

Documentation of Library Management Project

- The Library Management System (LMS) is developed using ASP.NET for robust server-side functionality and SQL Server for reliable data management. ASP.NET provides a powerful framework for building scalable web applications, ensuring efficient handling of requests and seamless integration with databases. SQL Server is employed as the backend database, leveraging its transactional capabilities and data integrity features to store and manage library information securely.
 - The architecture of our LMS revolves around ASP.NET MVC (Model-View-Controller) framework, facilitating a structured approach to application development. The front-end user interface is crafted using Razor views, offering dynamic content generation and interaction. Authentication and authorization are implemented using ASP.NET, which supports role-based access control and user management functionalities.
 - Key features of the LMS include comprehensive catalog management, allowing librarians to add, update, and categorize books, journals, and other resources efficiently. Users interact with the system through intuitive interfaces, enabling them to search for items, view availability, and manage borrowing and returning processes seamlessly. The system ensures data security and privacy through encrypted communication and secure storage practices, adhering to industry standards for protecting sensitive information.
 - In conclusion, our LMS built on ASP.NET and SQL Server combines robust technology with user-centric design to enhance library operations, providing administrators with tools for efficient resource management and patrons with a seamless experience accessing library services.
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- In our initial meeting, task distributions were made. We outlined the project timeline and task distribution, setting a deadline of approximately four weeks for project completion, with a strict requirement to finish by the end of the third week to allow time for testing and bug resolution. Following these instructions, the database development phase was initiated and a draft of the necessary tables was created on paper. These tables were designed to support the project's data management requirements effectively. Here are the team members and their roles:

Efe Erol – 200101066 – Analyst/Project manager

Umut Kuruluk – 210101118 – Backend

Yusuf Ömer Tursun – 200101005 – Backend

Eda Nur Yardım – 200101020 – Tester

Emre Yeloğlu – 210101125 – Frontend

Nupelda Kandemir – 200101052 – Frontend

- During the second meeting, we focused on modeling the database and looking initial frontend components. The database schema was finalized to ensure optimal data organization and integrity. Concurrently, we developed and investigating basic frontend interfaces, including the login page and showcase page, to verify their functionality and user experience. This initial examine phase aimed to identify and rectify any issues early in the development process. Here are our tables in the Database:

Tbl_üyeler

	Column Name	Data Type	Allow Nulls
🔑	ÜyeID	int	<input type="checkbox"/>
	ÜyeAd	varchar(20)	<input checked="" type="checkbox"/>
	ÜyeSoyad	varchar(20)	<input checked="" type="checkbox"/>
	ÜyeMail	varchar(50)	<input checked="" type="checkbox"/>
	KullanıcıAd	varchar(20)	<input checked="" type="checkbox"/>
	ÜyeSifre	varchar(20)	<input checked="" type="checkbox"/>
	Foto	varchar(250)	<input checked="" type="checkbox"/>
	Tel	varchar(20)	<input checked="" type="checkbox"/>
	okul	varchar(100)	<input checked="" type="checkbox"/>

- In the members table, we incorporated columns to store the member's name, surname, email address, username, password, photo, phone number, and school information. This design choice allows users to log in using their email address and sets the foundation for implementing two-step verification in future stages.

Tbl_kitap

	Column Name	Data Type	Allow Nulls
🔑	KitapID	int	<input type="checkbox"/>
	KitapAd	varchar(50)	<input checked="" type="checkbox"/>
	Kategori	tinyint	<input checked="" type="checkbox"/>
	Yazar	int	<input checked="" type="checkbox"/>
	BasımYıl	char(4)	<input checked="" type="checkbox"/>
	Yayınevi	varchar(50)	<input checked="" type="checkbox"/>
	SayfaSayısı	varchar(4)	<input checked="" type="checkbox"/>
	durum	bit	<input checked="" type="checkbox"/>
	KitapResim	varchar(250)	<input checked="" type="checkbox"/>

- In the books table, we added columns to store the title, category, author, publication year, publisher, page count, status (indicating whether the book is currently borrowed by another member), and cover image of each book. This comprehensive design ensures that all essential details about each book are effectively captured in the database.

Tbl_Yazar

	Column Name	Data Type	Allow Nulls
🔑	YazarID	int	<input type="checkbox"/>
	YazarAd	varchar(50)	<input checked="" type="checkbox"/>
	YazarSoyad	varchar(50)	<input checked="" type="checkbox"/>
	Detay	varchar(MAX)	<input checked="" type="checkbox"/>

- In the author table, we included columns to store the author's first name, last name, and any descriptions provided by the author about their books. This structure ensures that all pertinent information regarding the authors is maintained within the database.

Tbl_personel

	Column Name	Data Type	Allow Nulls
🔑	PersonelID	tinyint	<input type="checkbox"/>
	PersonelAdSoyad	varchar(50)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

- In the personnel table, we added columns to store the information of personnel responsible for the loan and return of books. This ensures that all relevant details about the staff managing book transactions are accurately recorded in the database.

