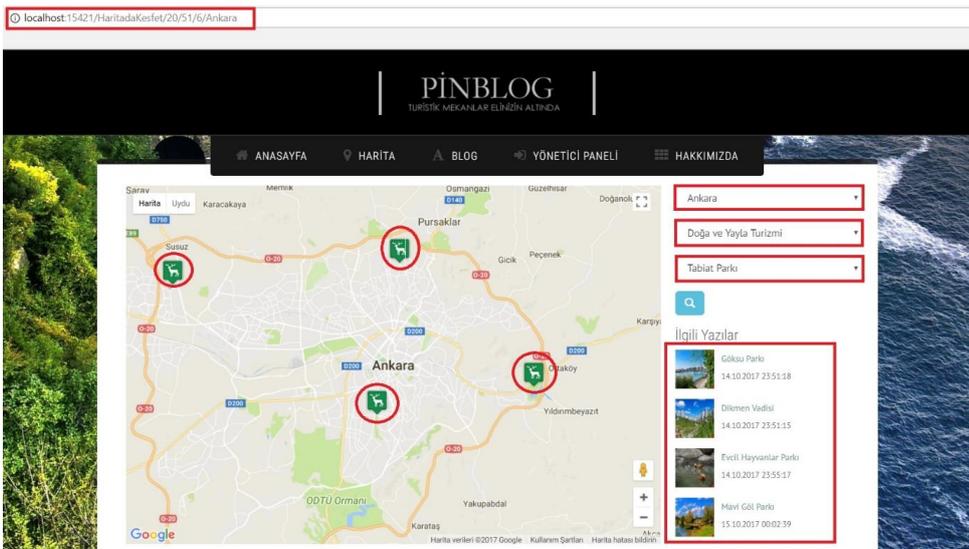


Figure 24 Locations based on selected criteria, as displayed on the map

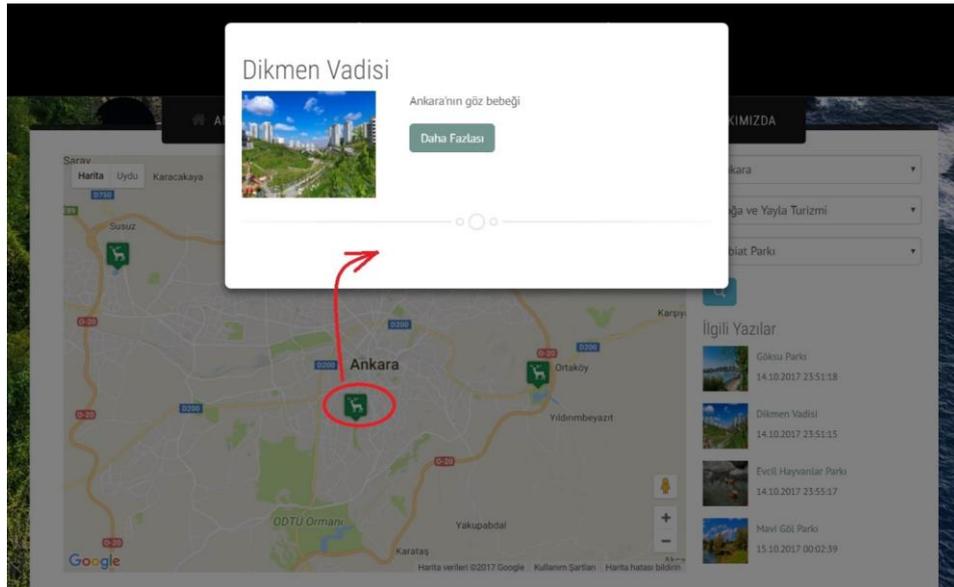


Figure 25 Information about the marker, displayed when one of the markers is clicked

localhost:15421/HaritadaKesfet/20/51/6/Ankara

Figure 26 Form of the link to any article

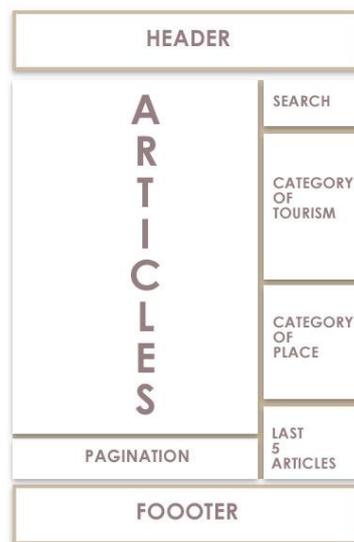


Figure 27 Layout of the article list page, consisting of six sections

Damlataş Mağarası

pinaryıldırım 22.10.2017 22:35:03 Mağara Turizmi Mağara Antalya 1 yorum



4 bin astım hastasına şifa olan özel bir mağara

Daha Fazlası

Figure 28 Each article includes a title, author, date, summary, link, and image

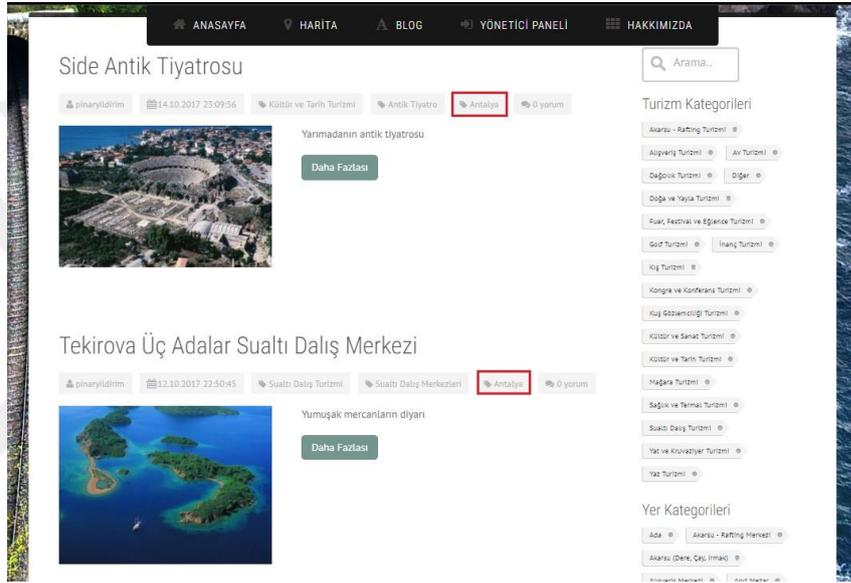


Figure 29 Clickable tags for the tourism type, the location type and the province

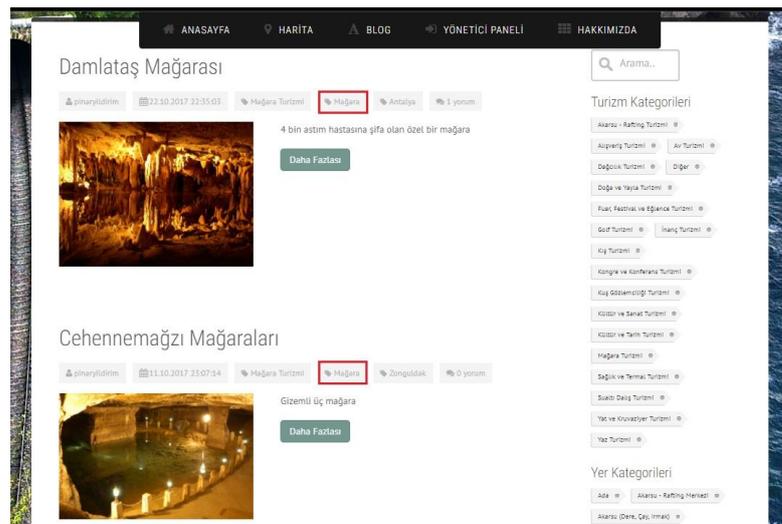


Figure 30 A list of relevant articles, displayed when the "Mağara Turizmi" tag is clicked

