

**HACETTEPE UNIVERSITY
DEPARTMENT OF COMPUTER ENGINEERING**

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**DATABASE MANAGEMENT SYSTEMS LABORATORY
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HOTEL RESERVATION SYSTEM

FINAL REPORT

PROJECT MEMBER

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1) Project Definition

We have chosen the “Hotel Reservation System”; as the subject of our project. Of course, you can make a reservation by entering the site of a hotel or by contacting directly by phone. Doing so will only provide you with cursory information about that hotel. But “What exactly is the hotel’s features and price? Which hotel is more affordable? Which hotel has better service quality?” For your questions like this, we thought that a site where all hotels are gathered under one roof can be much more useful. Therefore, we want to gather these hotels under a single site, filter them according to the customer’s request and ensure that customers find the appropriate hotel in a simpler and easier search away from confusion. There are many global sites similar to the project. For example, “Trivago”, “booking.com”.

One of the main actors in our system is hotels. The processes that the hotels can do in the system and their features are listed below.

- There are two types of staff working at the hotel. One is a normal employee and the other is an administrator. The manager can see the hotel's financial budget and statistics.
- The hotels have rooms with different features, different sizes, and different prices according to their specific structures.
- Hotels can add a new room.
- Information on whether rooms can be used, in particular renovations and maintenance, cleaning, is updated by hotel staff.
- The current condition of the room, whether it is full (until when) or empty must be specifically indicated to the customer.
- Rooms may have extra features or may be added.
- Staff, who are logged in, will be able to update their personal information (address/phone/mail, etc.) as they will have a profile of their own.

People who use the system are defined as customers. The transactions that customers can perform in the system are listed below.

- There are 2 types of customers in the system. Non-logging customers and logging customers.
- Customers, who are not logged in, can only search in the system and view hotels. In order to make a reservation, the customer must register in the system.
- Customers, who are logged in, will be able to update their personal information (address/phone/mail, etc.) as they will have a profile of their own.
- After logging into the system, the customer can select rooms, make reservations or cancel all such transactions.
- They can filter the rooms according to their wishes and sort them by price.
- If the customer wishes to reserve a room, he/she must enter the date information. In this way, information about which rooms are full and which rooms are empty can be kept in the system. When the reservation date is over, the room will be restored to empty status.
- When the customer has booked the room, the price is deducted from the account defined in the system. (According to the payment method he wants to make)
- The customer can choose additional facilities for the room and the fee varies accordingly.