Tbl_kategori

	Column Name	Data Type	Allow Nulls
🔑	ID	tinyint	<input type="checkbox"/>
	Ad	varchar(50)	<input checked="" type="checkbox"/>
	Durum	bit	<input checked="" type="checkbox"/>

- We created the category table to store the category names of books and to track the existence of each category. This allows for efficient management and verification of book categories within the database.

Tbl_mesajlar

	Column Name	Data Type	Allow Nulls
🔑	Id	int	<input type="checkbox"/>
	Gonderen	varchar(50)	<input checked="" type="checkbox"/>
	Alıcı	varchar(50)	<input checked="" type="checkbox"/>
	Konu	varchar(50)	<input checked="" type="checkbox"/>
	Icerik	varchar(500)	<input checked="" type="checkbox"/>
	Tarih	smalldatetime	<input checked="" type="checkbox"/>

- In this messages table, we added columns to store the sender, recipient, subject, content, and date information. The primary reason for creating this table is to allow users to communicate about the books they have read by exchanging messages via email.

Tbl_Kasa

	Column Name	Data Type	Allow Nulls
🔑	KasaID	int	<input type="checkbox"/>
	Ay	varchar(20)	<input checked="" type="checkbox"/>
	Tutar	decimal(18, 0)	<input checked="" type="checkbox"/>
			<input type="checkbox"/>

- In this cash table, we added columns to record the month and amount. Our primary purpose for creating this table is to track penalties for late book returns and to maintain information on the total amount accumulated in the cash register each month.

Tbl_iletisim

	Column Name	Data Type	Allow Nulls
🔑	ID	int	<input type="checkbox"/>
	Ad	varchar(50)	<input checked="" type="checkbox"/>
	Mail	varchar(50)	<input checked="" type="checkbox"/>
	Konu	varchar(50)	<input checked="" type="checkbox"/>
	Mesaj	varchar(1000)	<input checked="" type="checkbox"/>

- In the communication table, we added columns to store the user's name, email address, message subject, and message content. The primary purpose of this table is to facilitate the communication of user comments and criticisms about the library to the administrators or staff.

Tbl_hareket

	Column Name	Data Type	Allow Nulls
🔑	HareketID	int	<input type="checkbox"/>
	Kitap	int	<input checked="" type="checkbox"/>
	Üye	int	<input checked="" type="checkbox"/>
	Personel	tinyint	<input checked="" type="checkbox"/>
	AlisTarih	smalldatetime	<input checked="" type="checkbox"/>
	İadeTarih	smalldatetime	<input checked="" type="checkbox"/>
	ÜyeGetirmeTarih	smalldatetime	<input checked="" type="checkbox"/>
	IslemDurum	bit	<input checked="" type="checkbox"/>

- In the transaction table, we included columns to store the book name, the member receiving the book, the staff issuing the book, the date of issue, the due return date, the date of return by the member, and the return status of the book. This setup allows us to effectively track book loans and returns within the database.

Tbl_aciklama

	Column Name	Data Type	Allow Nulls
🔑	ID	tinyint	<input type="checkbox"/>
	Aciklama	varchar(MAX)	<input checked="" type="checkbox"/>

- We created this table to enable the library to provide its members with information about themselves.

Tbl_duyurular

	Column Name	Data Type	Allow Nulls
🔑	ID	tinyint	<input type="checkbox"/>
	kategori	varchar(50)	<input checked="" type="checkbox"/>
	icerik	varchar(100)	<input checked="" type="checkbox"/>
	tarih	datetime	<input checked="" type="checkbox"/>

