

E-Library Project - Group 02

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Objectives of Project

- The aim of this project is providing whole library system which is accessible via web.
- Users will be able to see sources and if users are member of the system, they will be rent sources.
- Users will be able to find the location of the sources from website and they can take it actual material from library.
- If a user wants to use electronic sources from website, he/she will be able to find information about electronic source and a link of the electronic source.

Guest Interface

A series of horizontal lines in teal and light blue colors, extending across the width of the slide below the title.

Guest Home Page

- Guest will see this page, when he/she enter to website.



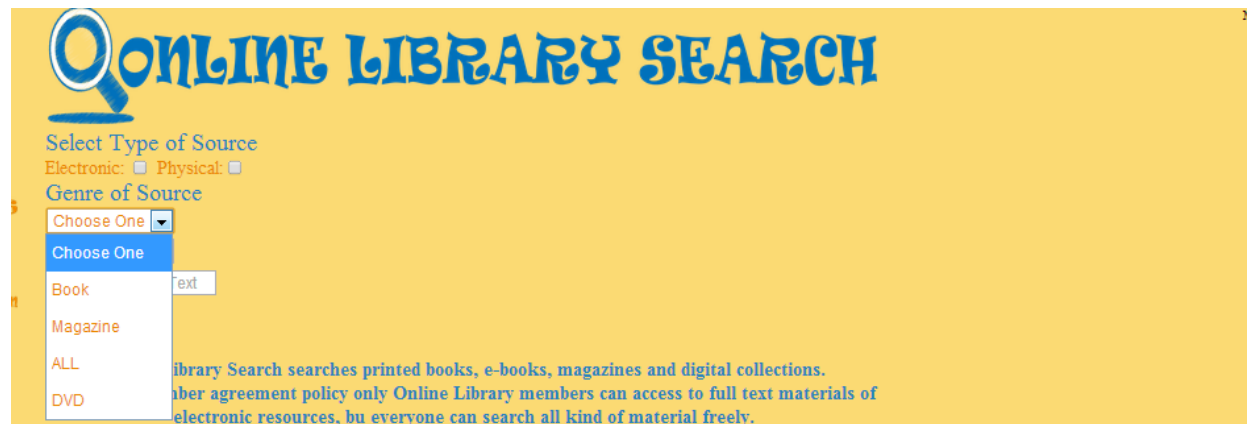
Searching Record

- Guest can search using source's name, type of source and genre of source.



The screenshot shows a yellow background with the title "ONLINE LIBRARY SEARCH" in large blue letters. Below the title, there is a section "Select Type of Source" with two radio buttons: "Electronic" and "Physical". Below this is a section "Genre of Source" with two dropdown menus, each labeled "Choose One". At the bottom of the form is a text input field labeled "Enter Searching Text" and a magnifying glass icon.

- First drop box have Book, Dvd, Magazine options.



This screenshot shows the same form as the previous one, but with the first "Choose One" dropdown menu open. The menu lists the following options: "Book", "Magazine", "ALL", and "DVD". The "Book" option is currently selected. Below the dropdown menu, there is a text input field labeled "Enter Searching Text". At the bottom of the form, there is a paragraph of text: "Library Search searches printed books, e-books, magazines and digital collections. Member agreement policy only Online Library members can access to full text materials of electronic resources, bu everyone can search all kind of material freely."

- Second drop box have subspecies of selected type of source. For book : education, engineering, history, novel, science, story, technology. For DVD : education, game, movie, song, documantery. For Magazine :comic, computer, engineering, life, science.



ONLINE LIBRARY SEARCH

Select Type of Source
Electronic: ☐ Physical: ☐

Genre of Source
Book

Choose One

Choose One

- Education
- Engineering
- History
- Novel
- Science
- Story
- Technology
- ALL

Library Search searches printed books, e-books, magazines and digital collections. Member agreement policy only Online Library members can access to full text materials of electronic resources, bu everyone can search all kind of material freely.

- by the textbox we can search book name, aauthor name, dvd name or magazine name.

- After clicking to search button records are shown
- Under the Rent row, record have link to record page



Name	Author	Category	Publication Year	Rent
------	--------	----------	------------------	------



Name	Category	Duration	Publication Year	Rent
Battlefield	Game	99	2013	Dvd's Page
Beatles - Please Please Me	Song	60	1963	Dvd's Page
Best of Mozart	Song	126	2000	Dvd's Page
Cosmos	Documentary	60	1980	Dvd's Page
Planet Earth	Documentary	44	2006	Dvd's Page
Sefiller	Movie	150	2012	Dvd's Page
Serenade	Song	4	2007	Dvd's Page



Name	Category	Issue Number	Publication Date	Rent
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- Guest can see information about source but they can not rent sources.

 **BOOK INFORMATION PAGE**

Book Name : Bin Dokuz Yüz Seksen Dört
Author : George Orwell
Publication Year : 1949
Category : Novel
ISBN : 43
Rental Count : 0

SOURCE'S RECORDS

#	Location	Availability	Rent
1	Mustafa İnan Kütüphanesi - m3.floor - 7.bookcase - 24.bookshelf - 34.order	Available	RENT

- If they want to rent a source, they will see this error message.

You must login to rent.

Most Populars

- When guest clicks Most Populars on navigation panel, most rented sources are listed.

