

## **Project 3 Personalization & Ajax**

Website: StayComfort

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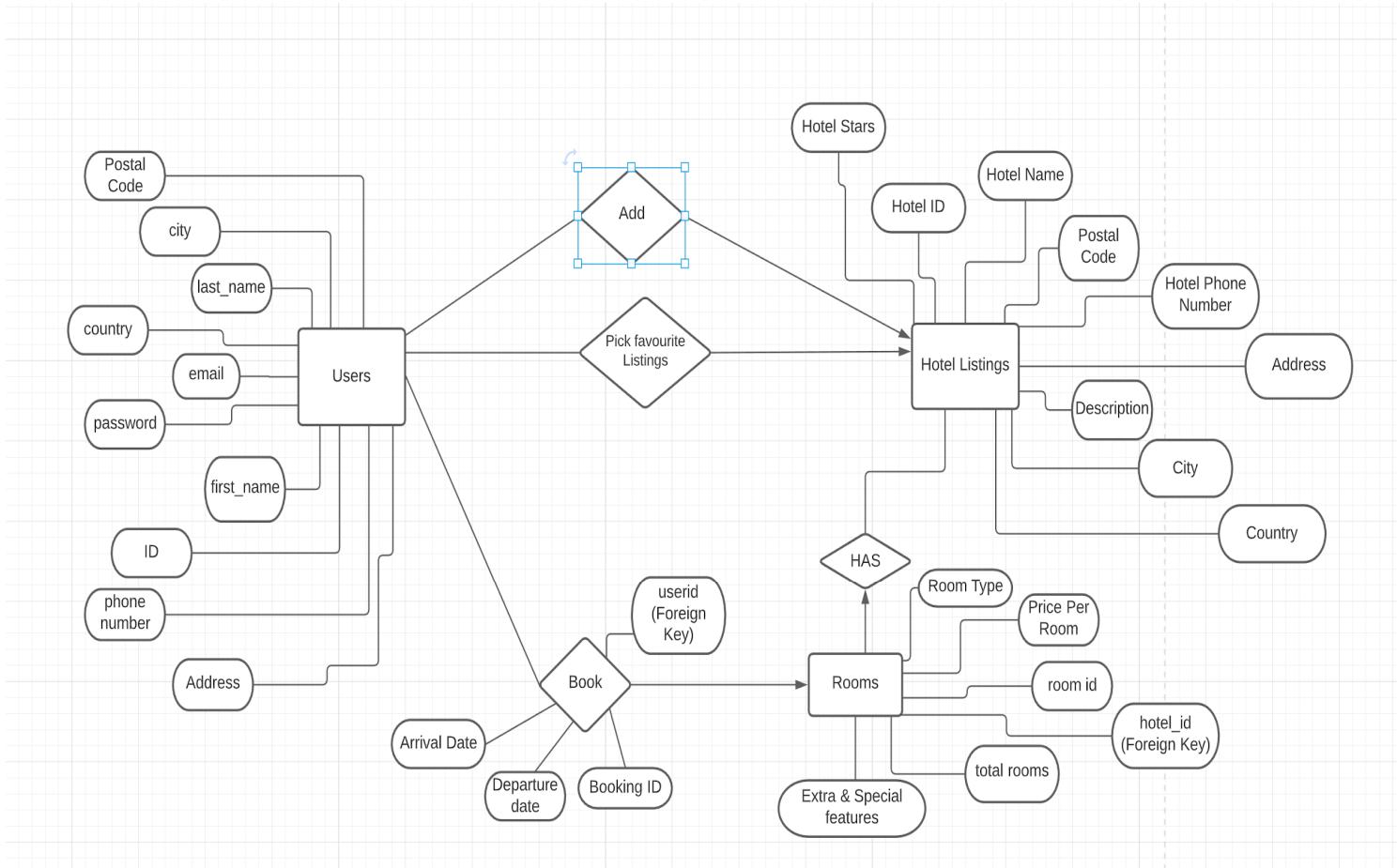
TA: Fatemeh Salehian Kia

### **ER Diagram Link:**

<https://lucid.app/invitations/accept/4de01d1c-cb14-45ca-ab10-43b71f32c989>

## Database Design

I have given a link to my ER diagram above also here is the ER Diagram that I have created to design this database.