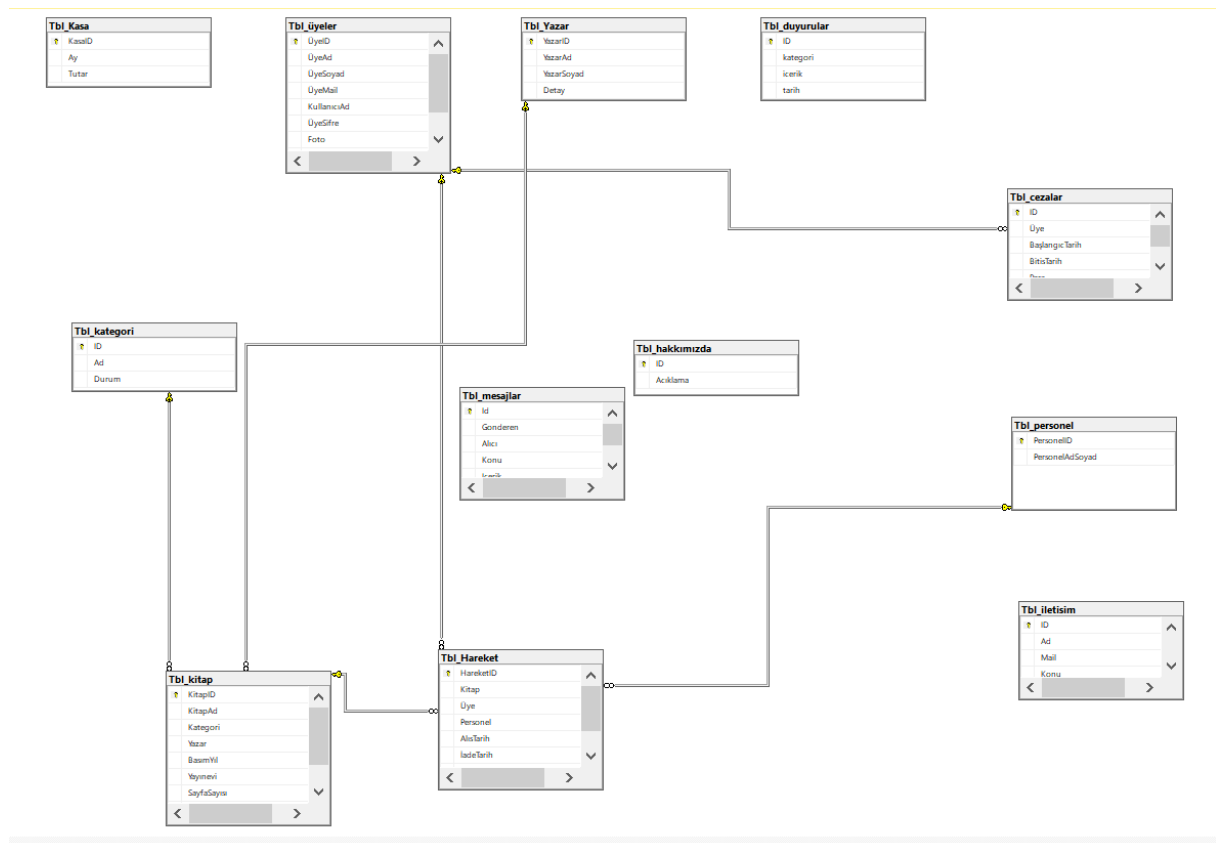
- In the announcements section, we created this table to inform users about the book categories, content details, and required submission dates.

Tbl_cezalar

	Column Name	Data Type	Allow Nulls
🔑	ID	int	<input type="checkbox"/>
	Üye	int	<input checked="" type="checkbox"/>
	BaşlangıçTarih	smalldatetime	<input checked="" type="checkbox"/>
	BitişTarih	smalldatetime	<input checked="" type="checkbox"/>
	Para	decimal(18, 2)	<input checked="" type="checkbox"/>
	Hareket	int	<input checked="" type="checkbox"/>

- In this table, we added columns to track the member who borrowed the book, the start date of the loan, the end date of the loan, the amount of penalty, and details of the book lending transaction where penalties are applicable. This setup allows us to effectively monitor and enforce penalties on users for overdue books.

Relationships of the database

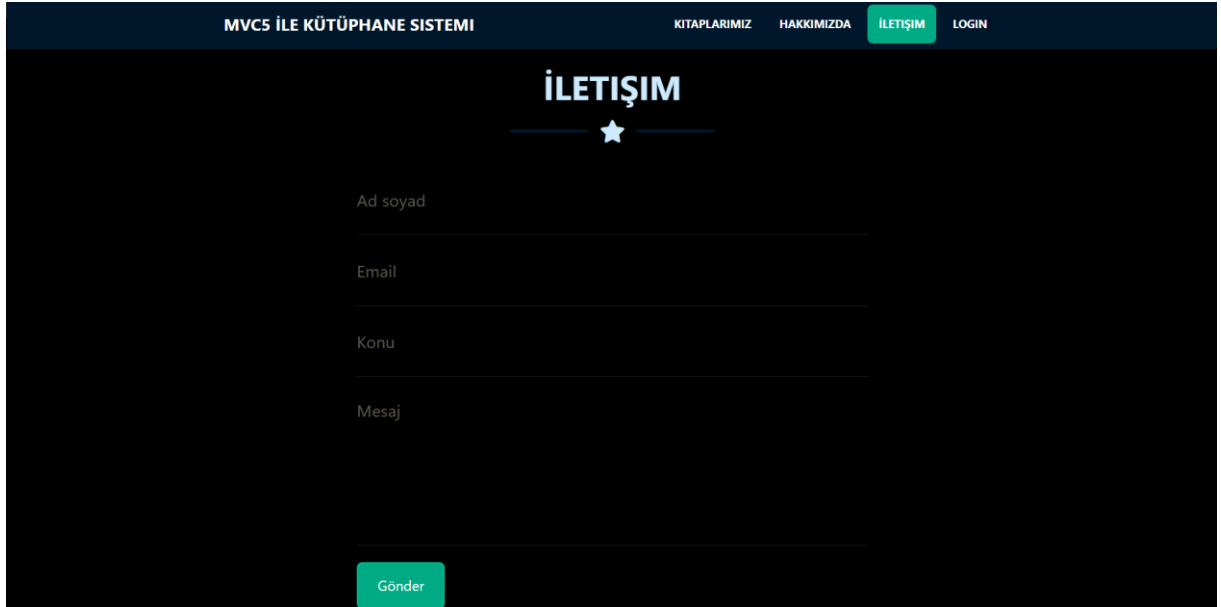


- We established relationships between the database tables and integrated the database into our Visual Studio editor. This step ensures seamless interaction and data management within our development environment, Visual Studio.