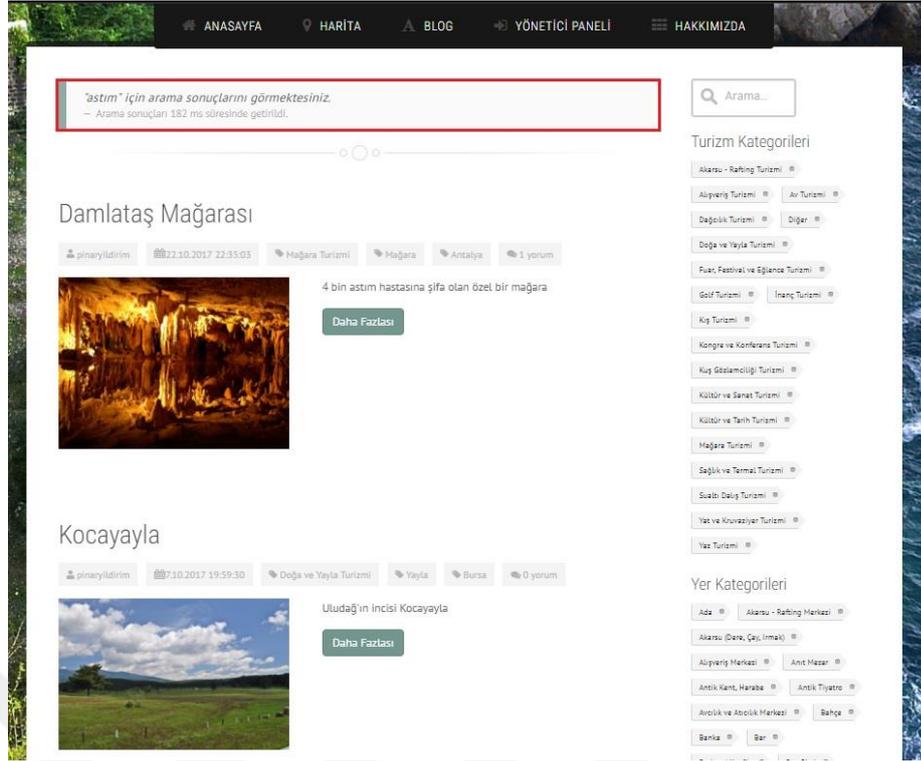


Figure 31 Information on how long a search took, given in milliseconds



Figure 32 Layout of the chosen article, consisting of four main sections

Damlataş Mağarası

pinaryıldırım 23.10.2017 21:02:00 Mağara Turizmi Mağara Antalya 1 yorum

Damlataş Mağarası, Antalya'nın Alanya ilçesinde deniz kıyısında bir mağardır. Alanya şehir merkezine 3 km uzaklıkta ve tarihi Alanya Kalesi'nin batı kısmında bulunmaktadır.

1948 yılında liman inşaatında kullanılmak üzere taş ocağı olarak tespit olunan bugünkü yerinde, bir dinamit ateşlenmesi sonucu bulunmuştur. Birbirinden güzel binlerce sarkıt ve dikitlerle süslü bu mağara hemen koruma altına alınıp mağara hakkında araştırmalara başlanmıştır ve turizme açılmıştır. Damlataş Mağarası, Türkiye'nin turizme açılan ilk mağarasıdır.



Yorumlar



1 taşla 3 kuş

Alanya'nın turistik bir değeridir. Astım hastaları için reçete ile önerilen mağara Küçük bir alana çok uzun bir geçmişe sahip Alanya kalesinin altında ve Kleopatra plajının yanında Bu üçgende 1 taşla 3 kuş

27.10.2017 23:34:39 Pinar

Figure 33 Page giving details of an article about Damlataş Cave

Yorumlar

Yazı hakkında yorum yapılmamıştır. Yazı için ilk yorumu siz yapabilirsiniz.

Yorum bırakınız

Adınız
Pinar ✓

Eposta
pinaryıldirim.egitim@gmail.com ✓

Yorum Başlığı
1 taşla 3 kuş ✓

Yorum
Alanya'nın turistik bir değeridir.
Astım hastaları için reçete ile önerilen mağara
Küçük bir alana çok uzun bir geçmişe sahip
Alanya kalesinin altında ve Kleopatra plajının yanında
Bu üçgende 1 taşla 3 kuş ✓

Gönder

Mağara Maasir
Medrese Mesit
Milli Park Müze Obruk
Ören Yeri Park Pazar
Plaj Saat Sani
Sarı Evi Sarı Merkez
Saray Sinagog Sinema
Su Parkı Suatı Dalgı Merkezleri
Sür Şeale Tabiat Parkı
Tıpınak Tema ve Eğlence Parkı
Tape Tiyatro Traverten
Tren Garı
Türizm Danışma Bürosu Türle
Yayla Yeraltı Şelali