The name of my website is StayComfortzz, it is a hotel listing and booking website where people can see the hotels and book them.

Whereas Members can add a listing on the hotel browsing page by themselves. But members have to register first. I decided to go with three main attributes

Hotel Listings, Rooms and Users. Now, users can also be members that is why it has all the entities related to their information, username password etc. the primary key in the user's attribute is the user id. The second is attribute is Hotel Listings and there are two relationships between the registered members and hotel listings. Members can personalize and add favourite listings to the home page (project 3) and members can also add hotel listings to the website's browse page. Hotel Listings have a lot of entities, the primary key is the hotel id. Hotel Listings does have a has-relation with rooms and rooms have their own attribute and the primary key for a room is the room id and the foreign key is the hotel id because a room will be available in the hotel. Members and users can also book the rooms, the book relationship uses the booking id as a primary key and the user's id as a foreign key because the user's id is related to the booking id and then easier to find the order. Members can log in and add hotel listings to the website, and once the form is filled to add hotel listings all that data goes to the database and the picture also comes to the img folder in the project.

### **Database Connectivity Code:**

I have attached the two codes for creating the database and connecting to it. In the second figure, I have used the command `mysqli_connect(host, root, "", database)` to connect to the database. In the first picture, I have created the database through the PHP code which only runs in the background when the page **ataak/databse.php is open**.

```

<?php
// 2. Create a database connection
$servername = "localhost";
$username = "root";
$password = "";

// Create connection
$conn = new mysqli($servername, $username, $password);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
} else {
    echo "Connection Successful";
}

// Create database
$sql = "CREATE DATABASE abhishek_taak";
if ($conn->query($sql) === TRUE) {
    echo "Database created successfully";
} else {
    echo "Error creating database: " . $conn->error;
}

$db = mysqli_select_db($conn, "abhishek_taak");

```

```

<?php
//connect to the db
$con = mysqli_connect("localhost","root","","abhishek_taak");
// Check connection
if (mysqli_connect_errno())
{
echo "Failed to connect to MySQL: " . mysqli_connect_error();
}
?>

```

## Secure Authentication Handling:

For secure authentication handling, I have created sessions by which the user can log in and logout. I will talk more about sessions in part 5, for secure

authentication handling I have used the hash method to hash all the user passwords that go inside the database and to stop the visitors from entering an unauthorized page by typing a URL I implemented sessions. Here is the code that I have used to hash the password which is stored in the database.

```
if (isset($_POST["submit"])) {
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "abhishek_taak";

    // Create connection
    $conn = new mysqli($servername, $username, $password, $dbname);

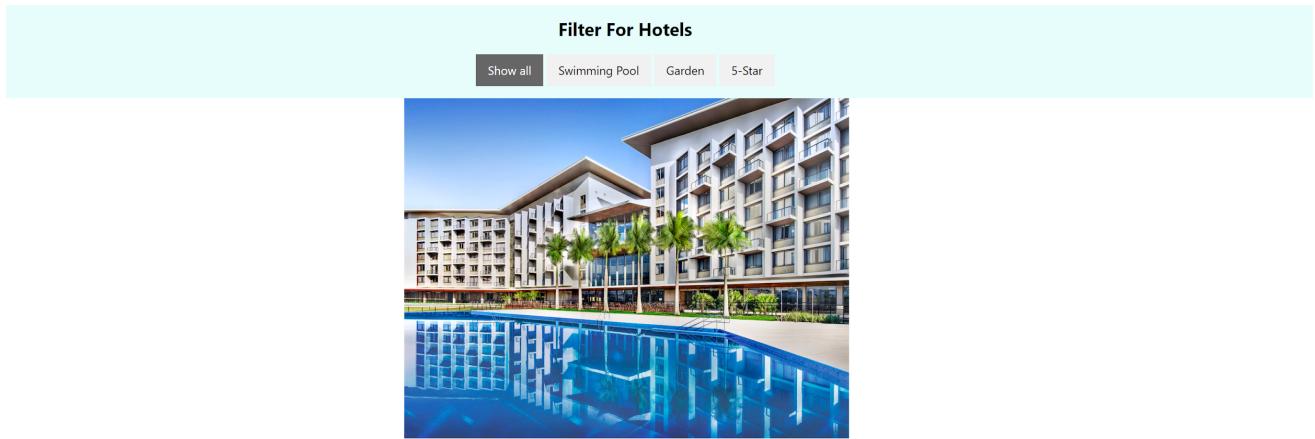
    $YUP = $_POST["pass"];
    $hash = password_hash($YUP, PASSWORD_DEFAULT);

    $sql = "INSERT INTO users(firstname, lastname, email, username, password_ofUser, Home_Address, City, postal_code, Country, phone_number)
VALUES('" . $_POST["fname"] . "', '" . $_POST["lname"] . "', '" . $_POST["email"] . ',
'" . $_POST["id"] . "', '" . $_POST["pass"] . "', '" . $_POST["address"] . "', '" . $_POST["city"] . ',
'" . $_POST["postal"] . "', '" . $_POST["country"] . "', '$hash')";
```