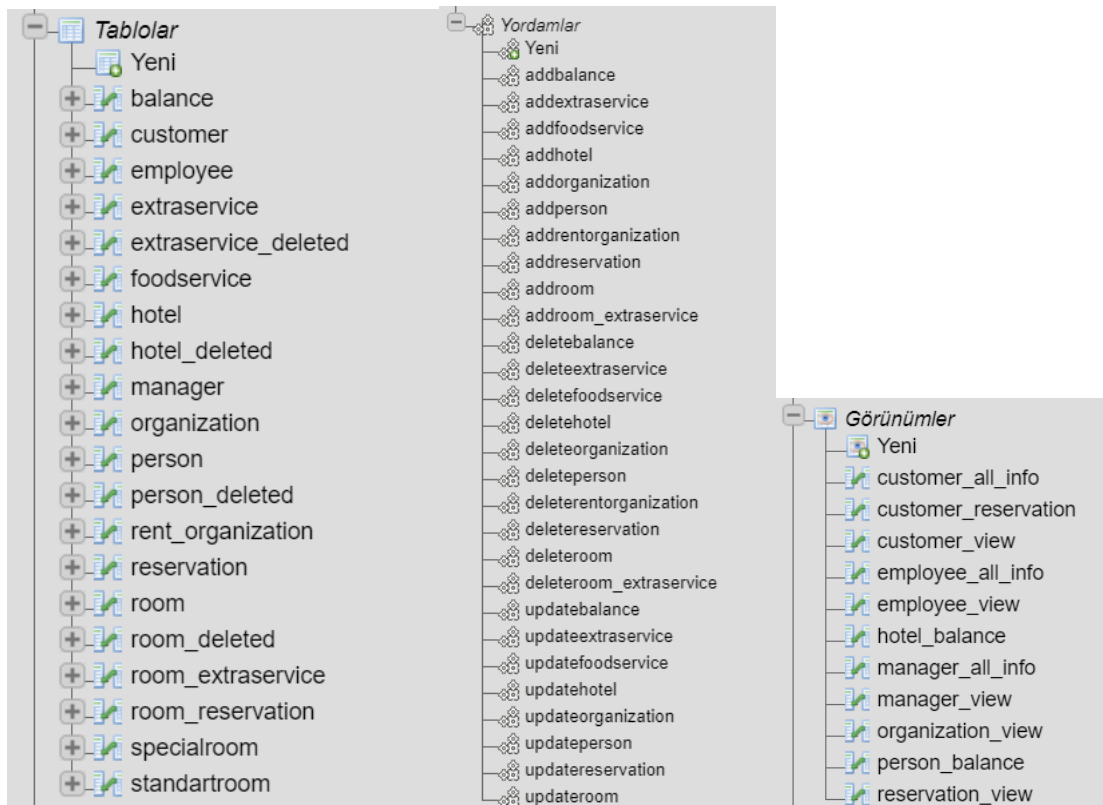
2) Database Connection

Since we are using MySQL, in the following image, we are making a connection to the database running in our localhost.

```
<?php
// Veritabani baglantimizi yapiyoruz
$host = "localhost";
$user = "root";
$pass = "password";
$db = "hotel_reservation";

$baglanti = mysqli_connect($host, $user, $pass, $db);
if (mysqli_connect_errno()) {
    echo "MySQL bağlantısı başarısız: " . mysqli_connect_error();
}
```

We make the connection to mysql with the "**mysqli_connect ()**" function. We define the parameters of this function first. We check the connection we established with these parameters in the if block and display it on the screen if there is an error. This is our db.php file. We include this file at the beginning of all the pages we process with the database. The tables, procedures and views in our database are as follows:



The only change in our tables is that we added the role in person table. We added picture attribute in the room and organization table. There is no change in the remaining tables.

3) Project

[Project Demo Video Link](#)

We use php in our project. We used Appserv. It contains Mysql & Php in AppServ. All of our files are as follows:

css

add-organization.php

add-room.php

date.php

db.php

hotel-detail.php

hotels.php

image-upload.php

index.php

login.php

logout.php

my-reservations.php

navbar.php

navbar-customer.php

navbar-employees.php

organizations.php

org-detail.php

php-excel.class.php

profile-customer.php

profile-employees.php

register-customer.php

register-hotel.php

room-detail.php

rooms.php

settings-customer.php

settings-employees.php

statistics.php

In our project, we come across a homepage at the first entrance to the site. Customers who log in to this homepage or all users who are not logged in can view it. From this page, you can go to those pages with the "Hotels", "Rooms", "Organizations" buttons in the upper left and see the hotels, rooms and organizations. Buttons in the upper right point to the registration and login page. You can review the reservations from this page, but you cannot make a reservation. When you want to make a reservation, you will be directed to the login page. This homepage is shown in the picture below.

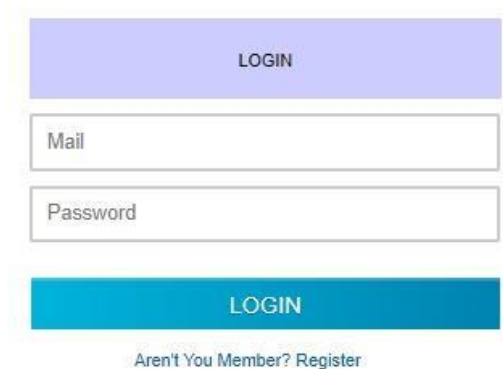


Reservation

City: Start Date: Finish Date:

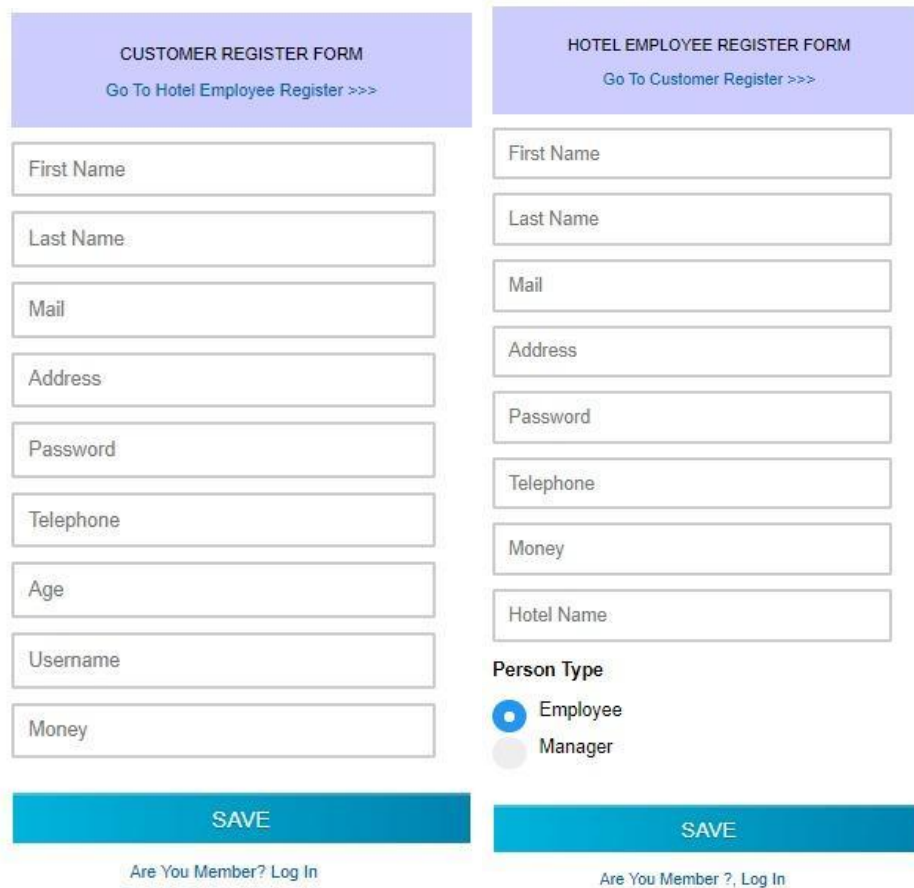
ID	Room Info	Room No	Price	Status	Capacity	Hotel Name	Details
1	asds	1-0-500	120 \$	available	2	Grand Makel Topkapi	Detail
2	asd	1-0-400	120 \$	available	2	Grand Makel Topkapi	Detail
3	Kral Dairesi, Yatak : 1 çift kişilik yatak, 4 tek kişilik yatak, Buyukluk : 170 m², Banyo : 2 banyo, 1 tuvalet	10-1-501	1000 \$	not available	11	Ramada Encore Izmir	Detail
4	Connection Oda, Yatak : 4 çift kişilik yatak, Buyukluk : 56-64 m², Banyo : 2 banyo	9-0-401	250 \$	not available	8	Pine Bay Holiday Resort	Detail
5	Standart Oda, Yatak : 2 çift kişilik yatak, Buyukluk : 28-32 m², Banyo : 1 banyo	8-0-301	175 \$	not available	4	Hampton By Hilton Kahramanmaraş	Detail
6	Suit Oda, Yatak : 2 çift kişilik yatak, 2 tek kişilik yatak, Buyukluk : 70 m², Banyo : 1 banyo	6-1-201	400 \$	not available	6	Doubletree By Hilton	Detail
7	Kose Oda, Yatak : 2 çift kişilik yatak, Buyukluk : 50 m², Banyo : 1 banyo	5-1-101	500 \$	not available	4	Hotel Grand Asya	Detail
8	Kral Dairesi, Yatak : 1 çift kişilik yatak, 4 tek kişilik yatak, Buyukluk : 170 m², Banyo : 2 banyo, 1 tuvalet	5-1-500	1000 \$	available	11	Hotel Grand Asya	Detail
9	Connection Oda, Yatak : 4 çift kişilik yatak, Buyukluk : 56-64 m², Banyo : 2 banyo	4-0-400	250 \$	available	8	Shimall Hotel	Detail

Our login page is as below picture. If you are registered to the system, you can login directly. However, if you are not registered in the system, "Aren't You Member? By clicking the "Register" tab, you will be directed to the registration page.