En Son Girilen Yazılar

Damlataş Mağarası
23.10.2017 21:02:00

Dolmabahçe Sarayı
20.10.2017 23:26:56

Camili Bucağı
20.10.2017 23:19:05

Pirinç Han
20.10.2017 22:53:11

Figure 34 Comment form for users to complete after reading the article

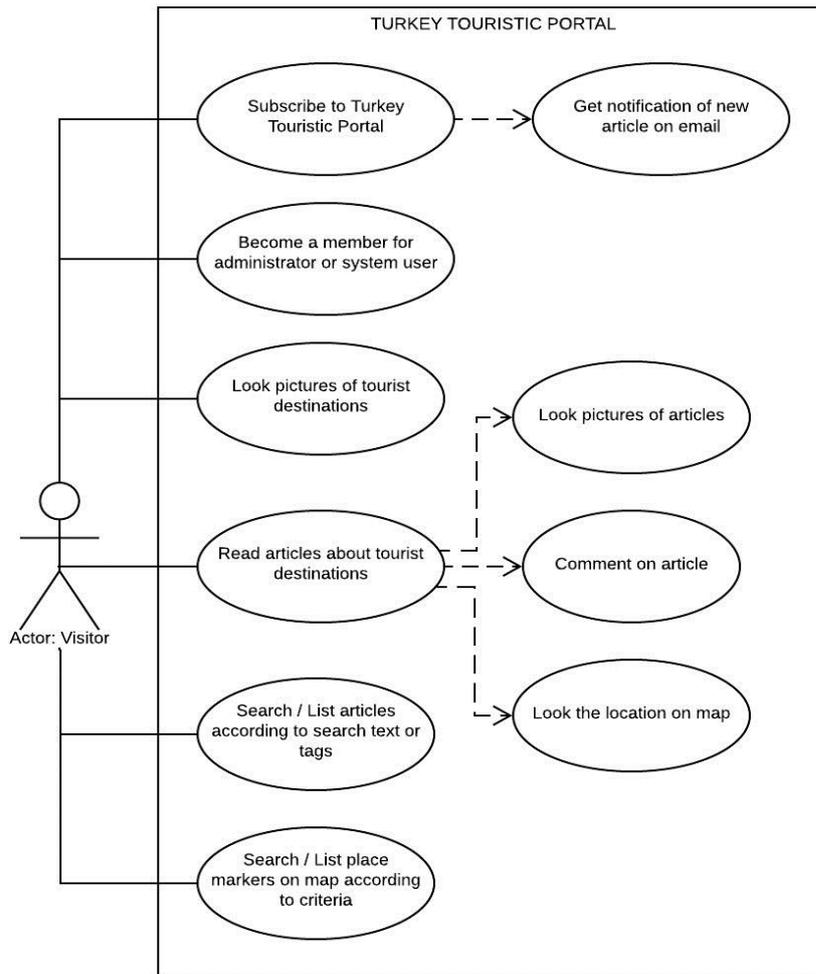


Figure 35 Use case diagram for the Turkey Tourist Portal

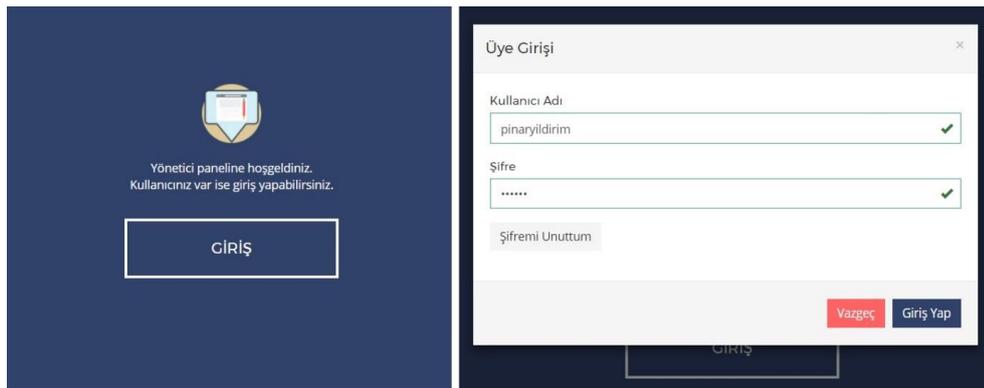


Figure 36 The two different types of users of the system

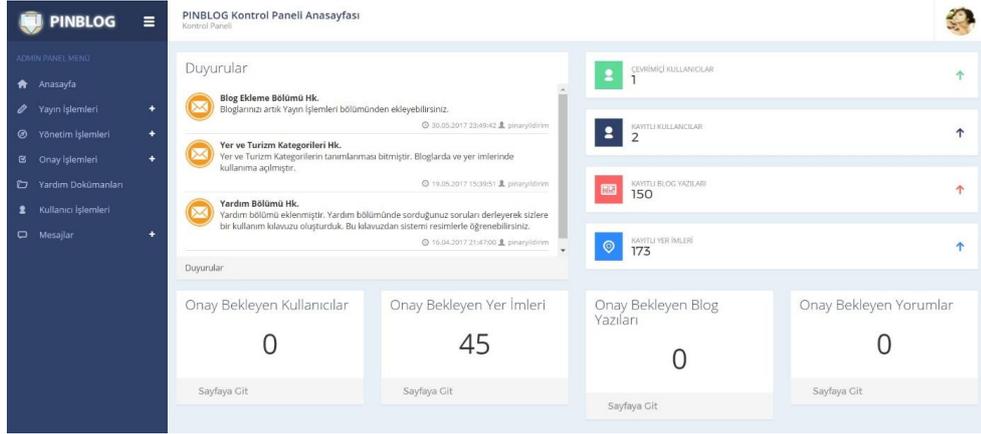


Figure 37 Homepage of the system control panel

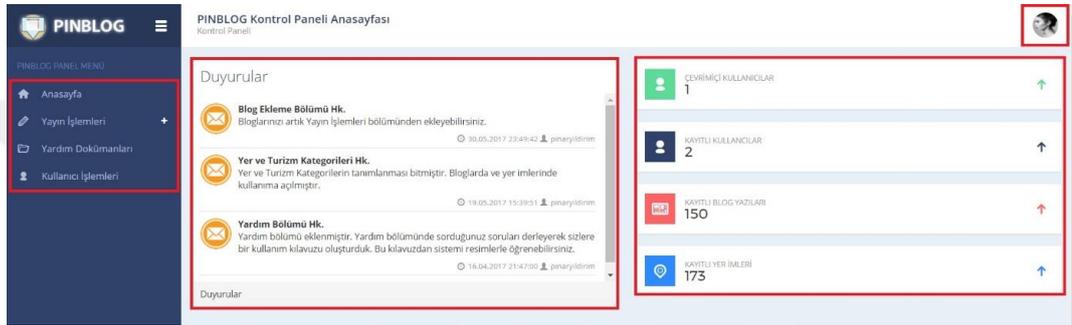


Figure 38 Variation in the control panel depending on the type of user



Figure 39 Variation in submenu items of sidebar menu depending on the type of user

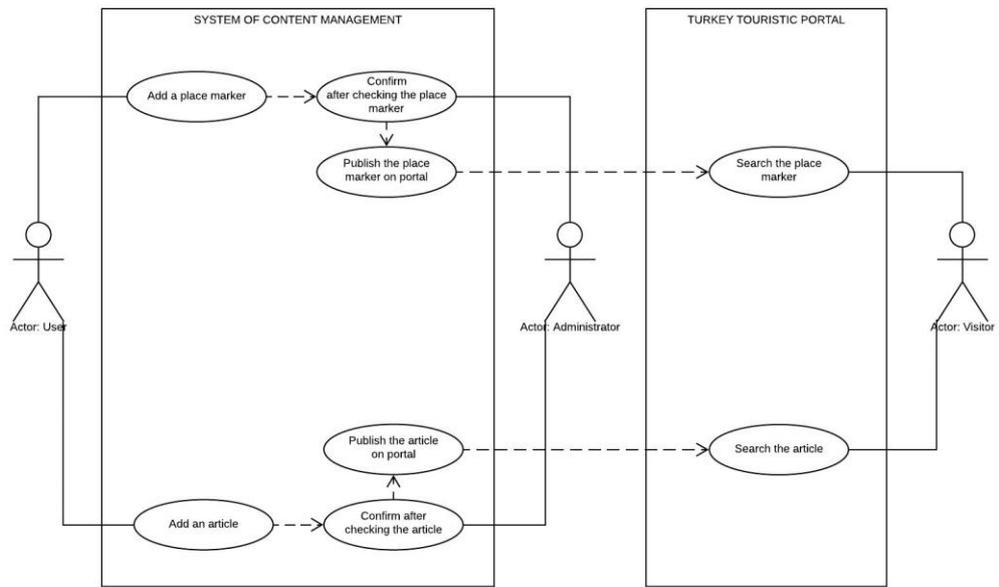


Figure 40 Use case diagram of the Turkey Tourist Portal and content management system

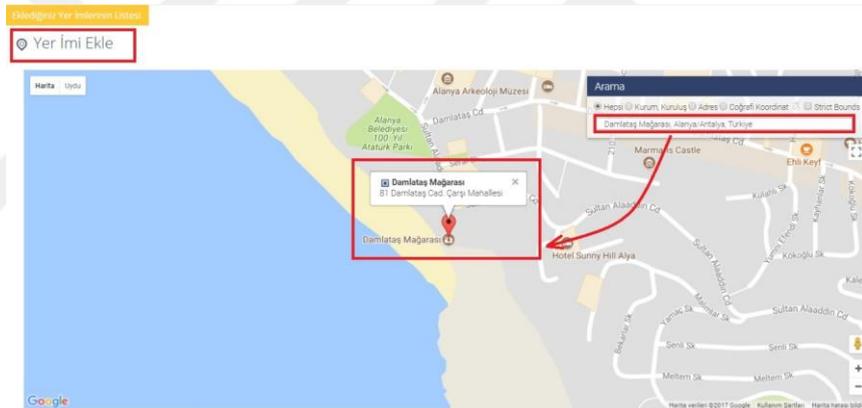


Figure 41 Location selected from list of suggestions from the search engine

Yeni Yerimi Ekleme Formu

Enlem Değeri: 36.541855000867855 ✓

Boylam Değeri: 31.98866844177246 ✓

Yer İsmi: Damlatış Mağarası ✓

Adres: Çarşı Mahallesi, Sultan Alaaddin Cd. No:1, 07400 Alanya/Antalya, Türkiye ✓

Yer Kategorisi: Mağara

KAYDET

Figure 42 Popup window showing latitude, longitude, location name and address of chosen marker

Sistemde Kayıtlı Yerimleriniz

Sayfada 10 kayıt göster

Ara: damlatış

Yer İsmi	Adres	Yer Kategorisi	Eklendiği Tarih	Onaylandığı Tarih	Durum	İşlem
Akdamar Adası	Akdamar Mahallesi, 65700 Gevaş/Van, Türkiye	Ada	11.10.2017 22:36:58	11.10.2017 22:37:09	ONAYLANDI	Sil
Damlatış Mağarası	Çarşı Mahallesi, Sultan Alaaddin Cd. No:1, 07400 Alanya/Antalya, Türkiye	Mağara	22.10.2017 22:12:58		BEKLEMEDE	Onayla Sil

2 kayıttan 1 - 2 arasındaki kayıtlar gösteriliyor (219 kayıt içerisinde bulunan)

Önceki 1 Sonraki

Figure 43 List of added markers

Eklediğiniz Yazıların Listesi

Blog Ekle

Başlık: Damlatış Mağarası

Özet: 4 bin astım hastasına şifa olan özel bir mağara ✓

Yer İsmi: Damlatış Mağarası ✓

Turizm türü: Mağara Turizmi ✓

Fotoğraflar: Dosyaları Seç 3 dosya ✓

Blog Yazısı:

Toplam uzunluğu 30m. olan mağara kuru, yatay mağara tipindedir; 200 m.lik bir alanı kaplamaktadır. Mağaranın kapısından içeri girince 45-50 m uzunluğunda bir geçit; 13-14 m çapında ve 15 m yüksekliğinde silindirik bir boşluk, ayrıca 15000 senede oluşmuş sütunlar vardır. Mağaranın iki katlı olan bölüğü 2500 metrelik hava itihava etmektedir. İçindeki ısı 22.3 derecedir. Mutlak nem 19.6 derece nispi nem %98'dir. Mağara dış tesislerden alınmış olup havasında bol miktarda ast karbonik vardır. Hava basıncı deniz seviyesinden biraz aşağıda olmasına rağmen 760 mm dir.

Mağara bölüğünün tamamı 180-200 metrekaredir. Mağara etrafındaki kalınlık 10 m'yi bulduğu için çökme ihtimali yoktur. Senenin 5-6 ayında devamlı damlar. Mağaradaki sarkit ve dikitlerin I.O. 20.000-15.000 yılları arasında meydana geldiği sanılmaktadır. Türkiye'nin turizme açılan ilk mağarasıdır.

Mağaranın Tıbbi Fonksiyonu : Mağaranın astıma iyi gelen dört vasfı olduğu tespit edilmiştir. Mağaranın ortasında bulunan normalde 8-10 misi fazla karbondioksit, yüksek oranda nem, alçak sühnet, radyoaktif gibi unsurların ilksinin astıma iyi geldiği, diğer ikisinin de yardımcı faktor olarak kabul edildiği bilinmektedir.

Alanya'ya tedavi için gelen hastaların, öncelikle bir doktordan mağaraya girmesinde bir sakınca olmadığına dair rapor alarak, mağaranın ilgili memuruna baş vurması gerekmektedir. Tedavi süresince sembolik bir ücret ödenir.