### Functionality for Visitors:

Visitors can get to the membership page and can be a member if they would like to. Apart from that visitors can view and browse the hotel and they can also view the Hotel details so it is easier for the visitor to directly call the hotel. In project 3 I am also planning to put a like button so that the visitor can leave a like button if the visitor likes the hotel. Visitors can also browse the hotel by the different filters, for example, the hotel which has a garden, swimming pool and the Hotel which are 5-stars. The picture at the bottom is showing how the visitors can view the browse hotel's page.

### Member Registration And Login



### Park Plaza Hotel London

★ 4-Star ★

#### Popular Amenities

- Free WiFi
- Free Breakfast
- Laundry
- bar
- Air Conditioning
- Tennis Court

Located near the beach, Thistle Piccadilly is in London's London City Centre neighbourhood, an area with good shopping. Buckingham Palace and The British Museum are cultural highlights, and some of the area's notable landmarks include Big Ben and London Eye. Looking to enjoy an event or a match?

See what's going on at London Stadium or O2 Arena. Guests appreciate the hotel's location for the sightseeing. It's also convenient for public transportation: Leicester Square Underground Station is 3 minutes on foot and Piccadilly Circus Underground Station is 4 minutes.

(Phone Number: 604-789-7415)

(email: 147852@gmail.com)

(Address: 90 Hop Street Vancouver, V8S4K1, Canada)

I have created a membership page where the user can come and register, the registered data goes to the database, the passwords of the user are hashed so that they don't leak and the rest of the data is stored in text. Here is the Picture of the Registration Page.



### Fill out The Details To Be a Member:

First Name:   
 Last Name:   
 E-mail:   
 username:   
 Password:   
 Street Address:   
 City:   
 Postal Code:   
 Country:   
 Phone Number:

After that, the user can log in through the login page, to implement this I implemented sessions and asked them retrieved the data from the database to look for the username and the user password. I started and sessions and set the expiration date to 30mins so that the session expires after 30 minutes, here is the code in which I started the sessions

```
<?php

// check if there is an active session
// if there is no active session --> user is not logged in
// redirect user to login page
session_start();

if(!isset($_SESSION["username"])){
    // if session variable 'username'is not set - redirect to login page
    header("Location: login.php");
    exit();
}
?>
```

I also created a login form by giving it a method `$_POST` and added a query, “take the login form details are found those details in the database” and if the details are found redirect to the member page and if not, ask the user to register or the password is wrong.

```

<?php
require('db.php'); //connection to db code
include("auth_sessionActiveCheck.php");

// Note: arrive at this page only if there is no active session
// If form submitted, insert values into the database.
if (isset($_POST['username'])) {
    // removes backslashes
    $username = stripslashes($_POST['username']);
    //escapes special characters in a string
    $username = mysqli_real_escape_string($con, $username);

    $password = stripslashes($_POST['password']);
    $password = mysqli_real_escape_string($con, $password);

    //Checking is user existing in the database or not
    $query = "SELECT * FROM `users` WHERE username='$username'
and password_ofUser='$password'";
    $result = mysqli_query($con, $query) or die(mysqli_connect_error());
    $rows = mysqli_num_rows($result);

    if ($rows == 1) {
        $_SESSION['username'] = $username;
        // Redirect user to index.php
        header("Location: membersOne.php");
    } else {
        echo "<h3>Username/password is incorrect.</h3>
<br/>Click here to <a href='login.php'>Login</a>";
        echo "<p>Not registered yet? <a href='member.php'>Register Here</a></p>";
    }
}