The login form consists of a purple header bar with the text "LOGIN" in white. Below the header are two white input fields: "Mail" and "Password". At the bottom is a blue button with the text "LOGIN" in white. Below the button is a link that says "Aren't You Member? Register".

There are 2 types of registration pages. One is for customers and the other is for hotel employees (manager and employees). You should choose whether you are a manager or employee from the bottom buttons. If you are already registered in the system, "Are You Member? Click "Log in" and you will go to the login page.



The image shows two registration forms side-by-side. The left form is titled "CUSTOMER REGISTER FORM" and the right form is titled "HOTEL EMPLOYEE REGISTER FORM". Both forms have a purple header bar with the title and a link to the other form. The left form has input fields for First Name, Last Name, Mail, Address, Password, Telephone, Age, Username, and Money. The right form has input fields for First Name, Last Name, Mail, Address, Password, Telephone, Money, and Hotel Name. Below the input fields is a "Person Type" section with two radio buttons: "Employee" (selected) and "Manager". At the bottom of each form is a blue button with the text "SAVE". Below the "SAVE" button is a link that says "Are You Member? Log In".

1- Customer Login

Let's look at what a logged-in customer can do. Again, after opening the same homepage, if you pay attention to it, if you pay attention, it writes the email of the user who is logged in at the top right. And has the "Log Out" button . From this page, the appropriate rooms can be displayed by determining the date and city for direct reservation. By clicking on the Detail button, you can go to the page with the details of the rooms and examine the rooms. The reservation process will be explained again later. Let's examine the pages opened by the buttons on this page one by one.

Reservation

City: Start Date: Finish Date: [SEARCH](#)

ID	Room Info	Room No	Price	Status	Capacity	Hotel Name	Details
1	asds	1-0-500	120 \$	available	2	Grand Makiel Topkapi	Detail
2	asd	1-0-400	120 \$	available	2	Grand Makiel Topkapi	Detail
3	Kral Dairesi, Yatak : 1 çift kişilik yatak, 4 tek kişilik yatak, Büyüklük : 170 m², Banyo : 2 banyo, 1 tuvalet	10-1-501	1000 \$	not available	11	Ramada Encore Izmir	Detail
4	Connection Oda, Yatak : 4 çift kişilik yatak, Büyüklük : 56-64 m², Banyo : 2 banyo	9-0-401	250 \$	not available	8	Pine Bay Holiday Resort	Detail
5	Standart Oda, Yatak : 2 çift kişilik yatak, Büyüklük : 28-32 m², Banyo : 1 banyo	8-0-301	175 \$	not available	4	Hampton By Hilton Kahramanmaraş	Detail
6	Suit Oda, Yatak : 2 çift kişilik yatak, 2 tek kişilik yatak, Büyüklük : 70 m², Banyo : 1 banyo	6-1-201	400 \$	not available	6	Doubletree By Hilton	Detail
7	Kose Oda, Yatak : 2 çift kişilik yatak, Büyüklük : 50 m², Banyo : 1 banyo	5-1-101	500 \$	not available	4	Hotel Grand Asya	Detail
8	Kral Dairesi, Yatak : 1 çift kişilik yatak, 4 tek kişilik yatak, Büyüklük : 170 m², Banyo : 2 banyo, 1 tuvalet	5-1-500	1000 \$	available	11	Hotel Grand Asya	Detail
9	Connection Oda, Yatak : 4 çift kişilik yatak, Büyüklük : 56-64 m², Banyo : 2 banyo	4-0-400	250 \$	available	8	Shimall Hotel	Detail
10	Standart Oda, Yatak : 2 çift kişilik yatak, Büyüklük : 28-32 m², Banyo : 1 banyo	3-0-300	175 \$	available	4	Dedeman İstanbul	Detail
11	Suit Oda, Yatak : 2 çift kişilik yatak, 2 tek kişilik yatak, Büyüklük : 70 m², Banyo : 1 banyo	2-1-200	400 \$	available	6	Divan Adana	Detail
12	Kose Oda, Yatak : 2 çift kişilik yatak, Büyüklük : 50 m², Banyo : 1 banyo	1-1-100	500 \$	available	4	Grand Makiel Topkapi	Detail

When the "Hotels" button is clicked, we see a page with hotels like the one below. All hotels name, address information, hotel type, star information, can be seen according to the satisfaction of the users.