KAYDET

Figure 44 After checking form elements, the article is saved

Sistemde Kayıtlı Yazılarınız

Sayfada 10 kayıt göster

Ara: [id]

Başlık	Özet	Eklendiği Tarih	Onaylandığı Tarih	Durum	İşlem
Adapazarı Deprem ve Kültür Müzesi	Türkiye'nin ilk deprem müzesi	11.10.2017 15:47:30	11.10.2017 15:49:04	ONAYLANDI	Sil
Akdamar Adası	Bir hüznün hikayesine sahip olan ada	11.10.2017 22:44:37	11.10.2017 22:47:09	ONAYLANDI	Sil
Anemurium Antik Kenti	Baharda görülesi bir antik yer	9.10.2017 20:34:22	9.10.2017 20:43:25	ONAYLANDI	Sil
Ardahan Kalesi	Tarihi millattan önceye dayanan kale	12.10.2017 20:53:35	12.10.2017 20:54:55	ONAYLANDI	Sil
Atatürk Arboretum	Beton bir çöle dönen İstanbul'da Atatürk Arboretumu bir vaha	7.10.2017 20:20:50	7.10.2017 20:21:42	ONAYLANDI	Sil
Ayvalık Turizm Danışma Bürosu	Ayvalık ile ilgili tüm bilgiler bu merkezde	14.10.2017 16:23:48	14.10.2017 16:24:27	ONAYLANDI	Sil
Büyüğü Fener Sineması (Bahçelievler)	Ankara'da tarihi bir sinema	14.10.2017 15:07:04	14.10.2017 15:11:02	ONAYLANDI	Sil
Cilo Dağı	Ülkemizin ikinci büyük dağı, dağcıların gözdesi	9.10.2017 20:49:13	9.10.2017 20:49:52	ONAYLANDI	Sil
Cumhuriyet Müzesi	1924-1960 yılları arasında TBMM faaliyetlerinin gerçekleştiği bina	14.10.2017 23:44:00	14.10.2017 23:44:09	ONAYLANDI	Sil
Damlataş Mağarası	4 bin astım hastasına şifa olan özel bir mağara	22.10.2017 22:53:03	23.10.2017 21:02:00	BİRLİKTE	Değiştir Sil

43 kayıttan 1 - 10 arasındaki kayıtlar gösteriliyor (151 kayıt içerisinde bulunun)

Önceki 1 2 3 4 5 Sonraki

Figure 45 Each user can view the added articles on the list and their status

Yeni Menü Ekle

Sistemde Kayıtlı Menüler

Sayfada 10 kayıt göster

Ara: [id]

Menü Adı	Açıklama	Üst Menü	Durum	İşlem
Aboneler	PinBlog yazılarını takip etmek isteyen kişiler elektronik postalarına yeni yazılar haber verilmektedir.	Mesajlar	AKTİF	Değiştir Sil Detay
Anasayfa	Yeni kullanıcıları, yeni blogları ve yeni yer imlerinin görülebileceği bir dashboard ekler.	Ana Menü	AKTİF	Değiştir Sil Detay
Anasayfa Kayan Yatay Resmi	Anasayfada kayan yatay resimleri ekleyebilir ve silebilirsiniz.	Yönetim İşlemleri	AKTİF	Değiştir Sil Detay
Arka Plan Resmi	Pinblog sitesinin arka plan resmini değiştirmenizi eklemenizi sağlamaktadır.	Yönetim İşlemleri	AKTİF	Değiştir Sil Detay
Blog Ekle	Turistik mekanları anlatan blog ekleme menüsüdür.	Yayın İşlemleri	AKTİF	Değiştir Sil Detay
Blog Onaylama	Blog uygun ise onaylanır yoksa silinir.	Onay İşlemleri	AKTİF	Değiştir Sil Detay
Duyurular	Kullanıcılara yönlendirici duyurular eklenir, silinir ve değiştirilir.	Yönetim İşlemleri	AKTİF	Değiştir Sil Detay
Kullanıcı İşlemleri	Bilgilerini düzenleyebildikleri alandır.	Ana Menü	AKTİF	Değiştir Sil Detay
Kullanıcılar	Menü eklenir, silinir ve değiştirilir.	Yönetim İşlemleri	AKTİF	Değiştir Sil Detay
Menü Kategorisi	Sistem kullanıcılarının görebileceği menüler eklenir, silinir ve değiştirilir.	Yönetim İşlemleri	AKTİF	Değiştir Sil Detay

22 kayıttan 1 - 10 arasındaki kayıtlar gösteriliyor

Önceki 1 2 3 Sonraki

Figure 46 Sortable and searchable list of menus

Menü Güncelleme Formu

Menü Adı
Aboneler

Açıklama
PinBlog yazılarını takip etmek isteyen kişiler elektronik postalarına yeni yazılar haber verilmektedir.

Link
/AdminPanel/Mesaj/Aboneler

Simge
typcn typcn-heart-full-outline

Eklenen menü bir Alt Menü'dür.

Üst Menü
Mesajlar

Roller
AdminUser
User

Aktif

GÜNCELLE

Figure 47 After checking all form elements, the menu is saved

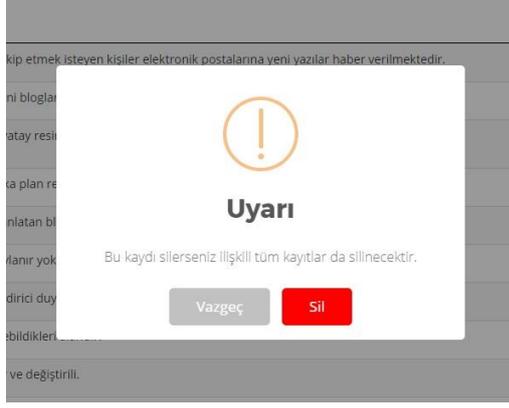


Figure 48 A confirmation window asks users to confirm deletion of the menus

Menü Detay Formu	
Oluşturan Kullanıcı	pinaryıldırım
Oluşturulduğu Tarih	16.04.2017 21:47:00
Değiştiren Kişi	pinaryıldırım
Değiştirildiği Tarih	03.06.2017 22:45:25

Kapat

Figure 49 All information is displayed in the menu detail form

Yeni Rol Ekle

Sistemde Kayıtlı Roller

Sayfada 10 kayıt göster

Ara:

Rol Adı	Açıklama	Durum	İşlem
AdminUser	Sistem Yöneticisi olarak rol, kullanıcı, harita yer imi ve blog ekler, değiştirir ve yeniler.	AKTIF	Değiştir Sil Detay
User	Sistem Kullanıcısı olarak blog ve harita yer imi ekler.	AKTIF	Değiştir Sil Detay

2 kayıttan 1 - 2 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 50 Sortable and searchable list of user roles

Rol Güncelleme Formu

Rol Adı

AdminUser

Açıklama

Sistem Yöneticisi olarak rol, kullanıcı, harita yer imi ve blog ekler, değiştirir ve yeniler.

Aktif

GÜNCELLE

Figure 51 After checking all form elements, the user role is saved

Rol Detay Formu

Oluşturan Kullanıcı	pinaryildirim
Oluşturulduğu Tarih	26.04.2017 23:45:11
Değiştiren Kişi	pinaryildirim
Değiştirildiği Tarih	01.05.2017 20:10:49

[Kapat](#)

Figure 52 All information is displayed in the user role detail form

[Yeni Kullanıcı Ekle](#)

Sistemde Kayıtlı Kullanıcılar

Sayfada 10 kayıt göster

Ara:

Fotoğraf	Kullanıcı Adı	Ad Soyad	E-Mail	Rolü	Durum	İşlem
	pinaryildirim	Pelin Yıldırım	pelyildirim@hotmail.com	User	AKTIF	Değiştir Sil Detay
	pinaryildirim	Pinar Yıldırım	pinaryildirim.egitim@gmail.com	AdminUser	AKTIF	Değiştir Sil Detay

2 kayıttan 1 - 2 arasındaki kayıtlar gösteriliyor

Önceki [1](#) Sonraki

Figure 53 Sortable and searchable list of all users

Yeni Kullanıcı Ekleme Formu

Ad Soyad: Seray MASTI ✓

Kullanıcı Adı: seraymasti ✓

Şifre: ✓

Email: seraymasti@1.com ✓

Rolü: User

Fotoğraf: Dosya Seç seray.JPG ✓

Aktif

[KAYDET](#)

Figure 54 After checking all form elements, the new user is saved

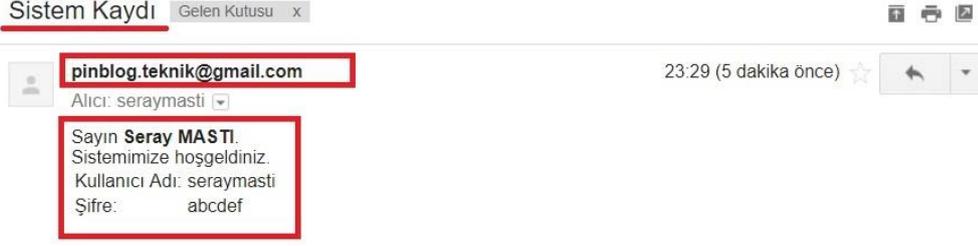


Figure 55 After a user is added by an administrator, the information is sent to the new user's email