```

After logging in the member can also update his/her information on the member page and also add hotel listings to the database and add the listings to the browsing page also. Once the member is logged in it also shows his/her name banner of that website page. Here is the picture of how the member page looks like when the member is logged in.



## Member View of StayComfortzz

[Update Your Account](#)[Add Hotel Listing To The Website & Database](#)[Add Editor's Choice Hotels to the Home Page](#)[Logout](#)

### Editor's Choice (Hotels)

(These Hotels can be added and edited by the Member on the Home page and on the Browse Hotel page)

## Personalization and AJAX

To add the personalization and Ajax support I have to add Jquery and import the library for AJAX through online resources.

I have used Ajax support to add two features to my project first, now we can filter the results without even refreshing the page and second I have created Pagination on which we can click and go on different pages without even refreshing the page. Here is a code snippet for that. (Figure 1.). I created functions in javascript which can determine which button is clicked and the function can get that button through the element id and display the content in that id on the page.

```

<script>
    filterSelection("all")
    // Took online help from https://www.w3schools.com/howto/howto\_js\_filter\_elements.asp -->
    function filterSelection(c) {
        var x, i;
        x = document.getElementsByClassName("filterDiv");
        if (c == "all") c = "";
        for (i = 0; i < x.length; i++) {
            w3RemoveClass(x[i], "show");
            if (x[i].className.indexOf(c) > -1) w3AddClass(x[i], "show");
        }
    }

    function w3AddClass(element, name) {
        var i, arr1, arr2;
        arr1 = element.className.split(" ");
        arr2 = name.split(" ");
        for (i = 0; i < arr2.length; i++) {
            if (arr1.indexOf(arr2[i]) == -1) {
                element.className += " " + arr2[i];
            }
        }
    }

    function w3RemoveClass(element, name) {
        var i, arr1, arr2;
        arr1 = element.className.split(" ");
        arr2 = name.split(" ");
        for (i = 0; i < arr2.length; i++) {
            while (arr1.indexOf(arr2[i]) > -1) {
                arr1.splice(arr1.indexOf(arr2[i]), 1);
            }
        }
        element.className = arr1.join(" ");
    }

    // Add active class to the current button |
    var btnContainer = document.getElementById("myBtnContainer");
    var btns = btnContainer.getElementsByClassName("btn");
    for (var i = 0; i < btns.length; i++) {
        btns[i].addEventListener("click", function() {
            var current = document.getElementsByClassName("active");
            current[0].className = current[0].className.replace(" active", "");
            this.className += " active";
        });
    }
}

```

Figure 1.

Also using Ajax, I created pagination on the Browse Hotel Page. I added a few Hotels on the Browse Hotel's page and created a link to redirect to many different hotels. The limit was two hotels per page. Here are the code snippets of how I created that.

```

<?php
    include('db.php');
    $limit = 2;
    $sql = "SELECT COUNT(*) FROM hotel_listings";
    $rs_result = mysqli_query($con, $sql);
    $row = mysqli_fetch_row($rs_result);
    $total_records = $row[0];
    $total_pages = ceil($total_records / $limit);
?
>
<div align="center">
    <ul class='pagination text-center' id="pagination">
        <?php if (!empty($total_pages)) : for ($i = 1; $i <= $total_pages; $i++) :
            if ($i == 1) : ?>
                <li class='active' id=<?php echo $i; ?>><a href='pagination.php?page=<?php echo $i; ?>'><?php echo $i; ?></a></li>
            <?php else : ?>
                <li id=<?php echo $i; ?>><a href='pagination.php?page=<?php echo $i; ?>'><?php echo $i; ?></a></li>
            <?php endif; ?>
        <?php endfor;
        endif; ?>
    </ul>
</div>
<br>
<br>
<br>
<div id="target-content">loading...</div>