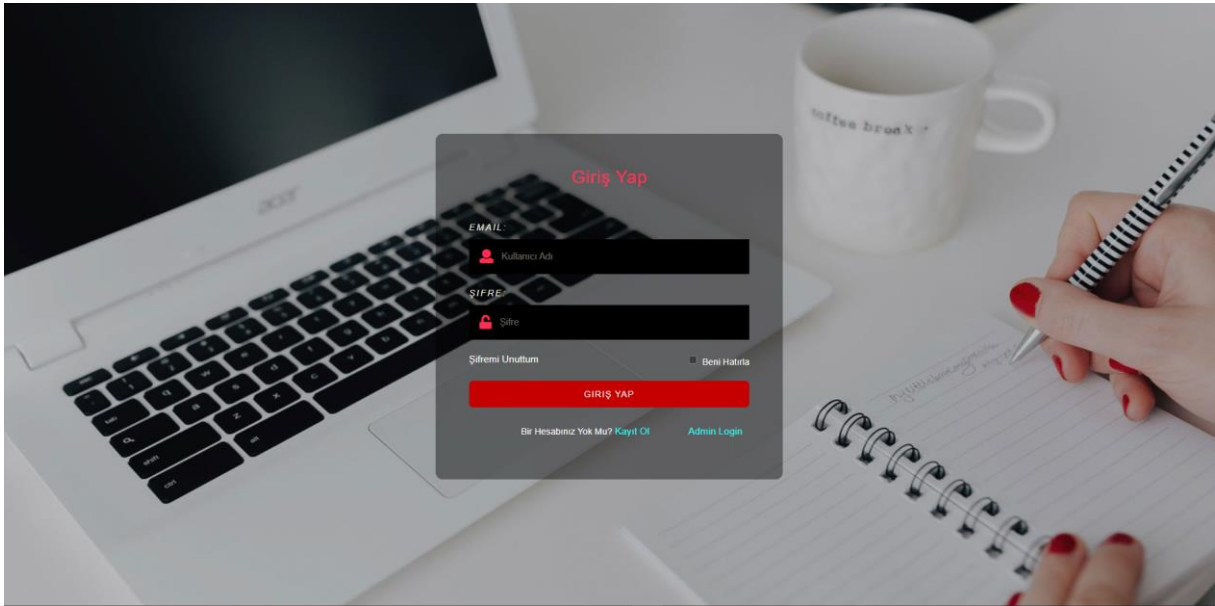
- During the last meeting, the backend and frontend development phases were completed, and testing phase has commenced. The tester is currently performing their tasks, while the team has initiated work on the overall report.
- In detail, the backend and frontend teams successfully concluded their respective development tasks, ensuring all functionalities and interfaces were implemented according to specifications. The tester is now actively engaged in validating the system's functionalities, executing test cases, and identifying potential issues or bugs to ensure robust performance.
- Simultaneously, the team has begun compiling the comprehensive project report, outlining key milestones achieved, challenges overcome, and insights gained during development. This phase marks a critical step towards finalizing the project deliverables and preparing for deployment.