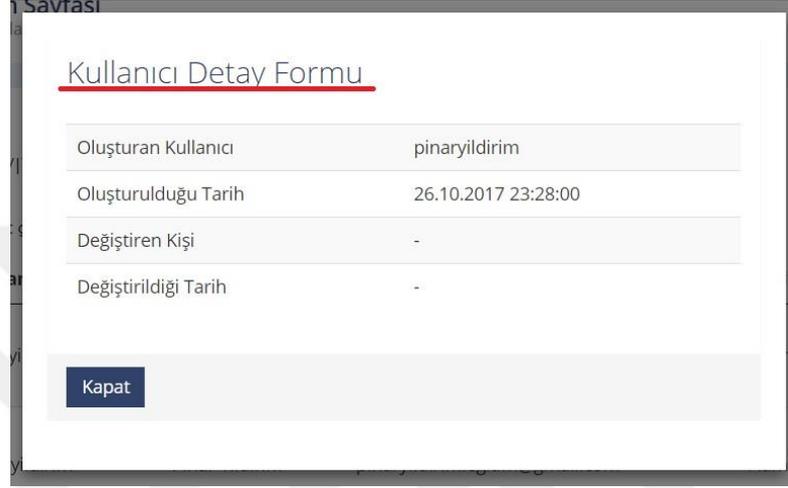


Figure 56 All information is displayed in the user detail form

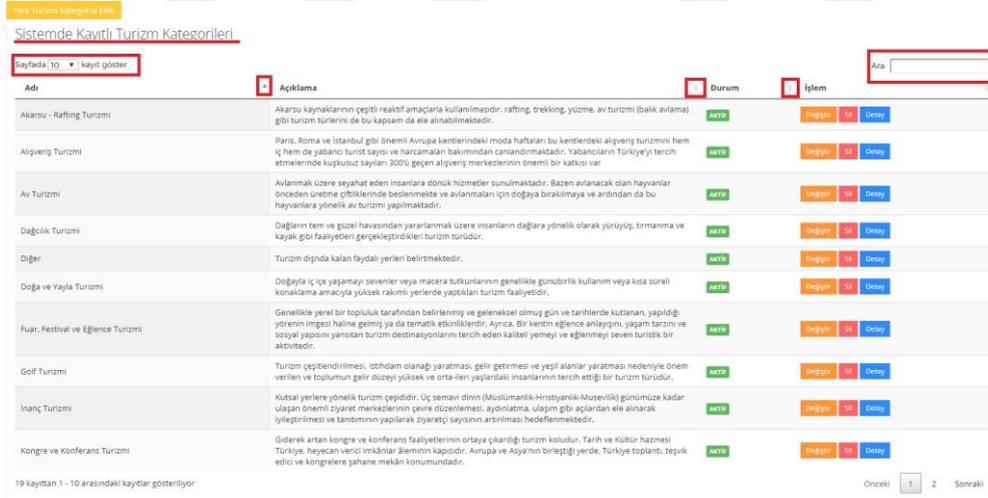


Figure 57 Sortable and searchable list of all tourism types

Turizm Kategorisi Güncelleme Formu

İsmi
Akarsu - Rafting Turizmi

Açıklama
Akarsu kaynaklarının çeşitli reaktif amaçlarla kullanılmasıdır. rafting, trekking, yüzme, av turizmi (balık avlama) gibi turizm türlerini de bu kapsam da ele alınabilmektedir.

Aktif

GÜNCELLE

Figure 58 After checking all form elements, the type of tourism is updated

Turizm Kategorisi Detay Formu

Oluşturan Kullanıcı	pinaryildirim
Oluşturulduğu Tarih	17.05.2017 23:30:25
Değiştiren Kişi	pinaryildirim
Değiştirildiği Tarih	19.05.2017 14:11:42

Kapat

Figure 59 All information is displayed in the tourism type detail form

Sistemde Kayıtlı Yer Kategorileri

Sayfada: 10 kayıt göster

Adı	Açıklama	Simge	Durum	İşlem
Ada	Deniz, göl ya da akarsuda bulunan, dört bir yanı su ile çevrili kara parçasıdır.	sunsetland	AKTIF	Değiştir Sil Düzenle
Akarsu (Dere, Çay, İrmak)	Yeryüzünde, yer altında belirli bir yatak içinde, eğim boyunca sürekli veya zaman zaman akan sudur. Çoğunlukla tatlı sudan oluşan akarsular, tatlı su gölleriyle birlikte insanlığın temel su ihtiyacını karşılamak için kullanılırlar. Bunun yanında gıda, enerji ve turizm sektörleri tarafından da kullanılırlar.	river	AKTIF	Değiştir Sil Düzenle
Akarsu - Rafting Merkezi	Bottarla ya da sallarla debisi yüksek nehirlerde yapılan bir nehir sporunun merkezidir.	watercraft	AKTIF	Değiştir Sil Düzenle
Alışveriş Merkezi	Çeşitli ürünlerin satışı konusunda genelde bir firma bünyesinde bazen de kooperatif olarak faaliyet gösteren büyük satış mağazasıdır.	shopping-center	AKTIF	Değiştir Sil Düzenle
Antik Kent, Harabe	Eski çağlardan günümüze kadar gelen kentlerdir.	antique-city	AKTIF	Değiştir Sil Düzenle
Antik Tiyatro	MÖ 550 ile MÖ 220 arasında antik Yunanistarı da gelişen bir tiyatro geleneğinin sergilendiği mekandır.	amphitheater	AKTIF	Değiştir Sil Düzenle
Anıt Mezar	Önemli bir olayda ya da tarihsel bir dönemde yaşamış önemli bir kişinin anısını canlı tutmaktır.	monument	AKTIF	Değiştir Sil Düzenle
Avcılık ve Atıcılık Merkezi	Avcılık ve Atıcılık sporlarının yapıldığı merkezdir.	hunting	AKTIF	Değiştir Sil Düzenle
Bahçe	Aynı ayın ya da kangik olarak içinde çiçek, çim, ağacı yettirilen çevresi çit ya da benzeri bir şeyle çevrili toprak parçası ya da yeşil alandır.	national-park	AKTIF	Değiştir Sil Düzenle
Banka	Fazile para alınıp verilebilen, kredi, kasalarında para, değerli belge, eya saklayan ve bunun dışındaki diğer ticari işlemler yapabilen yerdir.	bank	AKTIF	Değiştir Sil Düzenle

79 kayıttan 1 - 10 arasındaki kayıtlar gösteriliyor

Önceki 1 2 3 4 5 ... 8 Sonraki

Figure 60 Sortable and searchable list of all location types

Yer Kategori Güncelleme Formu

İsmi
Ada

Açıklama
Deniz, göl ya da akarsuda bulunan, dört bir yanı su ile çevrili kara parçasıdır.

Simge
sunsetland

Turizm Türü
 Mağara Turizmi
 Sağlık ve Termal Turizmi
 Sualtı Dalış Turizmi
 Yat ve Kruvaziyer Turizmi
 Yaz Turizmi

Aktif

GÜNCELLE

Figure 61 After checking all form elements, the type of location is updated

Yer Kategorisi Detay Formu

Oluşturan Kullanıcı: pinaryildirim

Oluşturulduğu Tarih: 11.10.2017 22:36:08

Değiştiren Kişi: -

Değiştirildiği Tarih: -

Kapat

Figure 62 All information is displayed in the location type detail form

Yeni Duyuru Ekle

Sistemde Kayıtlı Duyurular

Sayfada 10 kayıt göster

Ara:

Başlık	İçerik	Sırası	Durum	İşlem
Blog Ekleme Bölümü Hk.	Bloglarınızı artık Yayın İşlemleri bölümünden ekleyebilirsiniz.	3	AKTİF	Değiştir Sil Detay
Duyuru Bölümü Hk.	Duyurular bölümü eklenmiştir. Duyurular bölümünde yaptığımız yenilikleri bulabilirsiniz.	3	AKTİF	Değiştir Sil Detay
Yardım Bölümü Hk.	Yardım bölümü eklenmiştir. Yardım bölümünde sorduğunuz soruları derleyerek sizlere bir kullanım kılavuzu oluşturduk. Bu kılavuzdan sistemi resimlerle öğrenebilirsiniz.	1	AKTİF	Değiştir Sil Detay
Yer ve Turizm Kategorileri Hk.	Yer ve Turizm Kategorilerin tanımlanması bitmiştir. Bloglarda ve yer imlerinde kullanıma açılmıştır.	2	AKTİF	Değiştir Sil Detay
Yerimi Ekleme Bölümü Hk.	Turistik mekanların yerimlerini Yayın İşlemleri altında Yerimi Ekle bölümünden ekleyebilirsiniz	1	AKTİF	Değiştir Sil Detay

5 kayıttan 1 - 5 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 63 Sortable and searchable list of announcements

Savfası

Duyuru Güncelleme Formu

Başlık
Yerimi Ekleme Bölümü Hk.