```

```

<script>
    jQuery(document).ready(function() {
        jQuery("#target-content").load("pagination.php?page=1");
        jQuery("#pagination li").live('click', function(e) {
            e.preventDefault();
            jQuery("#target-content").html('loading...');
            jQuery("#pagination li").removeClass('active');
            jQuery(this).addClass('active');
            var pageNum = this.id;
            jQuery("#target-content").load("pagination.php?page=" + pageNum);
        });
    });
</script>

```

I imported the Ajax library and created a function that will determine that only two hotel stars show on the browsing page and the rest of them are displayed on the next page and which will appear only if we click them. Here is the final result of how both the pagination and Filtering. (Figure 2.)

To Add personalization support I edited the database and added a memberCustom table which will allow the member to add custom hotels to the member's home page. The table contained all the features that the Hotels table had and the member can also add a hotel listing to the browse hotel's page which the website viewers can browse

through. In Figure 3. & figure 4. & Figure 5. I have shown the code snippet of how I created that final result.

All Hotels

Show all
Swimming Pool
Garden
5-Star

[Go back to featured Hotel's](#)

1
2
3
4
5
6
7
8
9



**Test Hotel2**

★4-Stars★

Extra Features And Description: Garden

Figure 2. (Ajax, Pagination & Filtering)

```
// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
//-----
$image1 = $_FILES['image']['name'];

// Get text

// image file directory
$target = "img/" . basename($image1);

$sql = "INSERT INTO membertcustom(hotelid, hotel_stars, hotel_name, extra_features, hotelphone_number, email, hotel_Address, City, postal_code, Co VALUES('" . $_POST["hid"] . "', '" . $_POST["hstar"] . "', '" . $_POST["hname"] . "', '" . $_POST["hfeatures"] . "', '" . $_POST["hphone"] . "', '" . $_POST["hemail"] . "', '" . $_POST["haddress"] . "', '" . $_POST["hcity"] . "', '" . $_POST["hpostal"] . "', '" . $_POST["hcountry"] . "', '$image1', '" . $_POST["comm"] . "')";

if (mysqli_query($conn, $sql)) {
    echo "Successfully added this to your member page";
} else {
    echo "Error: " . $sql . "" . mysqli_error($conn);
}

if (move_uploaded_file($_FILES['image']['tmp_name'], $target)) {
    $msg = "Image uploaded successfully";
} else {
    $msg = "Failed to upload image";
}
```

Figure 5. Code Snippet for Personalization

## Cutsomize your member Page ataak

You Can Add Hotels to Your Member Page and Customize it to Your Needs

Hotel ID (**Numbers Only**) :

Hotel Stars:

Hotel Name:

Additional Features:

Phone Number:

Email:

Street Address:

City:

Postal Code:

Country:

Additional Comments:

Image:  Choose File No file chosen

**Submit**

Figure 3.

### ataak's Custom Page



**Custom Hotel**  
★5-Stars★

**Extra Features And Description:** Nothing  
(Phone Number: 7412589631)  
(Email: Custom hotel)  
(Address: Custom)

---

City: Custom  
Postal Code: Custom  
Country: Custom

**Additional Comments:** These are some additional comments

Figure 4.

### **Learning Experiences:**

This project has taught me a lot in terms of how the web works and functions. I got to learn PHP, JavaScript, AJAX and other small things that are going to be helpful in the future.

These projects were challenging for me because I was doing them alone with no partner so while making the projects I only got to put my knowledge into the project. In the beginning, I had difficulty fixing a lot of errors but as I did some research and asked TA and Helmine some questions I was able to fix the errors that I had. There were a few things in the project that were somewhat new from the class, so I had to research some of those things and that is good because I gained some more knowledge about those new and old things.

In terms of personal reflection, I learned a lot of new things as well, I learned how to manage my time properly if I am doing the project alone and also how to implement new things into your project via online resources. Especially during this time where we are studying at home, making that home environment to study was very difficult but with the help of this long project, I was able to manage my time properly and was able to create a study environment at home which helped me a lot.