★ MOST POPULAR 5 BOOKS

Book Name	Author	Category	Publication Year	Popularity	Link
Deva	Franz Kafka	Novel	1925	1	Book's Page
İlahi Komedya-Cehennem	Dante Alieghieri	Novel	2013	0	Book's Page
Tarihe Yön Veren Büyük Komutanlar	Barry Strauss	History	2013	0	Book's Page
Sayısal Elektronik	M. Kaya Yazgan	Engineering	2013	0	Book's Page
Mühendislik Mekaniği Dinamik	Mehmet Bakioğlu	Education	2012	0	Book's Page


★ MOST POPULAR 5 MAGAZINES

Magazine Name	Issue Number	Category	Publication Year	Popularity	Link
Penguen	2	Comic	2005	1	Magazine's Page
Oyungezer	6	Computer	2005	1	Magazine's Page
Penguen	1	Comic	2004	0	Magazine's Page
Chip	10	Computer	1992	0	Magazine's Page
IEEE	5	Science	1960	0	Magazine's Page

★ MOST POPULAR 5 DVDs

DVD Name	Duration	Category	Publication Year	Popularity	Link
Best of Mozart	126	Song	2000	1	DVD's Page
Sefiller	150	Movie	2012	0	DVD's Page
Beatles - Please Please Me	60	Song	1963	0	DVD's Page
Cosmos	60	Documentary	1980	0	DVD's Page
Battlefield	99	Game	2013	0	DVD's Page

- After clicking links, guest will see page that display information about that source. But guest can not rent any source.



MAGAZINE INFORMATION PAGE

You must login to rent.

Book Name : Penguen Magazine Information
Publication Year : 2004
Category : Comic
Issue : 1
Rental Count : 0

SOURCE'S RECORDS

#	Location	Availability	Rent
1	http://www.penguen.com	Available	RENT
2	Mustafa İnan Kütüphanesi - m2.floor - 4.bookcase - 15.bookshelf - null.order	Available	RENT

Requests & Suggestions

- Guest can send request or suggestion to admin for sake of website.



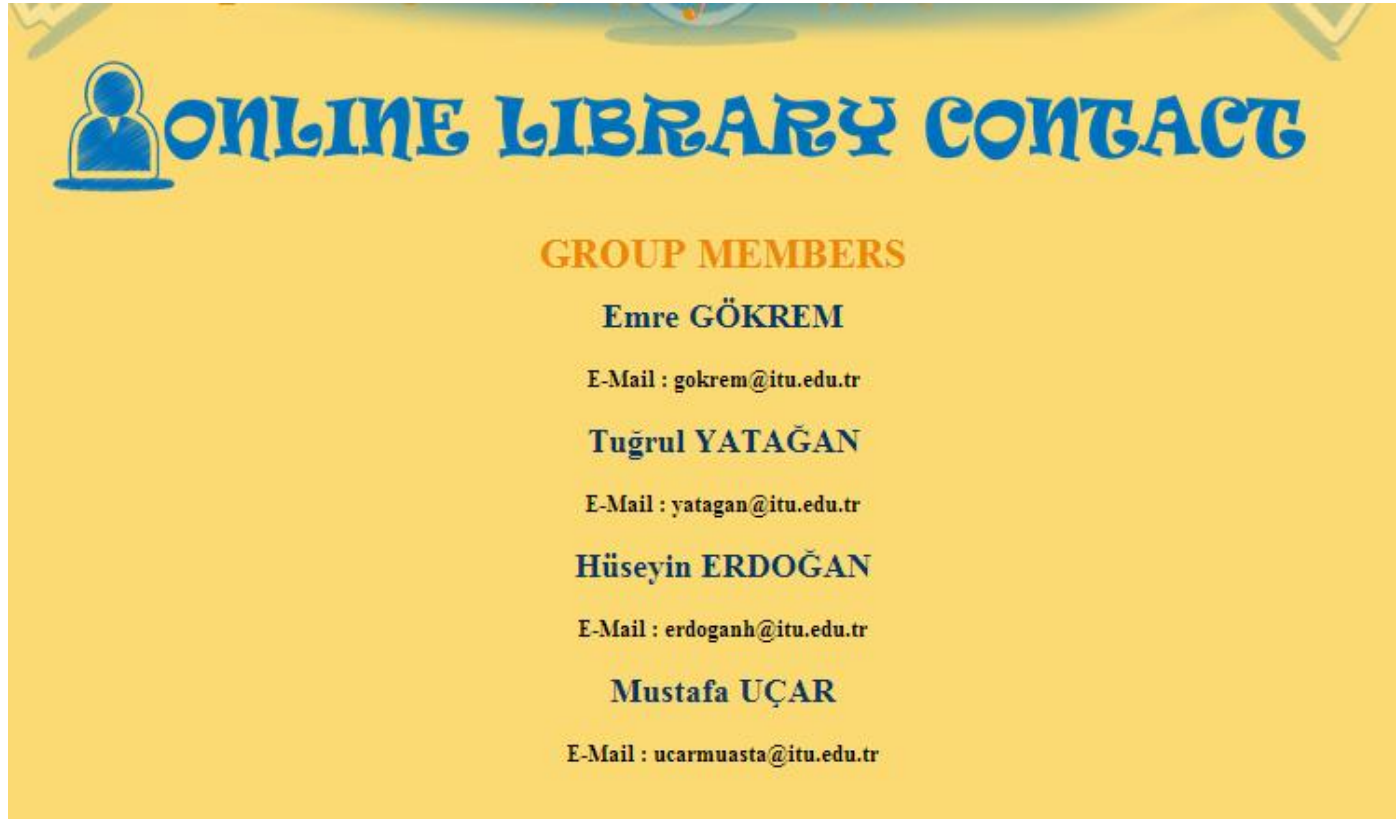
SEND REQUESTS & SUGGESTIONS

Please give us requests and suggestions in this area.