Filters

City

Stars

Hotel Type

uc Yıldızlı ● İki Yıldızlı ● Dört Yıldızlı ● Bir Yıldızlı ● Bes Yıldızlı ●

[FILTER](#)

Hotels

Ramada Encore Izmir

Address: Mithatpasa Caddesi 1460, Balçova, 35330, İzmir, Türkiye \$
Stars: 1
Hotel Type: Bir Yıldızlı

[Details](#)

Pine Bay Holiday Resort

Address: Camilmani Mevkii, 09400, Kuzadasi, Türkiye \$
Stars: 4
Hotel Type: İki Yıldızlı

[Details](#)

A more detailed examination can be made by clicking the "Details" button for each hotel. Here you can also see the information of the rooms that the hotel has. The following page shows the details page for "Shimall Hotel".

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#) [Search](#) [ceren_keskin924@example.com](#) [Log Out](#)

Shimall Hotel

Hotel Info: Havuz, Restoran
Address: Mucahitler Mahallesi, Mahmut Ersoy Cd. No:6, 27090 , Gaziantep, Türkiye \$
Phone Number: +908512124661
Stars: 3
Hotel Type: İki Yıldızlı

ID	Room Info	Room No	Price	Status	Capacity	Details
1	Connection Oda, Yatak : 4 çift kişilik yatak, Büyüklük : 56-64 m², Banyo : 2 banyo	4-0-400	250 \$	available	8	Detail

With the filter on the right side of the hotel page, you can filter by city, star and hotel type. The following two pictures show examples of filtering.

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#) [Search](#) [ceren_keskin924@example.com](#) [Log Out](#)

Filters

City

Stars

Hotel Type

uc Yıldızlı İki Yıldızlı Dort Yıldızlı Bir Yıldızlı Bes Yıldızlı

[FILTER](#)

Hotels

Hampton By Hilton Kahramanmaraş

Address: Trabzon Cad No 2, 46100, Kahramanmaraş, Türkiye \$
Stars: 4
Hotel Type: uc Yıldızlı

[Details](#)

Pine Bay Holiday Resort

Address: Camlımanlı Mevkii, 09400, Kuzadasi, Türkiye \$
Stars: 4
Hotel Type: İki Yıldızlı

[Details](#)

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#) [Search](#) [ceren_keskin924@example.com](#) [Log Out](#)

Filters

City

Stars

Hotel Type

uc Yıldızlı İki Yıldızlı Dort Yıldızlı Bir Yıldızlı Bes Yıldızlı

[FILTER](#)

Hotels

Grand Makedon Topkapı

Address: Maltepe Mah. Serce Kale sok no:1/1, 34010, İstanbul, Türkiye \$
Stars: 8
Hotel Type: Bes Yıldızlı

[Details](#)

With the "Search" button in the middle, you can search from the hotel name, hotel type and similar information. An example of the search is shown in the image below.

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#)

ceren_keskin924@example.com [Log Out](#)

Filters

City

Stars

Hotels

Address: Mucahitler Mahallesi, Mahmut Ersoy Cd. No:6, 27090 , Gaziantep, Turkiye \$

Stars: 3

Hotel Type: İki Yıldızlı

Secondly, by clicking on the "Rooms" button, you go to the page where the rooms are located. On this page, information such as the pictures of the rooms and information such as room number, usage status and capacity are given. As in the hotel, you can filter in the right part of the rooms according to the price, city, capacity and usage status. You can also search using the "Search" button in the same way. The image below shows an example of this page.

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#)

[Register](#) [Login](#)

Filters

Maximum Price

City

Capacity

Status
☐ Available
☐ Not Available

Rooms

3+1 Oda



Room Price: 450 \$
Room Number: 1-1-125
Room Status: available
Room Capacity: 6 Person


2+1 Oda



You can also go to the page where you can make a reservation by clicking the "Details" button, which provides detailed information about the room. An example of this page is shown below.

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#) [Search](#) [Register](#) [Login](#)

3+1 Oda



Room Price: 450 \$
Room Number: 1-1-125
Room Status: available
Room Capacity: 6 Person

Total Price: 0 \$ Your Balance: \$

[Reservation](#)

Thirdly, with the "Organizations" button, you go to the page where the organizations are listed. This page shows the type, information and fee of the organization. Also available in the picture of the organization. As with hotel and room pages, you can filter and search organizations by price and city. An example of this page is shown below.