İçerik
Turistik mekanların yerimlerini Yayın İşlemleri altında Yerimi Ekle bölümünden ekleyebilirsiniz

Duyuru Sırası 1

Aktif

GÜNCELLE

Kılavuzu oluşturduk. Bu kılavuzdan sistemi resimlerle öğrenebilirsiniz.

Figure 64 After checking all form elements, the announcement is updated

Savfası

Duyuru Detay Formu

Oluşturan Kullanıcı	pinaryildirim
Oluşturulduğu Tarih	30.05.2017 23:49:42
Değiştiren Kişi	pinaryildirim
Değiştirildiği Tarih	27.10.2017 14:47:15

Kapat

Figure 65 All information is displayed in the article detail form

Tüm Anasayfa Kayan Yatay Resimleri Göster

Sistemde Kayıtlı Anasayfa Kayan Yatay Resim

Sayfada 10 kayıt göster

Arta:

Anasayfa Kayan Yatay Resmi	Durum	Fotoğraf Adı	İşlem
	AKTİF	Neveşehir - Kapadokya	Sil Detay
	AKTİF	Amasya Yeşilirmak Vadisi	Sil Detay
	AKTİF	Adıyaman - Nemrut	Sil Detay
	AKTİF	Balıkesir - Marmas Kuş Cenneti	Sil Detay
	AKTİF	Ağrı - Doğu Bayazıt	Sil Detay
	AKTİF	Şanlıurfa - Göbeklitepe	Sil Detay

6 kayıttan 1 - 6 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 66 Sortable and searchable list of all images in the carousel slider

Yeni Anasayfa Kayan Yatay Resmi
Ekleme Formu

Kayan yatay resim boyutları **1080px x 300px** olmalıdır.

Fotoğraf Adı
Şanlıurfa - Göbeklitepe ✓

Fotoğraf
Dosya Seç sanliurfa-gobeklitepe.jpg ✓

Aktif

KAYDET

Figure 67 Insertion form for new image for the carousel slider

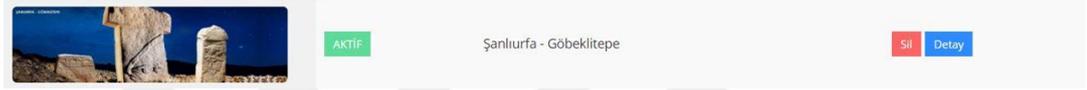


Figure 68 The saved image is located at the bottom of the list



Figure 69 The new image is displayed within the carousel slider on the front page of the Turkey Tourist Portal

Anasayfa Kayan Yatay Resmi Detay Formu

Oluşturan Kullanıcı	pinaryildirim
Oluşturulduğu Tarih	27.10.2017 16:29:32
Değiştiren Kişi	-
Değiştirildiği Tarih	-

Kapat

Figure 70 Detail form for a new image for the carousel slider

Yeni Arka Plan Resmi Ekle

Sistemde Kayıtlı Arka Plan Resimleri

Sayfa 1/10 | kayıt göster

Arka Plan Resmi	Durum	Fotoğraf Adı	İşlem
	FAHİR	Rize - Hamsiköy	FAHİR DETAY
	FAHİR	İstanbul - Sultan Ahmet Camii	FAHİR DETAY
	FAHİR	Trabzon - Uzungöl	FAHİR DETAY
	FAHİR	Zonguldak - Demiryolları	FAHİR DETAY
	FAHİR	Trabzon - Çal Mağarası	FAHİR DETAY
	FAHİR	Nevşehir - Kapadokya	FAHİR DETAY
	FAHİR	Balıkesir - Akçay	FAHİR DETAY
	FAHİR	Bartın - Hasankeyf	FAHİR DETAY
	FAHİR	İstanbul - Kız Kulesi	FAHİR DETAY

9 kayıttan 1 - 9 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 71 Sortable and searchable list of all images for the carousel slider

Yeni Arka Plan Resmi Ekleme Formu

Kayan yatay resim boyutları **1920px x 900px** olmalıdır.

Arka Plan Resmi Adı

✓

Fotoğraf

trabzon-ayderyaylasi.jpg ✓

Aktif

KAYDET

Figure 72 Insertion form for a new background image



Figure 73 The saved image is located at the bottom of the list



Figure 74 The new image is displayed in the background of the Turkey Tourist Portal

Arka Plan Resmi Detay Formu

Oluşturan Kullanıcı	pinaryildirim
Oluşturulduğu Tarih	27.10.2017 17:20:21
Değiştiren Kişi	-
Değiştirildiği Tarih	-

[Kapat](#)

Figure 75 Detail form of new background image

Sistemde Onay Bekleyen Kayıtlı Bloglar

Sayfada kayıt göster

Ara:

Blog Başlığı	İçerik	Turizm Türü	Yazarı	Oluşturduğu Tarih	İşlem
<u>Damlataş Mağarası</u>	4 bin astım hastasına şifa olan özel bir mağara	Mağara Turizmi	pinaryildirim	22.10.2017 22:35:03	Değiştir Sil Onayla

1 kayıttan 1 - 1 arasındaki kayıtlar gösteriliyor

Önceki Sonraki

Figure 76 Sortable and searchable list of all unapproved articles

Yazı Güncelleme Formu

Başlık

Özet

Yer İmi

Turizm türü

Yazı İçeriği

B **U** **A** Open sans **A** **?**

Damlataş Mağarası, Antalya'nın Alanya ilçesinde deniz kıyısında bir mağaradır. Alanya şehir merkezine 3 km uzaklıkta ve tarihi Alanya Kalesi'nin batı kıyısında bulunmaktadır.

1948 yılında liman inşaatında kullanılmak üzere taş ocağı olarak tespit olunan bugünkü yerinde, bir dinamit ateşlenmesi sonucu bulunmuştur. Birbirinden güzel binlerce sarkıt ve diktitlerle süslü bu mağara hemen

GÜNCELLE

Figure 77 Update form for unapproved article before publishing

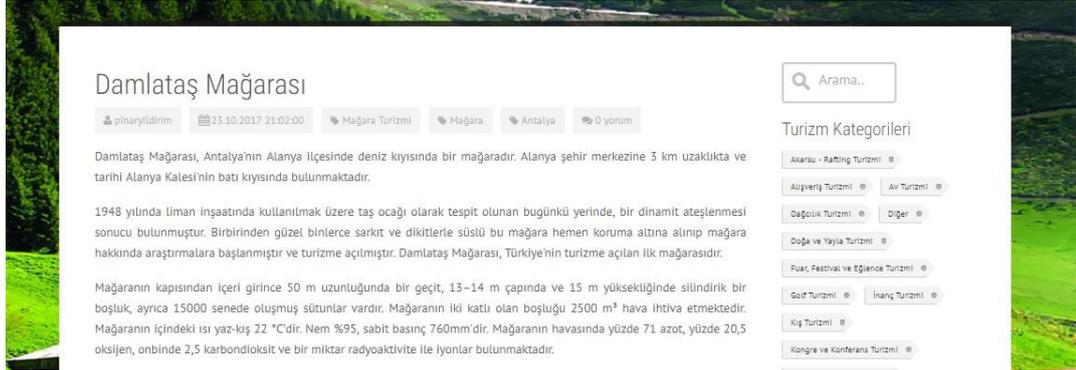


Figure 78 Any article confirmed in the content management system is published on the Turkey Tourist Portal



Figure 79 An email is sent to the subscribers of the Turkey Tourist Portal when any article is approved

Sistemde Onay Bekleyen Kayıtlı Yorumlar

Sayfada 10 kayıt göster

Ara:

Yorum Başlığı	İçerik	Yazarı	Oluşturduğu Tarih	İşlem
1 taşla 3 kuş	Alanya'nın turistik bir değeridir. Astım hastaları için reçete ile önerilen mağara Küçük bir alana çok uzun bir geçmişe sahip Alanya kalesinin altında ve Kleopatra plajının yanında Bu üçgende 1 taşla 3 kuş	Pinar	27.10.2017 22:35:29	   

1 kayıttan 1 - 1 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 80 Sortable and searchable list of all unapproved comments

Yorum Güncelleme Formu

Başlık

İçerik

Figure 81 Update form for unapproved comment before publishing

Yorumlar

	1 taşla 3 kuş Alanya'nın turistik bir değeridir. Astım hastaları için reçete ile önerilen mağara Küçük bir alana çok uzun bir geçmişe sahip Alanya kalesinin altında ve Kleopatra plajının yanında Bu üçgende 1 taşla 3 kuş	27.10.2017 23:34:39 Pinar
---	---	---------------------------