Contact Us

- In this page group members's e-mail addresses are showed so guest can interact with us.

A yellow rectangular graphic with a blue border. At the top left is a blue icon of a person sitting at a desk with a laptop. To its right, the text "ONLINE LIBRARY CONTACT" is written in a large, blue, stylized font. Below this, the text "GROUP MEMBERS" is written in a smaller, orange, bold font. Underneath, there are four entries, each consisting of a name in bold black font and an email address in a smaller black font.

ONLINE LIBRARY CONTACT

GROUP MEMBERS

Emre GÖKREM
E-Mail : gokrem@itu.edu.tr

Tuğrul YATAĞAN
E-Mail : yatagan@itu.edu.tr

Hüseyin ERDOĞAN
E-Mail : erdoganh@itu.edu.tr

Mustafa UÇAR
E-Mail : ucarmuasta@itu.edu.tr

About Us

- In this page information about project is given
- Also informations about libraries that are used in database and links of them are given



ONLINE LIBRARY ABOUT US

INFORMATION ABOUT E-LIBRARY PROJECT

The aim of this project is providing whole library system which is accessible via web. Users will be able to see sources (book, e-book, DVD, magazine etc.) and if users are member of the system, they will be rent sources. Users will be able to find the location of the sources from website and they can take actual material from library. If a user wants to use electronic sources from website, he/she will be able to find information about electronic source and a link of the electronic source. The system will have administrator users. Administrator users will be able to control the system (adding source, deleting source, updating source,). The system will have different searching types (type of source and genre of search). In addition, popular sources will be listed on the website according to popular search topics and popular rented sources. If a user does not enter the system for a year, account of the user will be deleted by the system.

CONTACT INFORMATION ABOUT LIBRARIES

Mustafa İnan Kütüphanesi Tel : (0212) 285 35 96

Mustafa İnan Kütüphanesi hakkında daha fazla bilgi için [tıklayın](#)

Makine Fakültesi Ratip Berker Kütüphanesi Tel : (0212) 293 13 00/2163

Makine Fakültesi Ratip Berker Kütüphanesi hakkında daha fazla bilgi için [tıklayın](#)

User Interface

A series of horizontal lines in teal and light blue colors, some solid and some dashed, extending across the bottom of the slide.

Register

- Guest can register anytime by clicking register link under login symbol.
- Guest encounter this page :



The image shows a registration form titled "ONLINE LIBRARY REGISTER" in blue, stylized text. To the left of the title is a blue icon of a person sitting at a desk with a laptop. Below the title, there are four input fields with labels in orange: "First Name : Enter First Name", "Last Name : Enter Last Name", "Username : Enter Username", and "Password : Enter Password". At the bottom of the form is a blue icon of a person sitting at a desk with a laptop, with a green plus sign to its right, and the text "SIGN UP" in orange below it.

- If guest enter another user information, he/she will see this error message.

Bu Kullanıcı Adı Zaten Kayıtlı, Yeniden Deneyin.

Login

- After registering, user can login to website using Username and Password.

A yellow rectangular form titled "ONLINE LIBRARY SIGN IN" in blue, stylized text. To the left of the title is a blue icon of a person. Below the title is a blue-bordered box containing two input fields: "Username" with a placeholder "Enter Username" and "Password" with a placeholder "Enter Password". Below the input fields is a blue padlock icon, followed by the word "LOGIN" in orange, bold, stylized text. At the bottom is a blue icon of a person with a green plus sign, followed by the word "Register" in orange, bold, stylized text.

- According to user_authority_state from users table, user is redirected to user or admin home page.
- Also user can do everything that guest can do.

Logout

- User can logout anytime from website by clicking logout icon.
- Also there is name and surname under the logout symbol.