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#) [Search](#) [Register](#) [Login](#)

Filters


Maximum Price

City

[FILTER](#)

Organizations


Konser



Organization Information: Tomorrowland Konseri
Organization Price: 1000 \$

[Details](#)


Kır Düğünü



You can go to the page that gives detailed information about the organization and you can make a reservation for the organization by clicking on the "Details" button similar to the other pages. An example of this page is shown below.

[Home](#) [Rooms](#) [Hotels](#) [Organizations](#) [Search](#) [kadir_kaya144@example.com](#) [Log Out](#)

Konser




Organization Information: Tomorrowland Konseri
Hotel Name: Konser

Total Price: Your Balance:

[Reservation](#)

In addition to these transactions, when the customer clicks on the upper right e-mail address, he goes to the profile page. On this page, the customer displays their own information. An example of this page is shown below.

[Home](#) [My Reservations](#) [Settings](#) [ceren_keskin924@example.com](#) [Log Out](#)



Staff

Ceren

First Name: Ceren
Last Name: Keskin
Email: ceren_keskin924@example.com
Address: cigdemli Mahallesi No:863 Gurun, Sivas
Telephone: +908511281760
Role: customer

In addition, the customer can update their information with the "Settings" button. An example of this update process is shown below.

[ceren_keskin924@example.com](#)

Settings

[SAVE](#)

Settings

Staff


As can be seen, the name information of the customer has been updated.

Now let's talk about the reservation process. There are suitable rooms to be booked with the date and city selection buttons on the homepage. And because the user is logged in, he can make a reservation if there is enough money in his account and the condition of the room is suitable. These pages are shown below.

Reservation

[Home](#)
[Rooms](#)
[Hotels](#)
[Organizations](#)

[ceren_keskin924@example.com](#)
[Log Out](#)

Kose Oda, Yatak : 2 cift kisilik yatak, Buyukluk : 50 m², Banyo : 1 banyo

 Room Price: 500 \$
 Room Number: 1-1-100
 Room Status: available
 Room Capacity: 4 Person


Total Price:
 Your Balance:

ID	Service Name	Service Price	Service Point	Add	Delete
1	Temizlik	50 \$	5	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
2	Tasima	100 \$	6	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
3	Wifi	10 \$	9	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
4	Kuru Temizleme	60 \$	2	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
5	Kahvalti	30 \$	9	<input type="button" value="Add"/>	<input type="button" value="Delete"/>
6	Aksam yemegi	50 \$	7	<input type="button" value="Add"/>	<input type="button" value="Delete"/>

If the room is not available now, the System will give a warning and you cannot reserve this room.

[Home](#)
[Rooms](#)
[Hotels](#)
[Organizations](#)

[ceren_keskin924@example.com](#)
[Log Out](#)

Standart Oda, Yatak : 2 cift kisilik yatak, Buyukluk : 28-32 m², Banyo : 1 banyo

 Room Price: 175 \$
 Room Number: 8-0-301

Room Status: not available

 Room Capacity: 4 Person

Total Price:
 Your Balance:

! Since the room is under renovation, it is not possible to rent it !

ID	Service Name	Service Price	Service Point	Add	Delete
----	--------------	---------------	---------------	-----	--------

If the price of the room exceeds the balance of the customer, no reservation is made and a warning like below is shown.

localhost web sitesinin mesaji

Your balance is not enough for reservation!

If the usage status and balance information are suitable, the fee of the room is calculated according to the number of days selected by the customer and written as "Total Price". The balance that the customer has is shown with "Your Balance". When the reservation is made, the price of the reservation is deducted from the balance of the customer. An example of this process is shown below.

Home

Rooms

Hotels

Organizations


Search

Search

arslansibel742@example.com

Log Out

4+1 Oda



Room Price: 750 \$

Room Number: 1-1-225

Room Status: available

Room Capacity: 8 Person

2 day

Total Price: 1500 \$

Your Balance: 2400 \$

Reservation

Home

Rooms

Hotels

Organizations


Search

Search

arslansibel742@example.com

Log Out

4+1 Oda



Room Price: 750 \$

Room Number: 1-1-225

Room Status: available

Room Capacity: 8 Person

Total Price: 1500 \$

Your Balance: 900 \$

Reservation

Organizations can also be booked in the same way as rooms.