Demonstration

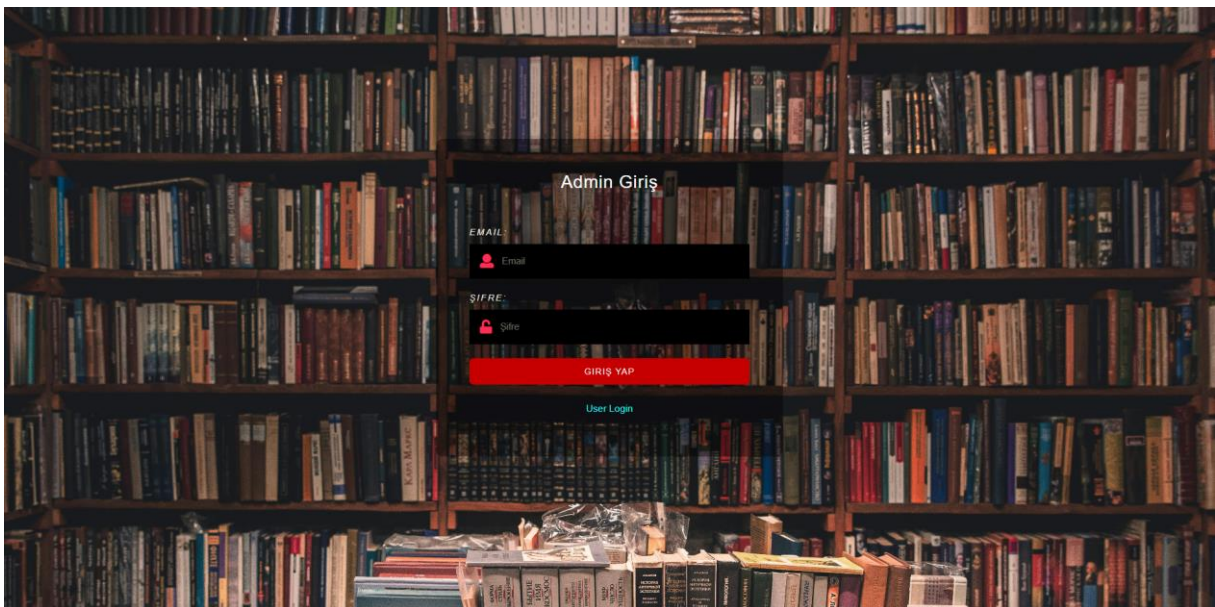
- By default, the Website starts from the Showcase page. The Showcase page includes: Our Books – About Us – Contact – Login button.




- When you press Login, the login screen appears. The login screen includes Login – Admin Login – Register



- Admin Login Page



– Register Page



The screenshot shows a registration page for a library. The background is a blurred image of a classroom with students. On the left, there is a white graduation cap icon and the text 'KÜTÜPHANEMIZE HOŞGELDİNİZ'. Below this, a message states: 'Kütüphanemize hoşgeldiniz, kayıt olmak için sağ tarafta bulunan paneldeki bilgileri eksiksiz bir şekilde girerek kaydınızı gerçekleştirebilirsiniz.' There are two buttons: 'Giriş Yap' (Login) and 'Siteye Dön' (Return to Site). On the right, there is a 'KAYIT PANELİ' (Registration Panel) with input fields for 'Adınız' (Your Name), 'Soyadınız' (Your Surname), 'Email', 'Kullanıcı Adı' (Username), 'Şifre' (Password), and 'Telefon' (Phone). A green 'Kayıt' (Register) button is at the bottom of the panel.

- You cannot register more than once with the same email, the same username and/or the same phone number. Error messages are also displayed on the screen:

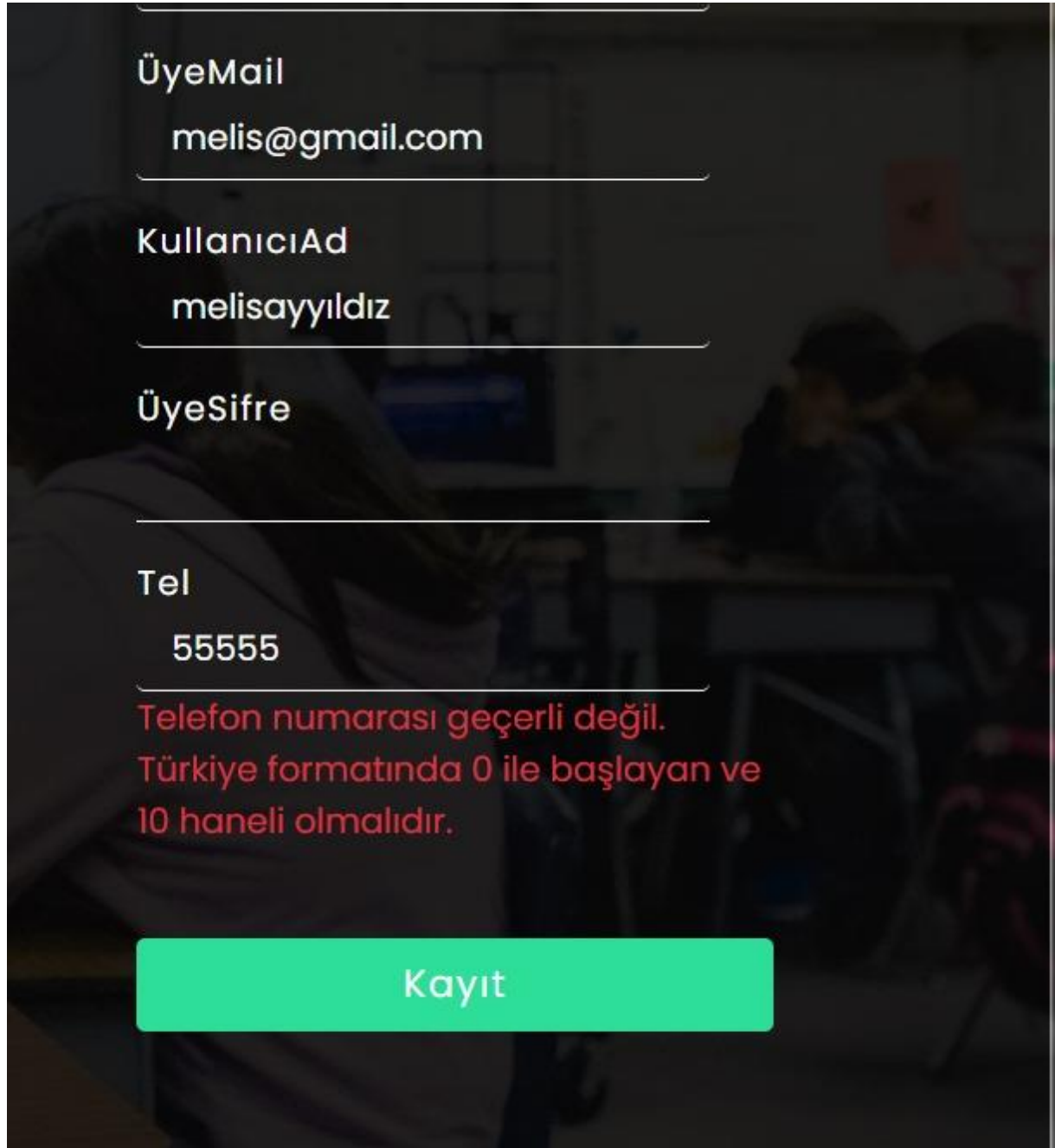


This screenshot shows the same registration page as above, but with filled-in fields and error messages. The 'KAYIT PANELİ' section contains the following information:

- ÜyeAd**: ahmet
- ÜyeSoyad**: tursun
- ÜyeMail**: ahmettursun@gmail.com
Bu email zaten kayıtlı.
- KullanıcıAd**: ahmettursun
Bu kullanıcı adı zaten kullanılıyor.
- ÜyeSifre**: (empty)
- Tel**: 55555
Bu telefon numarası zaten kayıtlı.

The 'Giriş Yap' and 'Siteye Dön' buttons are still visible at the bottom left.

- If you try to register with a non-formatted phone number, you will get the following error:

A registration form with a dark background and a blurred image of students in a classroom. The form has four input fields: 'ÜyeMail' with 'melis@gmail.com', 'KullanıcıAd' with 'melisayyıldız', 'ÜyeSifre' (empty), and 'Tel' with '55555'. Below the 'Tel' field is a red error message. At the bottom is a green 'Kayıt' button.

ÜyeMail

melis@gmail.com

KullanıcıAd

melisayyıldız

ÜyeSifre

Tel

55555

Telefon numarası geçerli değil.
Türkiye formatında 0 ile başlayan ve
10 haneli olmalıdır.

Kayıt

– The user can:

- see the announcements published by the site admin in the Profile section.
- find Date-Content-Category information in the Announcements section.

umut

Profilim

Gelen Mesajlar

Giden Mesajlar

Yeni Mesajlar

Duyurular

Kitaplarım

Vitrin

Çıkış Yap

Duyurular

Kategori	Tarih	İçerik
Bilgilendirme	28.05.2024	Saat Degisikligi Hk.

umut

Profilim

Gelen Mesajlar

Giden Mesajlar

Yeni Mesajlar

Duyurular

Kitaplarım

Vitrin

Çıkış Yap

Profile

umut kuruluk

Kitap sayım

1

Gelen mesaj sayısı

0

Duyuru Sayısı

1

Gelen Kutusu

Hakkımda

Üniversite

Telefon

1234

Duyurular

Ayarlar

Bilgilendirme

28.05.2024 08:00:00

Saat Degisikligi Hk.

- update their own information on the profile page from the settings tab.
- see the number of books purchased, the number of messages received and the number of announcements.
- also switch to the inbox.
- see the about section, university and phone number sections.

- see and delete the messages he receives in inbox.
- search emails with a specific word in the search mail section at the top right.

- In the New Message section, send an e-mail to another user's existing e-mail address.

umut

Profilim

Gelen Mesajlar

Giden Mesajlar

Yeni Mesajlar

Duyunular

Kitaplarım

Vitrin

Çıkış Yap

Alıcı Mail

Konu

İçerik

Gönder

- see Recipient-Subject-Message-Date information in the Outgoing Messages section.

umut

Profilim

Gelen Mesajlar

Giden Mesajlar

Yeni Mesajlar

Duyunular

Kitaplarım

Vitrin


Çıkış Yap


Giden Mesajlar Sayfası


Alıcı	Konu	Mesaj	Tarih
efe@hotmail.com	Kitap iade	Kitabi 1 gün geç iade edeceğim.	28.05.2024 00:00:00


- umut


Profilim


Gelen Mesajlar


Giden Mesajlar

Yeni Mesajlar

Duyurular

Kitaplarım

Vitrin

Çıkış Yap

Kitap Geçmişim

Kitap Adı	Alış Tarihi	Üye İade Tarihi
FEAROFGULLEYNİM	27.05.2024	27.05.2024

– The admin can:

- Performs CRUD operations for categories, writers, personels, members and books.
- lend the book and set the dates by selecting the book and the member's name in the lend the book section.