- After Logout user is redirected to guest Home Page

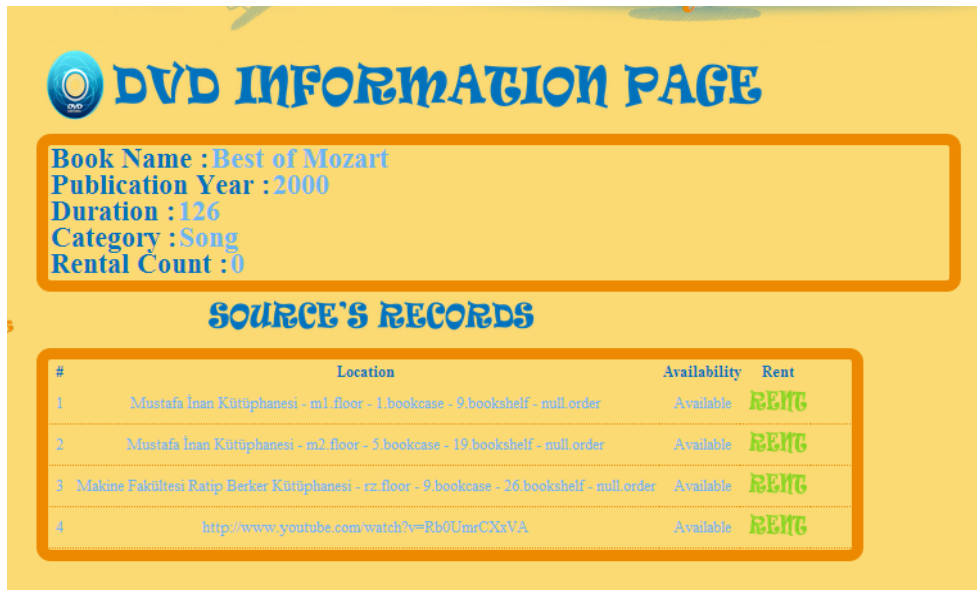
User Home Page

- User will see this page, when he/she logs in to website.



Searching Records

- Same as guest interface except renting procedure. User can rent sources which are available. Also user can see location of source and when source is available.



The screenshot displays a web interface for DVD information. At the top, there is a logo and the title "DVD INFORMATION PAGE". Below this, a box contains the following details: Book Name : Best of Mozart, Publication Year : 2000, Duration : 126, Category : Song, and Rental Count : 0. Underneath, a section titled "SOURCE'S RECORDS" contains a table with four columns: #, Location, Availability, and Rent. The table lists four records, each with a unique location and a "RENT" link.

#	Location	Availability	Rent
1	Mustafa İnan Kütüphanesi - m1.floor - 1.bookcase - 9.bookshelf - null.order	Available	RENT
2	Mustafa İnan Kütüphanesi - m2.floor - 5.bookcase - 19.bookshelf - null.order	Available	RENT
3	Makine Fakültesi Ratip Berker Kütüphanesi - rz.floor - 9.bookcase - 26.bookshelf - null.order	Available	RENT
4	http://www.youtube.com/watch?v=Rb0UmrCXsVA	Available	RENT

- If user press rent link, he/she will see this message.

DVD is rented.

- If user want to rent source which is not available, this message will be displayed.

DVD is not available for 30days.

- User also can put source which is not available to waiting list by clicking **WAIT** link in information page.

SOURCE'S RECORDS

#	Location	Availability	Rent	
1	Mustafa İnan Kütüphanesi - m1.floor - 1.bookcase - 9.bookshelf - null.order	Available in 30 days	RENT	WAIT
2	Mustafa İnan Kütüphanesi - m2.floor - 5.bookcase - 19.bookshelf - null.order	Available	RENT	
3	Makine Fakültesi Ratip Berker Kütüphanesi - rz.floor - 9.bookcase - 26.bookshelf - null.order	Available	RENT	
4	http://www.youtube.com/watch?v=Rb0UmrCXxVA	Available	RENT	

Most Populars Page

- This page is same as guest Most Populars page, except renting procedure. After clicking source's links user can see location of sources and user can rent them.



MAGAZINE INFORMATION PAGE

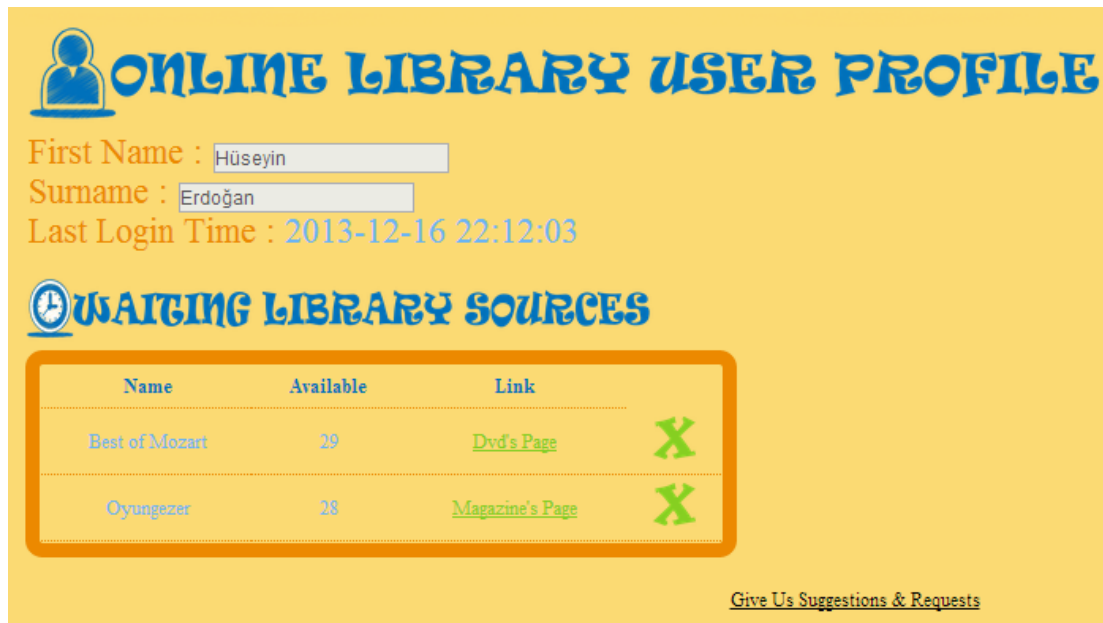
Book Name : Oyungezer Magazine Information
Publication Year : 2005
Category : Computer
Issue : 6
Rental Count : 1

SOURCE'S RECORDS

#	Location	Availability	Rent
1	http://oyungezer.com.tr	Available	RENT
2	Mustafa İnan Kütüphanesi - m1.floor - 2.bookcase - 10.bookshelf - null.order	Available in 29 days	RENT WAIT

User Profile

- User can see firstname, surname, last login time and sources which is user waiting for.