Figure 82 Any comment confirmed in the content management system is published on the Turkey Tourist Portal

Sistemde Onay Bekleyen Kayıtlı Yerimleri

Sayfada 10 kayıt göster

Ara:

Yer ismi	(Enlem,Boylam)	Yer Türü	Ekleyen Kullanıcı	Eklendiği Tarih	İşlem
Altındağ Belediyesi Karapürçek Su Parkı	(39,9726577235849 , 32,9744446277618)	Su Parkı	pinaryildirim	20.10.2017 23:55:59	<input type="button" value="Değiştir"/> <input type="button" value="Sil"/> <input type="button" value="Onayla"/>
Damlataş Mağarası	(36,5418550008679 , 31,9886684417725)	Mağara	pinaryildirim	22.10.2017 22:12:58	<input type="button" value="Değiştir"/> <input type="button" value="Sil"/> <input type="button" value="Onayla"/>

2 kayıttan 1 - 2 arasındaki kayıtlar gösteriliyor (46 kayıt içerisinde bulunun)

Önceki 1 Sonraki

Figure 83 Sortable and searchable list of all unapproved location markers

Yerimi Güncelleme Formu

Yer Ismi

Adres

GÜNCELLE

Figure 84 Update form for unapproved location marker before publishing



Figure 85 Any location marker confirmed in the content management system is published on the Turkey Tourist Portal

PINBLOG Yardım Sayfası

PINBLOG PANEL MENÜ

- Anasayfa
- Yayın İşlemleri
- Yönetim İşlemleri
- Onay İşlemleri
- Yardım Dokümanları
- Kullanıcı İşlemleri
- Mesajlar

PINBLOG Sistemi Yardım Word Belgesi

Ad: PinBlog Sistemi Yardım Dokümanı
Türü: DOCX

PINBLOG Sistemi Yardım PDF Belgesi

Ad: PinBlog Sistemi Yardım Dokümanı
Türü: PDF

Figure 86 User guide for the content management system in PDF and DOC formats

Kullanıcı Bilgileri Düzenleme Sayfası

Kullanıcı İşlemleri > Kullanıcı Yönetimi

- Bilgileri Gör
- Şifre Değiştir
- Eposta Değiştir

Figure 87 Three sections entitled “Bilgileri Gör”, “Şifre Değiştir” and “Eposta Değiştir”



Bilgileri Gör

Fotoğraf	
Kullanıcı Adı	pinaryildirim
Eposta	pinaryildirim.egitim@gmail.com
Kullanıcının Oluşturulduğu Tarih	26.04.2017 23:54:18

Şifre Değiştir

Eposta Değiştir

Figure 88 User information is displayed in the "Bilgileri Gör" accordion section



Şifre Değiştir

Mevcut Şifre
Şifre

Yeni Şifre
Şifre

Yeni Şifre - Tekrar
Şifre

KAYDET

Eposta Değiştir

Figure 89 "Şifre Değiştir" accordion section for changing a password



Eposta Değiştir

Email
pinaryildirim.egitim@gmail.com

KAYDET

Figure 90 "Eposta Değiştir" accordion section for changing a password

Üyelik İsteği Formu

PinBlog Yönetici Paneli'nde siz de bize katılmak ister misiniz?

Adınızı, soyadınızı, geçerli eposta adresinizi giriniz. Katılımlar geçmişlerinize göre yapıldığından geçmişlerinizi bizimle paylaşınız. Katılım değerlendirilmesi bittikten sonra sistemden sizlere haber verilecektir. Sizi aramızda görmekten onur duyarız.

Ad Soyad *

Harika Özbek ✓

Eposta *

harikaozbek@1.com ✓

Özgeçmiş *

Ankara Üniversitesi Türk Dili ve Edebiyatı bölümünde son sınıftayım. Daha önceden yerel bir gazete köşe yazarlığı yaptım. Dil bilgisine özen göstermekteyim. Ayrıca, hobi olarak fotoğrafçılık yapmaktayım. Tatillerde gezmeyi, yeni yerleri keşfetmeyi çok severim.

Gönder

Figure 91 User membership request form for content management system

Üyelik Mesajları

Sayfada 10 kayıt göster

Ara

Ad Soyad	Email	Özgeçmiş	Durum	Gönderi Tarihi	İşlem
Harika Özbek	harikaozbek@1.com	Ankara Üniversitesi Türk Dili ve Edebiyatı bölümünde son sınıftayım. Daha önceden yerel bir gazete köşe yazarlığı yaptım. Dil bilgisine özen göstermekteyim. Ayrıca, hobi olarak fotoğrafçılık yapıyorum. Tatillerde gezmeyi, yeni yerleri keşfetmeyi çok severim.	CEVAPLANMADI	28.10.2017 00:58:39	

1 kayıttan 1 - 1 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 92 Sortable and searchable list of images for the carousel slider

Cevap Yaz

Ad Soyad Harika Özbek

Email harikaozbek@1.com

Özgeçmiş Ankara Üniversitesi Türk Dili ve Edebiyatı bölümünde son sınıftayım. Daha önceden yerel bir gazete köşe yazarlığı yaptım. Dil bilgisine özen göstermekteyim. Ayrıca, hobi olarak fotoğrafçılık yapıyorum. Tatillerde gezmeyi, yeni yerleri keşfetmeyi çok severim.

Cevap

Üyeliliğiniz onaylanmıştır.
Kullanıcı adınız: harikaozbek
Şifre: harikaozbek1
Sisteme <http://localhost:15421/AdminPanel/Hesap/Login> bu bağlantıdan girebilirsiniz.

Gönder

Figure 93 Administrator response to a visitor asking to be a user of the system

pinblog.teknik@gmail.com 01:12 (0 dakika önce)

Alıcı: bana

Üyeliliğiniz onaylanmıştır. Kullanıcı adınız: harikaozbek Şifre: harikaozbek1 Sisteme <http://localhost:15421/AdminPanel/Hesap/Login> bu bağlantıdan girebilirsiniz.

Yanıtlamak veya Yönlendirmek için burayı tıklayın

Figure 94 An email is sent after the administrator's response to the user membership form

Üyelik Mesajları

Sayfada 10 kayıt göster

Ara

Ad Soyad	Email	Özgeçmiş	Durum	Gönderi Tarihi	İşlem
Harika Özbek	harikaozbek@1.com	Ankara Üniversitesi Türk Dili ve Edebiyatı bölümünde son sınıftayım. Daha önceden yerel bir gazete köşe yazarlığı yaptım. Dil bilgisine özen göstermekteyim. Ayrıca, hobi olarak fotoğrafçılık yapıyorum. Tatillerde gezmeyi, yeni yerleri keşfetmeyi çok severim.	CEVAPLANDI	28.10.2017 00:58:39	

1 kayıttan 1 - 1 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 95 The status of messages are displayed as CEVAPLANDI and CEVAPLANMADI

Üyelik Detay Formu

Cevap Veren Kullanıcı	pinaryıldırım
Cevap Verildiği Tarih	28.10.2017 01:12:40
Cevap	Üyeliğiniz onaylanmıştır. Kullanıcı adınız: harikaozbek Şifre: harikaozbek1 Sisteme http://localhost:15421/AdminPanel/Hesap/Login bu bağlantıdan girebilirsiniz.

Kapat

Figure 96 Detailed form for reply message to user membership form

Abonelik İsteği Formu

Siz de yeni yazılarımızdan anında haberdar olmak isterseniz abone olabilirsiniz. Abonelik için geçerli eposta adresinizi giriniz.

Eposta *

cemileasci@1.com ✓

Abone Ol

Figure 97 Subscription request form for articles for the portal

PinBlog Sistem Aboneliği Hk. Gelen Kutusu x

pinblog.teknik@gmail.com 01:32 (0 dakika önce) ☆

Alıcı: bana ▾

PinBlog aboneliğiniz alınmıştır.