The screenshot shows the 'Ödünç Kitap Ver' (Lend Book) form. On the left is a sidebar with navigation items: Kategoriler, Kitaplar, Yazarlar, Üyeler, Personeller, Ödünç Kitap Ver, Ödünç Kitap Al, İstatistikler, Duyurular, İşlemler, Hava Raporu, Galeri, Vitrin, and Çıkış. The main form area has the following fields:

- Üye**: umut kuruluk
- Kitap**: FEAROFGULLEYNIM
- Personel**: Efe
- Kitap Alış Tarihi**: 28.05.2024
- Kitap İade Tarihi**: 4.06.2024

At the bottom of the form is a red button labeled 'Kitabı Ödünç Ver'.

- In the Retrieve borrowed book section, Admin enters the date when the member returns the borrowed book. If the member brought the book late, it indicates how much penalty he/she will be subjected to depending on the day he brought the book late.

The screenshot shows the 'Ödünç Kitap Listesi' (Borrowed Book List) table. The sidebar is the same as in the previous screenshot. The table has the following columns: İşlem ID, Kitap Adı, Üye, Personel, Alış Tarihi, İade Tarihi, and İade Al.

İşlem ID	Kitap Adı	Üye	Personel	Alış Tarihi	İade Tarihi	İade Al
2	FEAROFGULLEYNIM	umut kuruluk	Efe	28.05.2024	04.06.2024	Kitabı İade Et

At the bottom left of the page, there is a URL: <https://localhost:44340/Ödünç/Ödünç/>