ONLINE LIBRARY USER PROFILE

First Name : Hüseyin
Surname : Erdoğan
Last Login Time : 2013-12-16 22:12:03


WAITING LIBRARY SOURCES

Name	Available	Link
Best of Mozart	29	Dvd's Page
Oyungezer	28	Magazine's Page

[Give Us Suggestions & Requests](#)

- Also there is a link to suggestion and request page and if user sends request, user name will be seen by admins.

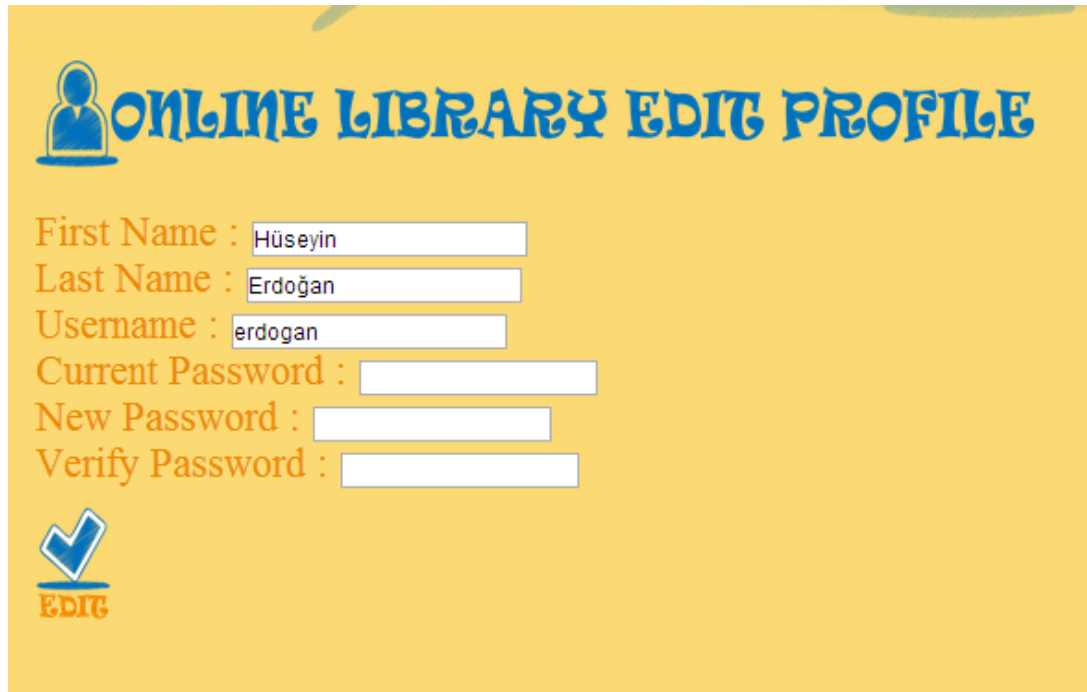
- User can delete sources which are in the waiting source list.

Name	Available	Link	
Best of Mozart	29	Dvd's Page	


- If user clicks , source which is in waiting list will be deleted.

Edit Profile

- User can change first name, last name, user name and password.
- Current Password is necessary for changing all of this information.



The image shows a web form titled "ONLINE LIBRARY EDIT PROFILE" on a yellow background. At the top left is a blue icon of a person. Below the title are five input fields with labels in orange text: "First Name" (containing "Hüseyin"), "Last Name" (containing "Erdoğan"), "Username" (containing "erdogan"), "Current Password", "New Password", and "Verify Password". At the bottom left is a blue checkmark icon above the word "EDIT" in orange.

 **ONLINE LIBRARY EDIT PROFILE**

First Name :


Last Name :

Username :

Current Password :

New Password :

Verify Password :

 **EDIT**

Archive

- In this page sources are listed which are rented by user.



Source Name	Source Type	Renting Date	Last Returning Date	Source Link
Penguen	Magazine	2013-12-16	2014-01-15	Source's Page
Best of Mozart	DVD	2013-12-16	2014-01-15	Source's Page

Admin Interface

A series of horizontal lines in teal, light blue, and white, extending across the bottom of the slide.


Admin Home Page

- Admin will see this page, when he/she logs in to website.



Admin Profile Page

- Admin will see profil information and last 10 renting process.



ONLINE LIBRARY ADMIN PROFILE

Name :

Surname :

Last Login Time : 2013-12-16 19:30:19

Last 10 Library Renting Process

User	User Last Access	Source	Source Type	Renting Date	Expected Returning Date	Source Link
Hüseyin Erdoğan	2013-12-16 19:31:52	Penguen	Magazine	2013-12-16	2014-01-15	Source's Page
Hüseyin Erdoğan	2013-12-16 19:31:52	Best of Mozart	DVD	2013-12-16	2014-01-15	Source's Page
Tuğrul Yatağan	2013-12-15 14:43:11	Oyungezer	Magazine	2013-12-15	2014-01-14	Source's Page
Üye Kullanıcı	2013-12-16 19:16:57	Dava	Book	2013-12-15	2014-01-14	Source's Page

Admin Edit Profile

- Same as user edit profil page.