Yanıtlamak veya Yönlendirmek için burayı tıklayın

Figure 98 An email is sent to a new subscriber after a subscription request is received

Abone Listesi

Sayfa 10 | kayıt göster

Ara

Elektronik Posta	Abonelik Tarihi	İşlem
cemileasci@1.com	28.10.2017 01:27:22	✖

1 kayıttan 1 - 1 arasındaki kayıtlar gösteriliyor

Önceki 1 Sonraki

Figure 99 Sortable and searchable list of all subscribers



Figure 100 An email is sent to subscribers after a new article is published



Figure 101 The report page is divided into two parts



Figure 102 The first part changes dynamically depending on the chosen province



Figure 103 The second part consists of four different lists

APPENDIX C

ENGLISH EQUIVALENTS OF SYSTEM ITEMS

TURKISH	ENGLISH
Abone Listesi	Subscribers list
Abone Ol	Subscribe
Aboneler	Subscribers
Abonelik İsteği Formu	Subscription request form
Açıklama	Explanation
Ada	Island
Akarsu - Rafting Merkezi	Whitewater rafting resort
Akarsu - Rafting Turizmi	Whitewater rafting tourism
Akarsu (Dere, Çay, Irmak)	River
Alışveriş Merkezi	Shopping mall
Anasayfa	Main page
Anasayfa Kayan Yatay Resmi	Carousel slider
Anasayfa Kayan Yatay Resmi Detay Formu	Detail form of carousel slider
Anıt Mezar	Mausoleum
Antik Kent	Ancient cities
Antik Tiyatro	Ancient theatre
Arka Plan Resmi	Background image
Arka Plan Resmi Adı	Title of background image
Arka Plan Resmi Detay Formu	Detail form of background image
Av Turizmi	Hunting tourism
Avcılık ve Atıcılık Merkezi	Hunting lodges, Hunting sports club
Bahçe	Garden
Banka	Bank
Bar	Bar, Pub
Başarılı	Successful

Başlık	Title
Berber / Kuaför	Barber, Hair salon
Bilgileri Gör	Show information
Bize katılmak ister misiniz?	Work with us
Blog	Article
Blog Ekle	Add an article
Blog Listesi	Article lists
Blog Onaylama	Approval form of article
Blog Yazısı	Article content
Boylam Değeri	Longitude value
Bu kaydı silerseniz ilişkili tüm kayıtlar silinecektir.	If you delete this record, all associated records will be deleted.
Buz Pisti	Ice rink
Kış Sporları Turizm Merkezi	Winter sports center
Cafe / Restoran	Cafe / Restaurant
Cami	Mosque
Çarşı	Bazaar
Çeşme	Fountain
Cevap	Answer, reply
Cevap Veren Kullanıcı	User that replies to message
Cevap Verildiği Tarih	Date on which the message is replied
Cevap Yaz	Write a reply to message
Çiftlik	Farm, ranch
Dağ	Mountain
Dağcılık Turizmi	Hillwalking tourism
Değiştir	Edit
Değiştiren Kişi	User that edits article
Detay	Detail
Detayları Göster	Show details
Diğer	Uncategorized type of tourism
Doğa ve Yayla Turizmi	Nature tourism
Dosya Seç	Choose file
Durum	Status
Duyuru Detay Formu	Detail form of notification
Duyuru Güncelleme Formu	Update form of notification

Duyurular	Notifications
Eczane	Pharmacy
Eklediğiniz Yer İmlerinin Listesi	List of your location markers
Eklenen menü bir alt menüdür	This menu is a submenu
En fazla blog yazısı giren kullanıcı	User who entered most articles
En fazla blog yazısı olan il	Province which entered most articles
En fazla yer imi olan il	Province which entered most location markers
En fazla yerimi giren kullanıcı	User who entered most location markers
Enlem Değeri	Latitude value
Eposta Değiştir	Change your e-mail
Fener	Lighthouse
Festival ve Eğlence Turizmi	Entertainment tourism
Fotoğraf Adı	Photograph title
Fotoğraflar	Photographs
Fuar	Fair
Göl	Lake
Golf Merkezi	Golf resort
Golf Turizmi	Golfing tourism
Gönder	Send
Gösteri - Kongre Merkezi	Convention and congress center
Güncelle	Update
Hakkımızda	About
Hamam	Turkish bath
Harabe	Ruin
Harita	Map
Haritada Keşfet	Explore on a map
Hastane	Hospital
Havaalanı	Airport
Hostels	Hostel
Hotel	Hotel
İçerik	Content
İnanç Turizmi	Religious tourism
Kale	Castle
Kanyon	Canyon, Gorge
Kaplıca	Hot spring

Karakol	Police station
Kastel	Fountain
Katedral	Cathedral
Kayak Merkezi	Ski resort
Kaydet	Save
Kayıtlı Kullanıcı	Registered user
Kayıtlı Yazı	Registered article
Kayıtlı Yeri	Registered location marker
Kervansaray	Roadside inn, Caravanserai
Kilise	Church
Kış Turizmi	Winter tourism
Konak	Mansion
Kongre ve Konferans Turizmi	Congress tourism
Köprü	Bridge
Körfez	Gulf
Köşk	Ornate wooden mansion
Koy	Bay
Kullanıcı Detay Formu	Detail form of user
Kullanıcı İşlemleri	User management
Kullanıcılar	Users
Kültür Merkezi	Cultural center
Kültür ve Sanat Turizmi	Cultural and art center
Kültür ve Tarih Turizmi	Cultural and history center
Kümbet	Gonbad, Mausoleum
Kuş Gözlemciliği Turizmi	Ornithology tourism
Kütüphane	Library
Liman	Port, Harbor
Mağara	Cave
Mağara Turizmi	Cave tourism
Manastır	Monastery
Medrese	Madrasah, Religious school
Menü Detay Formu	Detail form of menu
Menü Kategorisi	Categories of menu
Mesajlar	Messages
Mescit	Small mosque

Milli Park	National park
Misyonumuz/Vizyonumuz	Mission and vision
Müze	Museum
Obruk	Sinkhole
Oluşturulduğu Tarih	Date that article was created
Oluşturan Kullanıcı	User who creates article
Onay İşlemleri	Approval management
Ören Yeri	Ruins
Özet	Abstract
Özgeçmiş	Autobiography
Park	Amusement park
Pazar	Marketplace
Plaj	Beach
Raporlar	Reports and statistics
Rol Detay Formu	Detail form of user role
Roller	User roles
Saat	Clock tower
Şadırvan	Fountain
Sağlık ve Termal Turizmi	Health and thermal tourism
Sahil	Coast
Sanat Evi	Art center
Sanat Merkezi	Art center
Saray	Palace
Şelale	Waterfall
Şifre	Password
Şifre Değiştir	Change your password
Sil	Delete
Simge	Icon
Sinagog	Synagogue
Sinema	Cinema
Sistemde Onay Bekleyen Kayıtlı Bloglar	Unapproved articles on system
Sistemde Onay Bekleyen Kayıtlı Yerimleri	Unapproved location markers on system
Şu an ki konumuz	You are here
Su Parkı	Aquapark

Sualtı Dalış Merkezleri	Dive center
Sualtı Dalış Turizmi	Scuba diving tourism
Sur	Ancient city wall
Tabiat Parkı	Natural park
Tapınak	Shrine
Tema ve Eğlence Parkı	Amusement park
Tepe	Hill
Tiyatro	Theatre
Traverten	Stepped travertine terrace
Tren Garı	Train station
Türbe	Mausoleum
Turizm Danışma Bürosu	Tourist information center
Turizm Kategori Detay Formu	Detail form of tourism types
Turizm Kategori Güncelleme Formu	Update form of tourism types
Turizm Kategorileri	Tourism types
Turizm Türü	Tourism type
Uyarı	Warning
Üyelik Detay Formu	Detail form of membership
Üyelik Mesajları	Membership message
Üyelik Mesajları Yönetim	Membership message management
Yardım Dokümanları	Help files
Yat ve Kruvaziyer Turizmi	Yacht and cruise tourism
Yayın İşlemleri	Publishing management
Yayla	Highland, plateau
Yaz Turizmi	Summer and sea tourism
Yazı Güncelleme Formu	Update form of article
Yazı İçeriği	Article content
Yeni Anasayfa Kayan Yatay Resmi Ekle	Add a new carousel slider
Yeni Anasayfa Kayan Yatay Resmi Ekleme Formu	Insert form of carousel slider
Yeni Arka Plan Resmi Ekle	Add a new background image
Yeni Arka Plan Resmi Ekleme Formu	Insert form of background image
Yeni Duyuru Ekle	Add a new notification
Yeni Kullanıcı Ekle	Add a new user
Yeni Menü Ekle	Add a new menu

Yeni Rol Ekle	Add a new user role
Yeni Turizm Kategorisi Ekle	Add a new tourism type
Yeni Yer Kategorisi Ekle	Add a new location type
Yer ismi	Location title
Yer Kategori Güncelleme Formu	Update form of location type
Yer Kategorileri	Location type
Yer Kategorisi Detay Formu	Detail form of location type
Yeraltı Şehri	Underground city
Yerimi	Location Marker on Map
Yerimi Ekle	Add an Article
Yerimi Güncelleme Formu	Update form of location marker
Yerimi Onaylama	Approval form of location marker
Yönetici Paneli	Administrative panel
Yönetim İşlemleri	System components management
Yorum Başlığı	Comment title
Yorum Güncelleme Formu	Update form of comment
Yorum Onaylama	Approval form of comment
Yorum(lar)	Comment(s)
Yorumunuz alınmıştır	Your comment has been received