Konser



Organization Information: Tomorrowland Konseri
Hotel Name: Konser

Total Price: 1000 \$ Your Balance: \$

Your balance is not enough for rent organization!

Room and organization reservations made are displayed as follows when the "My Rezervation" button is clicked on the customer's profile page.

My Reservations

Reservation ID	Room Number	Price	Hotel Name	Hotel Address	Hotel Telephone
11	1-1-225	1500 \$	Grand Makedon Topkapi	Maltepe Mah. Serce Kale sok no: 1/1, 34010, Istanbul, Turkiye	+908514694867

2- Employee Login

When the staff logs in at the hotel, a profile page appears as follows and they can update their information with the "Settings" button, as in the customer.



Staff

Ugur

First Name: Ugur
Last Name: celik
Email: celikugur@example.com
Address: Tomruk Caddesi No:472 Kibriscik, Bolu
Telephone: +908512188855
Role: employee

Settings

First Name

Last Name

celikugur@example.com

Address

Password

Telephone

Money

SAVE

3- Manager Login

When the hotel manager logs in, a profile page like the one below appears. As with other users, the administrator can view his information and update his information with the "Settings" button.



Staff

Nilgun

First Name: Nilgun
Last Name: Korkmaz
Email: korkmaznilgun981@example.com
Address: Namik Kemal Sokagi No:622 Lice, Diyarbakir
Telephone: +908518455036
Role: manager

Settings

First Name

Last Name

korkmaznilgun981@example.com

Address

Password

Telephone

Money

SAVE

In addition, the manager adds the room with the "Add Room" button. Here you can upload a picture for the room. It also adds the room after entering all the information of the room. The added room is seen in the rooms that the customer is looking at. An example of this process is shown below.

The screenshot shows a web application interface with a dark blue header. The header contains a navigation menu with 'Home' (highlighted in green), 'Settings', 'Add Room', 'Add Organization', and 'Statistics'. On the right side of the header, the user's email 'arslansalih155@example.com' and a 'Log Out' button are visible. Below the header, a message states: 'Sorry, only JPG, JPEG, PNG & GIF files are allowed.' Below this message, there is a text input field labeled 'Select image to upload:' with a button 'Dosya Seç' and a status 'Dosya seçilmedi'. To the right of this is a blue 'Upload Image' button. The main content area features a light blue box titled 'Add Room'. Inside this box, there is a placeholder image of a modern bedroom. Below the image are five text input fields labeled 'Room Info', 'Room Price', 'Room Number', 'Capacity', and 'Feature'.

The manager performs the process of adding an organization with the "Add Organization" button. You can also upload a picture for the organization. After entering all the information of the organization, it adds the organization. An example of this process is shown below.

The screenshot shows the same web application interface as the previous one. The navigation menu is identical. The message about file formats and the upload button are also present. The main content area features a light blue box titled 'Add Organization'. Inside this box, there is a placeholder image of a red carpet leading to a building. Below the image are four text input fields labeled 'Organization Name', 'Organization Info', 'Organization Price', and 'Grand Maked Topkapi'.

The manager can see the statistical information about the hotel on the page opened by the "Statistic" button. Here, information such as the financial status of the hotel and the occupancy status can be observed. An example of this process is shown below.

Operation	Information	Result
COUNT	Number of Rooms in The Hotel	3
COUNT	Number of Available Rooms in The Hotel	3
COUNT	Number of Not Available Rooms in The Hotel	0
COUNT	Number of Special Rooms in The Hotel	2
COUNT	Number of Reserved Rooms in The Hotel	3
MAX	Maximum Price of Rooms in The Hotel	500 \$
MIN	Minimum Price of Rooms in The Hotel	125 \$
AVG	Average Price of Rooms in The Hotel	358.3333333333333 \$
SUM	Total Balance in The Hotel	1250 \$
FIRST	The First Rezerved Room in The Hotel	1-1-100
LAST	The Last Rezerved Room in The Hotel	1-1-100