The image shows a web form titled "ONLINE LIBRARY EDIT PROFILE" on a yellow background. The title is in blue, with a blue person icon to its left. Below the title, there are six input fields with orange labels: "First Name" (containing "Emre"), "Last Name" (containing "Gökrem"), "Username" (containing "a"), "Current Password", "New Password", and "Verify Password". At the bottom left, there is a blue checkmark icon above the word "EDIT" in orange.

 **ONLINE LIBRARY EDIT PROFILE**

First Name :

Last Name :

Username :

Current Password :

New Password :

Verify Password :


EDIT

Admin Search

- In this page admins can search any item and also they can delete them, update them and put them to libraries.



Name	Category	Issue Number	Publication Date	Rent
Chip	Computer	10	1992	Magazine's Page
IEEE	Science	5	1960	Magazine's Page
Oyungezer	Computer	6	2005	Magazine's Page
Penguen	Comic	1	2004	Magazine's Page
Penguen	Comic	2	2005	Magazine's Page
Time	Life	6	1923	Magazine's Page

- Search procedure is same as guest and user search procedure. But when admins click to Magazine's Page, he/she will see this page unlike guest and user.

 **MAGAZINE INFORMATION PAGE**

Magazine Name :Penguen Magazine Information
Publication Year :2004
Category :Comic
Issue :1
Rental Count :0

ADD EDIT X

SOURCE'S RECORDS

#	Location	Availability	Edit	Delete
1	http://www.penguen.com	Available	EDIT	X
2	Mustafa İnan Kütüphanesi - m2.floor - d.bookcase - da.bookshelf - 20.order	Available	EDIT	X

Source Placed Page

- When admin clicks **ADD**, he/she will see Online Library Source Placed Page.



The screenshot shows a web form titled "SOURCE PLACED PAGE" in blue, bold, serif font. The form has a yellow background. It contains several labels in orange text on the left and corresponding input fields on the right. The labels are: "Source Name :", "Library Name:", "Library Floor:", "Bookcase:", "Bookshelf:", and "Column(1-50):". The input fields are: a text box with "Penguin" (highlighted in blue), a dropdown menu with "Choose One", a dropdown menu with "Choose One", a dropdown menu with "Choose One", a dropdown menu with "Choose One", and a text box with "1-50". Below the input fields, there is a blue text label "Placed Source" followed by a large green plus sign.

- In this page, admin enters library name and according to library, admin select library floor, bookcase, bookshelf and column number.
- If source is also electronic, admin can enter source's URL.
- Source Placed Page is common for all tree type.(book, DVD, magazine)

Source's Records

- In this part user sees location of sources.
- If user is admin, he/she can edit and delete location of source.

SOURCE'S RECORDS				
#	Location	Availability	Edit	Delete
3	Mustafa İnan Kütüphanesi - m3.floor - g.bookcase - gb.bookshelf - 34.order	Available	EDIT	X

- Admin can delete location of source by clicking X

Source's Records Edit Page

- If admin clicks **EDIT** in source's records table, he/she will see this page.
- If there is a need update for source's location, admin can do it in this page.

SOURCE EDIT PAGE

Source Name : Bin Dokuz Yüz Seksen Dört

Library Name: Mustafa İnan Kütüphanesi

Library Floor: m3

Bookcase: g


Bookshelf: gb

Column(1-50): 34

Place Change 

Edit Book

- When admin clicks **EDIT** in book information page, he/she will see this page for updating book informations.



BOOK EDIT PAGE


Book Name :

Author :

Publication Year :

ISBN :

Category :


EDIT

Edit DVD

- When admin clicks **EDIT** in DVD information page, he/she will see this page for updating DVD informations.




DVD Name :

Duration :

Publication Year :

Category :



EDIT

Edit Magazine

- When admin clicks **EDIT** in magazine information page, he/she will see this page for updating magazine informations.

MAGAZINE EDIT PAGE

Magazine Name :

Issue Number :

Publication Year :

Category :

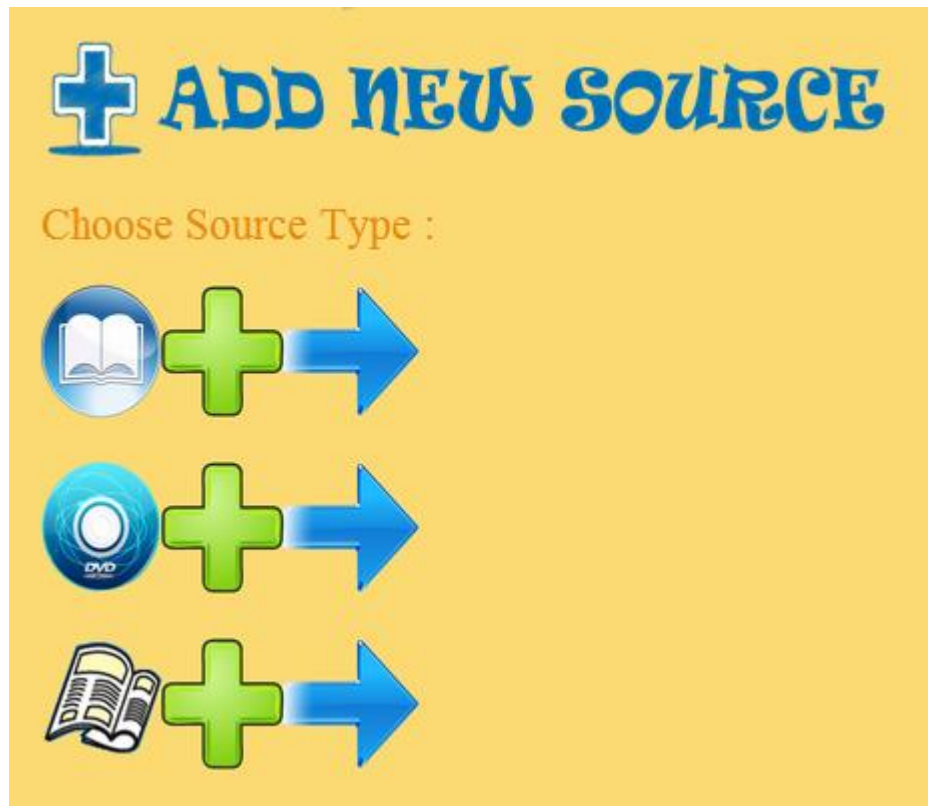


Delete Source

- When admin clicks  for any type, he/she will be redirected to admin home page and source will be deleted with all of its records.

Adding Source

- Admins can add source.
- First admin selects type of source(book, magazine, dvd).



Adding Book

- After selecting type of source, admin enters information of source. For books : book name, author name, publication year, ISBN and book category.



The screenshot shows a web form titled "ADD BOOK PAGE" with a book icon. The form is set against a yellow background. On the left, labels for the input fields are listed in orange text. On the right, the corresponding input fields are shown. At the bottom center, there is a green plus icon and the text "Add Source".

ADD BOOK PAGE


Book Name :

Author Name :

Book Publication Year :

Book ISBN :

Book Category :

Add Source 

Adding DVD

- For DVDs : DVD name, publication year, duration and DVD category.



The screenshot shows a web form titled "ADD DVD PAGE" with a blue DVD icon. The form has a yellow background. On the left, there are labels for "DVD Name :", "DVD Publication Year :", "DVD Duration :", and "DVD Category :". On the right, there are corresponding input fields: a text box for "DVD Name", a spinner box for "DVD Publication Year", a spinner box for "DVD Duration", and a dropdown menu for "DVD Category" currently showing "Documentary". At the bottom right, there is a green plus icon and the text "Add Source".

ADD DVD PAGE

DVD Name :
DVD Publication Year :
DVD Duration :
DVD Category :

DVD Name
DVD Publication Year
DVD Duration
Documentary

Add Source+

Adding Magazine

- For magazines : magazine name, publication year, issue number, and magazine category.



Magazine Name :
Magazine Publication Year :
Issue Number :
Magazine Category :

Magazine Name	<input type="text"/>
Magazine Publication	<input type="text"/>
Issue Number	<input type="text"/>
Comic	<input type="button" value="v"/>

Add Source 

Admin Archive

- Admin can see requests and suggestions in this page.

Message	User	Delete
Site çok güzel olmuş elinize sağlık	Public User	Delete This Message
Bu siteyi sürekli kullanıyorum harikasınız	Public User	Delete This Message
Mustafa hariç geri kalanınızı çok seviyorum, başarılar	Public User	Delete This Message
Çok güzel site olmuş elinize sağlık.	Public User	Delete This Message

- Also admin can delete this requests and suggestions.

Message	User	Delete
Site çok güzel olmuş elinize sağlık	Public User	Delete This Message
Bu siteyi sürekli kullanıyorum harikasınız	Public User	Delete This Message
Mustafa hariç geri kalanınızı çok seviyorum, başarılar	Public User	Delete This Message

Database Tables



users

- This table stores user data. Informations in this table as follows:

Name	Type	Not Null	Primary Key
user_id	Int(11)	Auto increment	1
user_nickname	Varchar(45)	1	0
user_name	Varchar(45)	1	0
user_surname	Varchar(45)	1	0
user_password	Varchar(45)	1	0
user_authority_state	bit(1)	1	0
user_last_access_time	Datetime	1	0
user_point	Varchar(45)	1	0

- user_authority_state : information about user that is normal user or admin.
- user_last_access_time : last access time of user. This information used for deleting user that does not enter website for over a year.
- user_point : penalty point. This points are deleted only by admin.

logs

- This table stores data about login procedure and sources that are rented. Informations in this table as follows:

Name	Type	Not Null	Primary Key
log_id	Int(11)	1	1
user_id	Int(11)	1	0
record_id	Int(11)	1	0
renting_date	date	1	0
expected_returning_date	date	1	0
returning_date	date	1	0

- renting_date : if user rents a source , this shows renting date
- expected_returning_date : expected return date of rented source
- user_authority_state : return date of rented source

types

- This table stores data about source type. Informations in this table as follows:

Name	Type	Not Null	Primary Key
type_id	Int(11)	1	1
type_name	Varchar(45)	1	0

- type_name : contains types. Ex: book, DVD, magazine

books

- This table stores book's data. Informations in this table as follows:

Name	Type	Not Null	Primary Key
book_id	Int(11)	Auto increment	1
book_name	Varchar(45)	1	0
author_id	Int(11)	1	0
book_publication_year	Year(4)	1	0
book_ISBN	Varchar(45)	1	0
book_rental_count	Int(11)	1	0
book_category_id	Int(11)	1	0

- **book_rental_count** : renting number of books and used for displaying most popular books
- **author_id** : author id connects books table with authors table

book_categories

- This table stores data about book categories. Informations in this table as follows:

Name	Type	Not Null	Primary Key
book_categorie_id	Int(11)	Auto increment	1
book_categorie_name	Varchar(45)	1	0

- book_categorie_name : used for categorizing books. Ex : novel, science.

authors

- This table stores data about writers of books. Informations in this table as follows:

Name	Type	Not Null	Primary Key
author_id	Int(11)	Auto increment	1
author_name	Varchar(45)	1	0
author_information	mediumtext	1	0

- author_information : brief information about author

magazines

- This table stores magazine data. Informations in this table as follows:

Name	Type	Not Null	Primary Key
<u>magazine_id</u>	Int(11)	Auto increment	1
<u>magazine_name</u>	Varchar(45)	1	0
<u>magazine_issue_number</u>	Int(11)	1	0
<u>magazine_publication_date</u>	Date	1	0
<u>magazine_rental_count</u>	Int(11)	1	0
<u>magazine_category_id</u>	Int(11)	1	0

- magazine_issue_number: issue number of magazine
- magazine_rental_count : renting number of magazines and used for displaying most popular magazines

magazine_categories

- This table stores data about magazine categories. Informations in this table as follows:

Name	Type	Not Null	Primary Key
magazine_categorie_id	Int(11)	Auto increment	1
magazine_categorie_name	Varchar(45)	1	0

- **magazine_categorie_name** : used for categorizing magazines. Ex : politic, comic.

DVDs

- This table stores DVD's data. Informations in this table as follows:

Name	Type	Not Null	Primary Key
DVD_id	Int(11)	Auto increment	1
DVD_name	Varchar(45)	1	0
DVD_duration	Int(11)	1	0
DVD_publication_date	Date	1	0
DVD_rental_count	Int(11)	Default "0"	0
DVD_category_id	Int(11)	1	0

- DVD_rental_count : renting number of DVDs and it is used for displaying most popular DVDs

DVD_categories

- This table stores data about categories of DVDs. Informations in this table as follows:

Name	Type	Not Null	Primary Key
DVD_category_id	Int(11)	Auto increment	1
DVD_category_name	Varchar(45)	1	0

- DVD_category_name : used for categorizing DVDs. Ex : movie, song, game.

records

- This table stores data about sources and type of this sources. Informations in this table as follows:

Name	Type	Not Null	Primary Key
record_id	Int(11)	Auto increment	1
type_id	Int(11)	1	0
x_id	Int(11)	1	0
Physical_electronic	bit(1)	1	0

- type_id : type of record. Ex : book,DVD, magazine
- physical-electronic : record is physical or electronic
- x_id : connects records table with source's table

bookcases

- This table stores data about bookcases and this informations are used for locating books. Informations in this table as follows:

Name	Type	Not Null	Primary Key
bookcase_id	Int(11)	Auto increment	1
floor_name	Int(11)	1	0
bookcase_name	Varchar(10)	1	0

- floor_name : floor name that is bookcase in.

bookshelves

- This table stores data about bookshelves and this informations are used for locating bookcases. Also bookshelves have limit. Informations in this table as follows:

Name	Type	Not Null	Primary Key
bookshelf_id	Int(11)	Auto increment	1
bookcase_id	Int(11)	1	0
bookshelf_name	Varchar(10)	1	0
book_limit	Int(11)	1	0

- **bookcase_id** : bookcase id that is bookshelf in there
- **book_limit** : maximum number of book that bookshelf can contain.

floors

- This table stores data about floors that libraries have. Informations in this table as follows:

Name	Type	Not Null	Primary Key
floor_id	Int(11)	Auto increment	1
library_id	Int(11)	1	1
floor_name	Varchar(45)	1	1

- **library_id** : library that's contains that floor

libraries

- This table stores library data. Informations in this table as follows:

Name	Type	Not Null	Primary Key
library_id	Int(11)	Auto increment	1
library_name	Varchar(45)	1	0
library_address	Varchar(45)	1	0

electronic_resources

- This table stores data about sources that are electronic. Informations in this table as follows:

Name	Type	Not Null	Primary Key
record_id	Int(11)	Auto increment	1
url	Varchar(45)	1	0

- url : users can reach sources on internet using url

physical_resources

- This table stores data about sources that are physical. Informations in this table as follows:

Name	Type	Not Null	Primary Key
record_id	Int(11)	Auto increment	1
bookshelf_id	Int(11)	1	0
book_column	Int(11)	1	0
current_log_id	Int(11)	1	0

waiting_resources

- This table stores data about users that are waiting for sources. Informations in this table as follows:

Name	Type	Not Null	Primary Key
user_id	Int(11)	1	1
record_id	Int(11)	1	1

- record_id : source that is users waiting for

suggestions

- This table stores suggestions that are going to send to admin. Informations in this table as follows:

Name	Type	Not Null	Primary Key
suggestion_id	Int(11)	1	1
suggestion	text	1	0

Entity Relation Diagram

A series of horizontal lines in teal and light blue colors, with varying lengths and slight offsets, creating a modern, layered effect across the middle of the slide.