- add a new book

Kategoriler

Kitaplar

Yazarlar

Üyeler

Personeller

Ödünç Kitap Ver

Ödünç Kitap Al

İstatistikler

Duyurular

İşlemler

Hava Raporu

Galeri

Vitrin

Çıkış

Yeni Kitap Ekle

Kitap Adı

Kitap Kategorisi

korfu

Yazar

omar gul

Basım Yılı

Yayınevi

Sayı Sayısı

Kitap ekle

- add a new author

Kategoriler

Kitaplar

Yazarlar

Üyeler

Personeller

Ödünç Kitap Ver

Ödünç Kitap Al

İstatistikler

Duyurular

İşlemler

Hava Raporu

Galeri

Vitrin

Çıkış

Yazar Adı

Yazar Soyadı

Yazar Detay

Yazar ekle

- add a new member

Kategoriler

Kitaplar

Yazarlar

Üyeler

Personeller

Ödünç Kitap Ver

Ödünç Kitap Al

İstatistikler

Duyurular

İşlemler

Hava Raporu

Galeri

Vitrin

Çıkış

Üye Adı

Üye Soyadı

Üye Maili

Üye Kullanıcı Adı

Üye Şifre

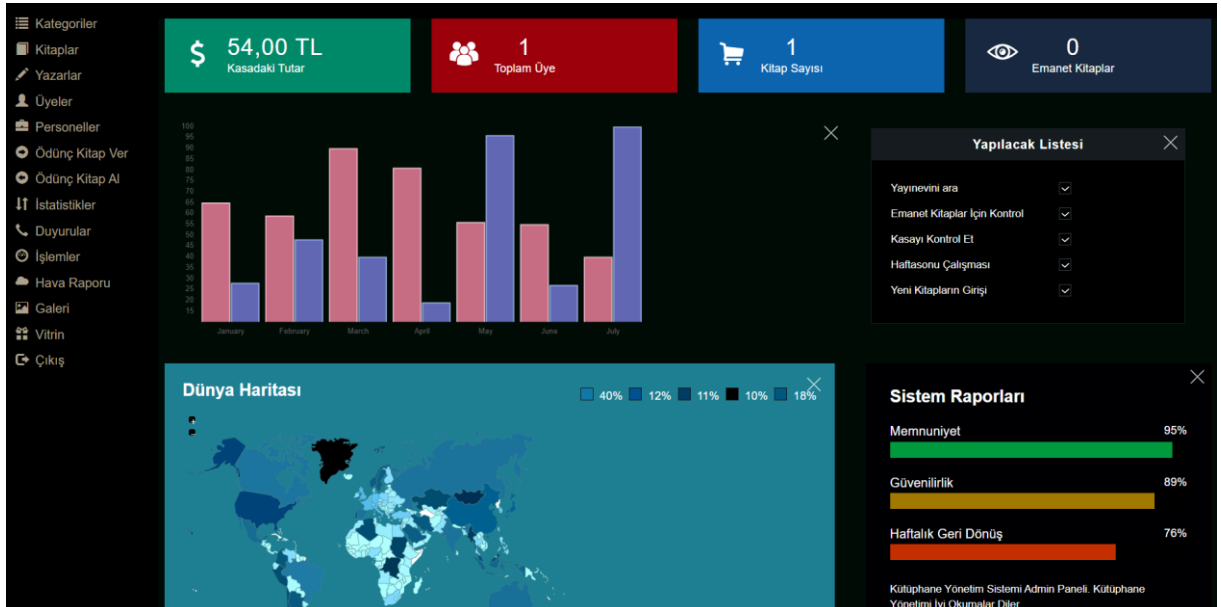
Fotoğraf Linki

Üye Telefon

Üye Okut

Personel ekle

- In the statistics section, the money accumulated from fines can be seen with the amount in the safe. Total number of members and books and deposited books can be seen.



- In the Announcements section, can publish an announcement by specifying the Category, Content and Date so that all users can see it.

Kategoriler

Kitaplar

Yazarlar

Üyeler

Personeller

Ödünç Kitap Ver

Ödünç Kitap Al

İstatistikler

Duyurular

İşlemler

Hava Raporu

Galeri

Vitrin

Çıkış

Duyurular

Duyuru No	Kategori	Tarih	Sil	İçerik
1	Bilgilendirme	28.05.2024	Sil	Detaylar

Yeni Duyuru Ekle

Kategoriler

Kitaplar

Yazarlar

Üyeler

Personeller

Ödünç Kitap Ver

Ödünç Kitap Al

İstatistikler

Duyurular

İşlemler

Hava Raporu

Galeri

Vitrin

Çıkış

Duyuru Kategorisi

Duyuru İçerik

Duyuru Tarihi

Duyuru ekle

- Kategoriler

Kitaplar

Yazarlar

Üyeler

Personeller

Ödünç Kitap Ver

Ödünç Kitap Al

İstatistikler

Duyurular

İşlemler

Hava Raporu

Galeri

Vitrin

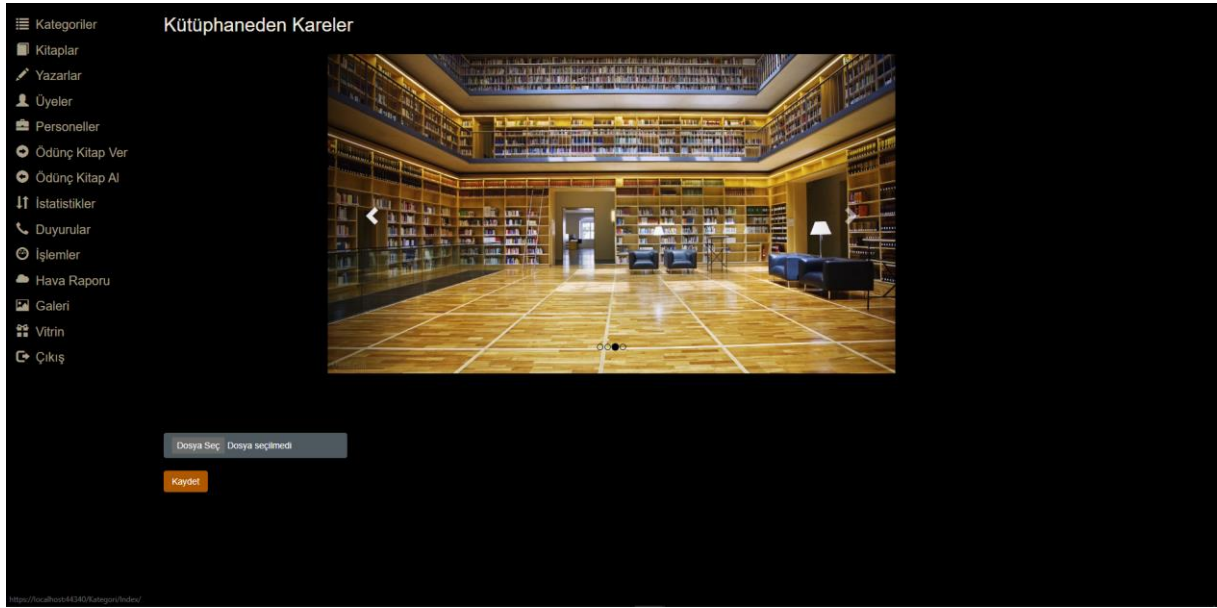
Çıkış

İade Alınan Kitap Listesi

İşlem ID	Kitap Adı	Üye	Personel	Alış Tarihi	Üye İade Tarihi
1	FEAROF GULLEYNİM	umut kuruluk	Efe	27.05.2024	27.05.2024
2	FEAROF GULLEYNİM	umut kuruluk	Efe	28.05.2024	28.07.2024

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- Photos of the library appear in the gallery section.



- Logout button returns to the Login screen.

- If you try to access a screen for which you are not authorized:

