

COS 108 – Web Programming and Application

Name : Chaw Thiri Win

Contents

System Overview.....	3
1. Storyboard	4
2. Detailed Sitemaps.....	16
3. Database Design	17
4. Task – 1 Key Features	18
4.1. External Cascading Style.....	18
4.2. Form	20
4.3. Use of Table.....	22
5. Task – 2 Key Features	24
1. HTML Validations	24
2. JavaScript (Client-Side) Validations.....	24
3. PHP (Server-Side) Validations.....	25
3.1. Sanitization:	25
3.2. File Type Validation:.....	25
3.3. Database Error Handling:	25
4. Login Validation:	26
5. Enroll Form:	26
6. Output key features.....	28
6.1. Enrollment Form	28
6.2. Admin Validation:.....	28
6.3. Main Admin Validation:	29
Reference list	30

System Overview

The "Balance" website redesign seeks to establish a vibrant space for health enthusiasts, encouraging work-life balance and healthy lifestyles by disseminating health-related information and making it easier to sign up for weekly events and activities. The website, which will be constructed with HTML, CSS, and JavaScript, will have an intuitive user interface with data validation, interactive forms, and a consistent design throughout at least five pages. In order to ensure a thorough and interesting experience for both the general public and company employees, it will also integrate database connectivity via PHP and MySQL to collect user information for event enrollment and give administrators safe access to manage user data.

1. Storyboard

The is the storyboard of the project. Here we will see the Mock-ups design of the website of each pages.

Window Title

LOGO

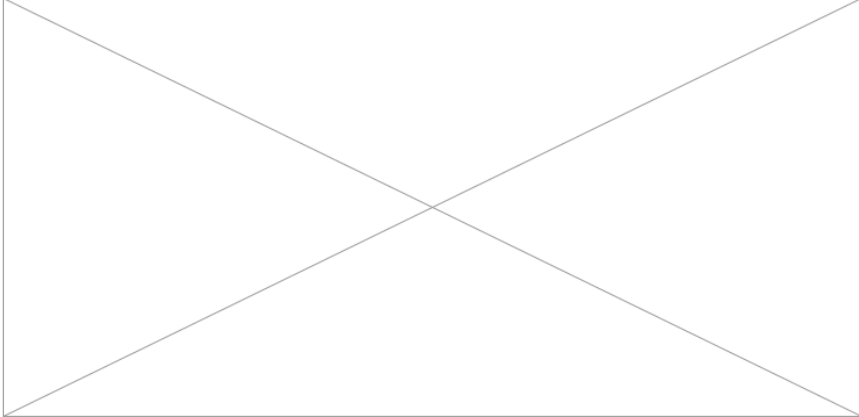
HOME

EVENTS

ACTIVITIES

ADMIN



CONTACT US





Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit, sed quia non numquam eius modi tempora incidunt ut labore et dolore magnam aliquam quaerat voluptatem. Ut enim ad minima veniam, quis nostrum exercitationem ullam corporis suscipit laboriosam, nisi ut aliquid ex ea commodi consequatur? Quis autem vel eum iure reprehenderit qui in ea voluptate velit esse quam nihil molestiae consequatur, vel illum qui dolorem eum fugiat quo voluptas nulla pariatur?



Group



Group



Group

Group





Group

CONTACT US

BALANCE



QUICKLINK

-Line 1
 -Line 2
 -Line 3
 -Line 4

HAVE A QUESTION?

-Line 1
 -Line 2
 -Line 3
 -Line 4

© 2025 BALANCE | ALL RIGHT RESERVED

Figure – 1.1 : Home Form

Window Title

○ ○ ○

LOGO

HOME

EVENTS

ACTIVITIES

ADMIN

CONTACT US

DATE:

Text

TIME:

Text

LOCATION:

Text

DESCRIPTION:

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

PARTICIPANTS:

Text

CREATED:

Text

UPDATED:

Text

JOIN NOW

DATE:

Text

TIME:

Text

LOCATION:

Text

DESCRIPTION:

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

PARTICIPANTS:

Text

CREATED:

Text

UPDATED:

Text

JOIN NOW

CONTACT US

BALANCE

QUICKLINK

-Line 1

-Line 2

-Line 3

-Line 4

HAVE A QUESTION?

-Line 1

-Line 2

-Line 3

-Line 4


© 2025 BALANCE | ALL RIGHT RESERVED

Figure – 1.2 : Events Form

Window Title

LOGO

HOMEEVENTS**ACTIVITIES**ADMINCONTACT US



DATE:

Text

TIME:

Text

LOCATION:

Text

DESCRIPTION:

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

PARTICIPANTS:

Text


CREATED:

Text

UPDATED:

Text

JOIN NOW



DATE:

Text

TIME:

Text

LOCATION:

Text

DESCRIPTION:

Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

PARTICIPANTS:

Text

CREATED:

Text

UPDATED:

Text


JOIN NOW

CONTACT US

BALANCE

QUICKLINK

HAVE A QUESTION?



-Line 1

-Line 2

-Line 3

-Line 4

-Line 1

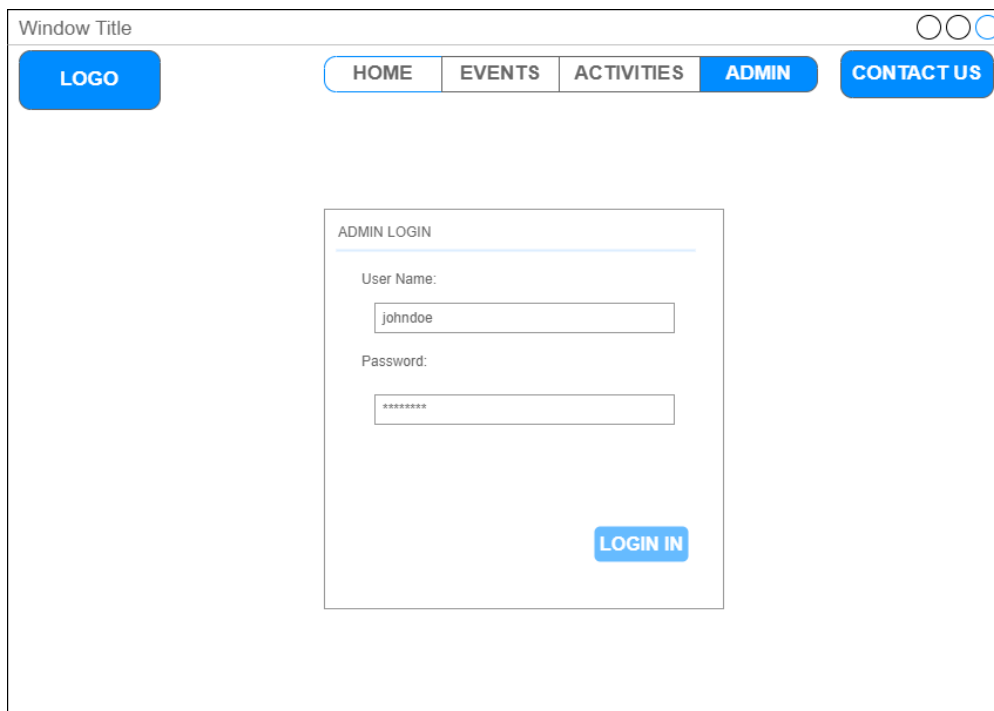
-Line 2

-Line 3

-Line 4

© 2025 BALANCE | ALL RIGHT RESERVED

Figure – 1.3 : Activities Form



Window Title

LOGO

HOME EVENTS ACTIVITIES ADMIN CONTACT US

ADMIN LOGIN

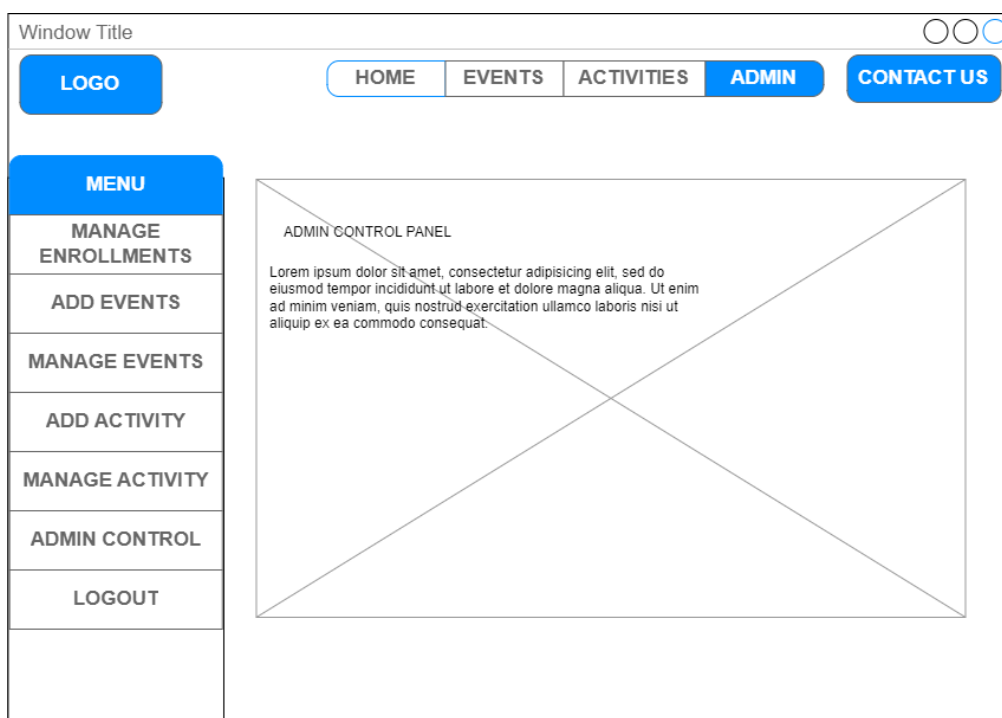
User Name:

john doe

Password:

LOGIN IN

Figure – 1.4 : Admin Login Form



Window Title

LOGO

HOME EVENTS ACTIVITIES ADMIN CONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

ADMIN CONTROL PANEL

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Figure – 1.5 : Admin Home Form

Window Title

LOGO

HOME

EVENTS

ACTIVITIES

ADMIN

CONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

NAME	Behind	Ahead	Updated	Pull request	Builds
staging Main Branch			2.8 minutes ago		
dbthin/repo/api/allow_repo_updates	107	3	5 minutes ago	#10258	OF
zdavis/BBCDEV-1577	103	2	5 minutes ago	#10232	OF
tkells/BBCDEV-1631-fix-require-account-access	7	1	2.5 minutes ago	#10267	OF
jmooring/BBCDEV-1603	2	14	2.9 minutes ago	#10244	OPEN

Email address

name@example.com

Example select

1

Example multiple select

1
2
3
4

Example textarea

Update

Figure – 1.6 : Manage Enrollments Form

Window Title

LOGO

HOME

EVENTS

ACTIVITIES

ADMIN

CONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

Email address

name@example.com

Example select

1

Example multiple select

1
2
3
4

Example textarea

Example select

1

Example select

1

ADD NEW EVENT

Figure – 1.7 : Add Events Form

Window Title

LOGO

HOME

EVENTS

ACTIVITIES

ADMIN

CONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

NAME	Behind	Ahead	Updated	Pull request	Builds
staging Main Branch			2-8 minutes ago		
dbhin/repo/api/allow_repo_updates	107	3	5 minutes ago	#102-58	OP
zdavis/BBCDEV-1577	103	2	5 minutes ago	#102-32	OP
tkells/BBCDEV-1631-fix-require-account-access	7	1	2-5 minutes ago	#102-67	OP
jmooring/BBCDEV-1603	2	14	2-9 minutes ago	#102-44	OPEN

Email address

name@example.com

Example select

1

Example multiple select

1

2

3

4

Example textarea

Update

Figure – 1.8 : Manage Events Form

Window Title

LOGO

HOMEEVENTSACTIVITIESADMINCONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

Email address

name@example.com

Example select

1

Example multiple select

1234

Example textarea

Example select

1

Example select

1

ADD NEW EVENT

Figure – 1.9 : Add Activity Form

Window Title

LOGO

HOMEEVENTSACTIVITIESADMINCONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

NAME	Behind	Ahead	Updated	Pull request	Builds
staging Main Branch			2.8 minutes ago		
abhin/repo/api/allow_repo_updates	107	3	5 minutes ago	#102.5.8	OP
zdavis/BBCDEV-1577	108	2	5 minutes ago	#102.32	OP
tkells/BBCDEV-163-fix-require-account-access	7	1	2.5 minutes ago	#102.67	OP
jmooring/BBCDEV-1603	2	14	2.9 minutes ago	#102.44	OPEN

Email address

name@example.com

Example select

1

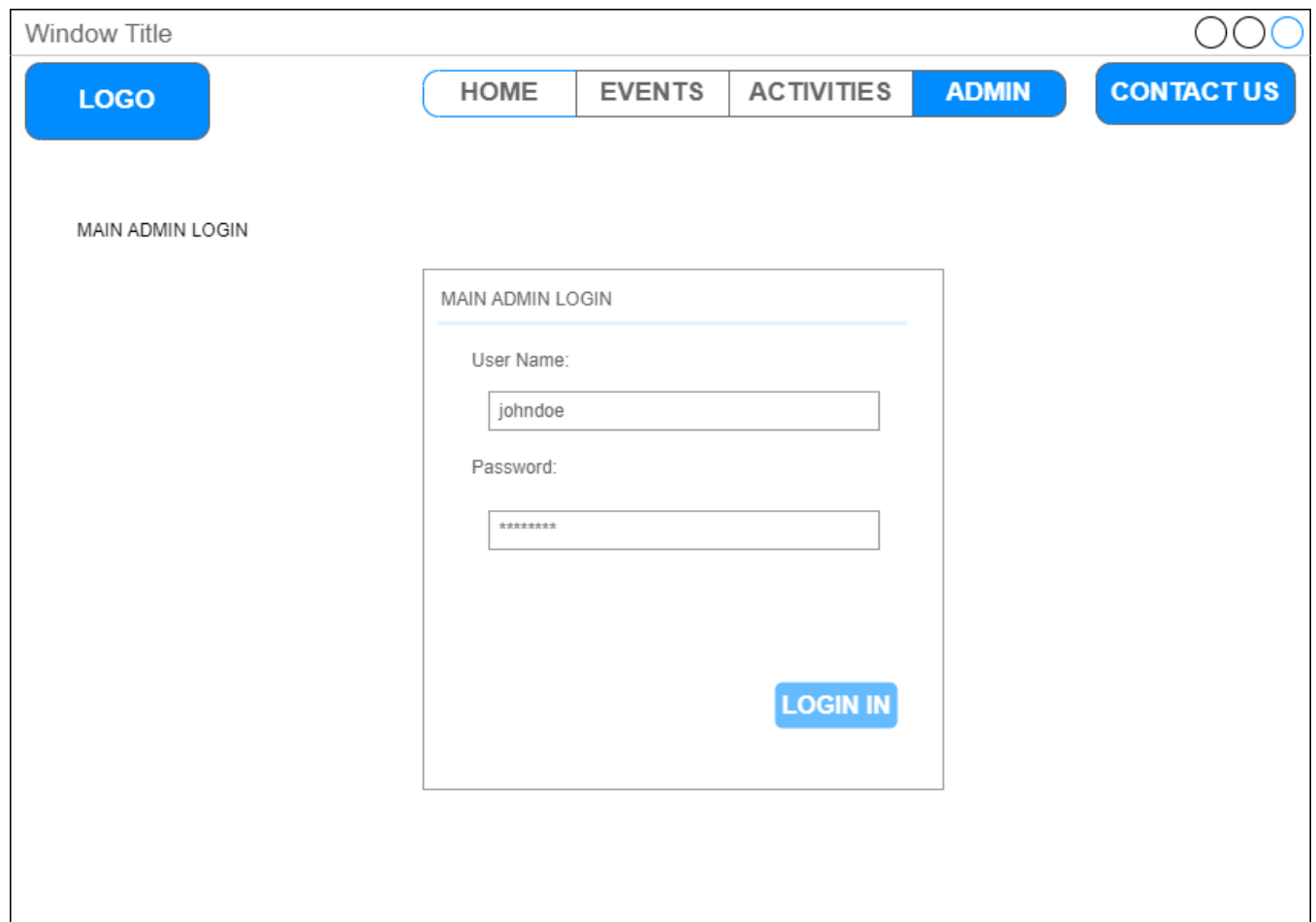
Example multiple select

1234

Example textarea

Update

Figure – 1.10 : Manage Activity Form



The image shows a web application window titled "Window Title". The header contains a blue "LOGO" button on the left and a navigation menu with five buttons: "HOME", "EVENTS", "ACTIVITIES", "ADMIN" (highlighted in blue), and "CONTACT US". The main content area is titled "MAIN ADMIN LOGIN". It features a central login form with the title "MAIN ADMIN LOGIN" and a horizontal line. The form has two input fields: "User Name:" with the text "johndoe" and "Password:" with masked characters "*****". A blue "LOGIN IN" button is located at the bottom right of the form.

Window Title

LOGO

HOME EVENTS ACTIVITIES ADMIN CONTACT US

MAIN ADMIN LOGIN

MAIN ADMIN LOGIN

User Name:

johndoe

Password:

LOGIN IN

Figure – 1.11 : Main Admin Login Form

Window Title

LOGO

HOME

EVENTS

ACTIVITIES

ADMIN

CONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

Email address

name@example.com

Example select

1

Example multiple select

1
2
3
4

Example textarea

Example select

1

Example select

1

ADD NEW EVENT

Figure – 1.12 : Add Admin Form

Window Title

LOGO

HOME

EVENTS

ACTIVITIES

ADMIN

CONTACT US

MENU

MANAGE ENROLLMENTS

ADD EVENTS

MANAGE EVENTS

ADD ACTIVITY

MANAGE ACTIVITY

ADMIN CONTROL

LOGOUT

NAME	Behind	Ahead	Updated	Pull request	Builds
staging Main Branch			2.8 minutes ago		
dbhin/repo/api/allow_repo_updates	107	5	5 minutes ago	#10258	OPEN
zdavis/BBCDEV-1577	109	2	5 minutes ago	#10232	OPEN
tkells/BBCDEV-163-Fix-require-account-access	7	1	2.5 minutes ago	#10267	OPEN
jmooring/BBCDEV-1603	2	14	2.9 minutes ago	#10244	OPEN

Email address

name@example.com

Example select

1

Example multiple select

1
2
3
4

Example textarea

Update

Figure – 1.13 : Manage Admin Form

2. Detailed Sitemaps

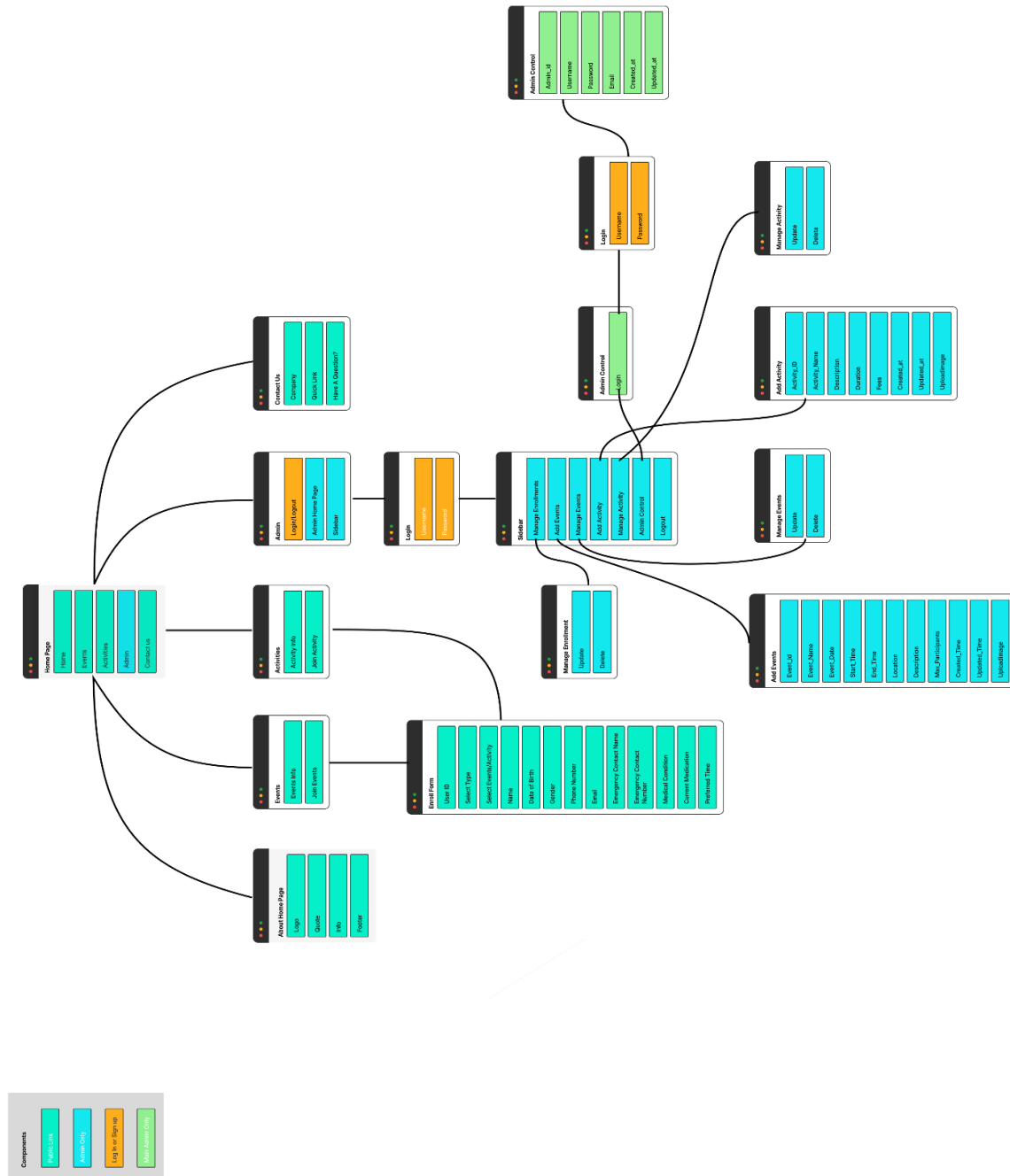


Figure – 2 : SITEMAP OF WORK LIFE BALANCE PROJECT

3. Database Design

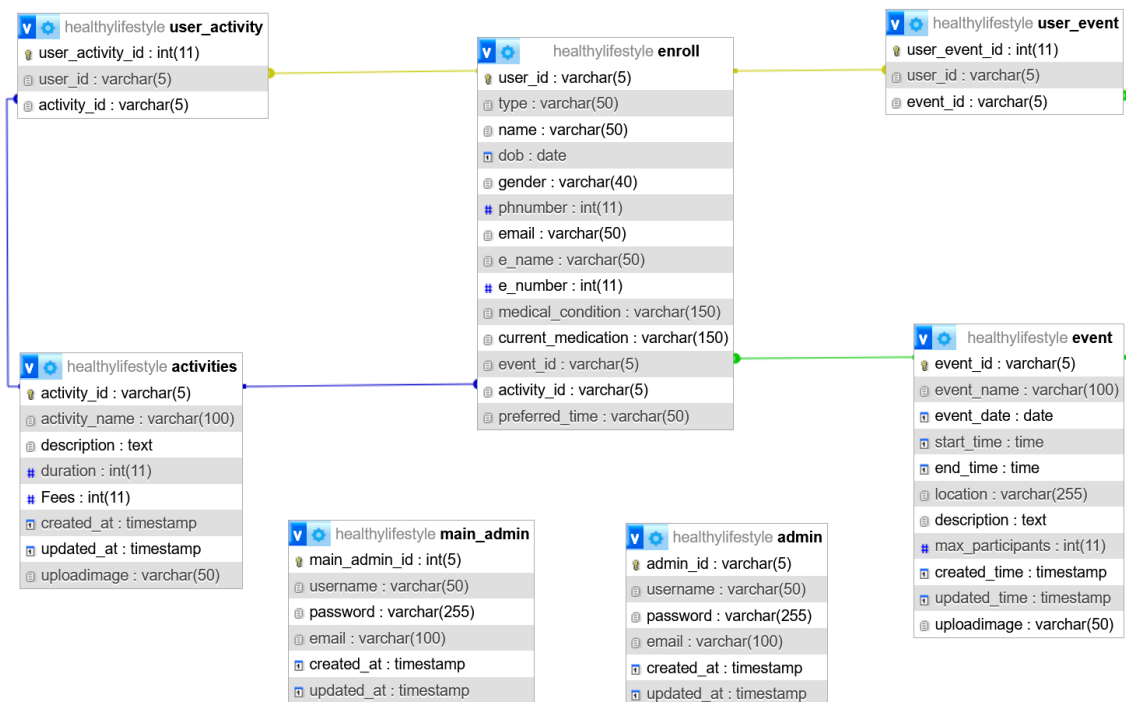


Figure – 3 : Database Design

Activities, events, and user enrollment are the main focuses of the database design. Important tables that contain information about names, descriptions, dates, and participation fees are `activities` and `event`. The `enroll` table contains foreign keys referencing `activities` and `event` and contains user data gathered during enrollment. The `user_activity` and `user_event` tables establish many-to-many connections. The `admin` and `main_admin` tables are used to manage administrative tasks, such as access control and user authentication. Because all of the tables are integrated, the "Balance" platform can manage actions, events, user data, and administrative access in a complete manner.

4. Task – 1 Key Features

4.1. External Cascading Style

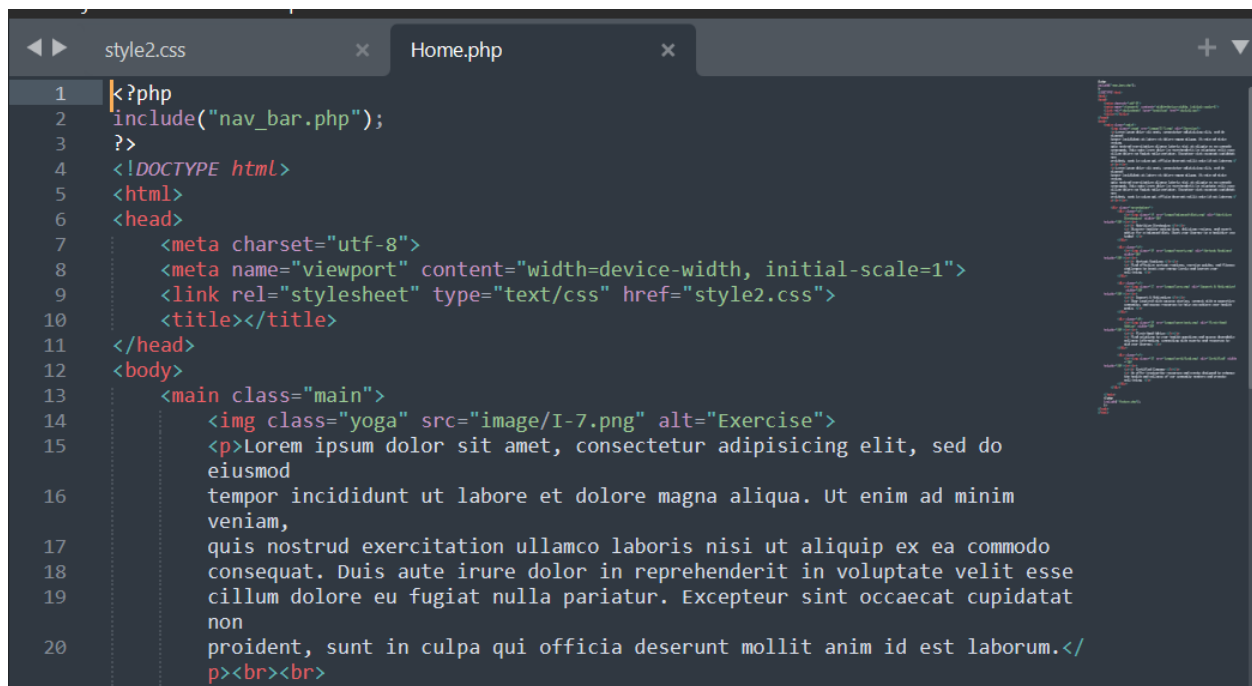
By attaching a distinct `.css` file to your HTML document, we can use external Cascading Style Sheets (CSS) to keep our code structure neat and orderly. Because changes to the external stylesheet are automatically reflected on all connected pages, this method makes updates efficient and enables us to apply uniform styles across several web pages. External CSS further speeds up load times for repeat visitors by allowing browser caching.

```
<html>
<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width,
  initial-scale=1">
  <link rel="stylesheet" type="text/css" href="style1.css"
  >
  <title></title>
</head>
```

Figure – 4.1.1 : Linking Style in Main Form

```
style1.css
1  @import url('https://fonts.googleapis.com/css2?family=Montserrat:ital,wght@0,100..
2
3  * {
4    box-sizing: border-box;
5    margin: 0;
6    padding: 0;
7  }
8
9  li, a, button, p {
10   font-family: "Montserrat", sans-serif;
11   font-weight: 500;
12   font-size: 16px;
13   color: #000000;
14   text-decoration: none;
15 }
```

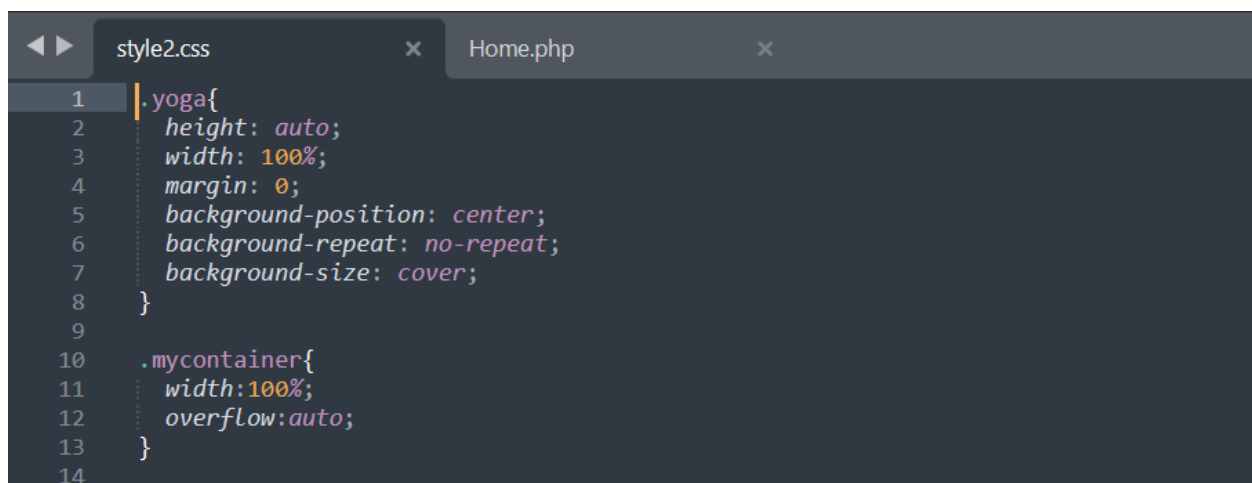
Figure – 4.1.2 : External Style Sheet (1)



```

1 <?php
2 include("nav_bar.php");
3 ?>
4 <!DOCTYPE html>
5 <html>
6 <head>
7     <meta charset="utf-8">
8     <meta name="viewport" content="width=device-width, initial-scale=1">
9     <link rel="stylesheet" type="text/css" href="style2.css">
10    <title></title>
11 </head>
12 <body>
13     <main class="main">
14         
15         <p>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do
16         eiusmod
17         tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim
18         veniam,
19         quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo
20         consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
        cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat
        non
        proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p><br><br>
    </main>
  
```

Figure – 4.1.3 : Linking CSS Style in Main Form



```

1 .yoga{
2     height: auto;
3     width: 100%;
4     margin: 0;
5     background-position: center;
6     background-repeat: no-repeat;
7     background-size: cover;
8 }
9
10 .mycontainer{
11     width: 100%;
12     overflow: auto;
13 }
14
  
```

Figure – 4.1.4 : External Style Sheet (2)

4.2. Form

```
<div class="content3">
  <!-- Login Page -->
  <form action="admin.php" method="post" enctype="multipart/form-data">
    <table>
      <tr>
        <td><label for="username">Enter Username:</label></td>
        <td><input type="text" name="username" id="username" required></td>
      </tr>
      <tr>
        <td><label for="password">Enter Password:</label></td>
        <td><input type="password" name="password" id="password" required></td>
      </tr>
      <tr>
        <td colspan="2">
          <center><input type="submit" name="sub" value="Login"></center>
        </td>
      </tr>
    </table>
  </form>
```

Figure – 4.2.1 : HTML Login using Form and Table

The screenshot shows a web application interface. At the top, there is a navigation bar with the logo "BALANCE HEALTH & FITNESS" on the left and links for "Home", "Events", "Activities", "Admin", and a "Contact Us" button on the right. Below the navigation bar, a message "Login Unsuccessful. Please try Again!" is displayed. In the center of the page, there is a login form with two input fields: "Enter Username:" and "Enter Password:". Below these fields is a green "Login" button.

Figure – 4.2.2 : Output of HTML Login

```

20 <div class="container">
21 <button onclick="history.back();" class="back-btn">Back</button>
22 <div class="activity-grid"> <!-- Added a wrapper for the grid layout -->
23 <?php
24 // Display each record in a styled box
25 while ($record = mysqli_fetch_array($result)) {
26     echo "<div class='data-box'>";
27     echo "<img src='image_1/' " . htmlspecialchars($record['uploadimage']) . " alt='Activity Image'
28         class='activity-image'>";
29     echo "<h3>Activity Name: " . htmlspecialchars($record['activity_name']) . "</h3>";
30     echo "<p><strong>Description:</strong> " . htmlspecialchars($record['description']) . "</p>";
31     echo "<p><strong>Duration (minutes):</strong> " . htmlspecialchars($record['duration']) . "</p>";
32     echo "<p><strong>Fees:</strong> " . htmlspecialchars($record['Fees']) . "</p>";
33     //Formatting the timestamp
34     $created_at = date_format(date_create($record['created_at']),"Y/m/d H:i:s");
35     $updated_at = date_format(date_create($record['updated_at']),"Y/m/d H:i:s");
36     echo "<p><strong>Created:</strong> " . htmlspecialchars($created_at) . "</p>";
37     echo "<p><strong>Updated:</strong> " . htmlspecialchars($updated_at) . "</p>";
38     echo "<button class='btn_join' onclick='redirectToActivityForm()'>Join Now</button>";
39
40     echo "</div>";
41 }
42 ?>
43 </div>

```

Figure – 4.2.3 : Using PHP and HTML to create Information Table

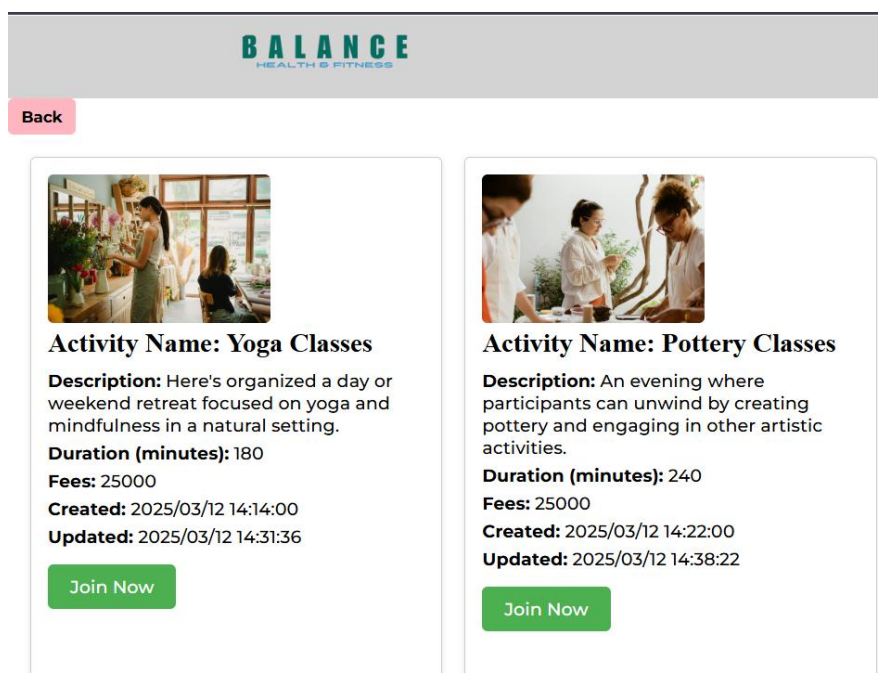


Figure – 4.2.4 : Output of PHP and HTML table

4.3. Use of Table

```

43 <div class="content1">
44 <button onclick="history.back();" class="back-btn">Back</button>
45
46 <h2>Activities Info</h2>
47
48 <?php if (empty($activities)): ?>
49 <table border="1">
50 <thead>
51 <tr>
52 <th>Activity ID</th>
53 <th>Activity Name</th>
54 <th>Description</th>
55 <th>Duration (minutes)</th>
56 <th>Fees</th>
57 <th>Created At</th>
58 <th>Updated At</th>
59 <th>Image</th>
60 <th>Actions</th>
61 </tr>
62 </thead>

```

Figure – 4.3.1 : Creating Table by separating thead

```

62 </thead>
63 <tbody>
64 <?php foreach ($activities as $activity): ?>
65 <tr>
66 <td><?php echo htmlspecialchars($activity['activity_id']); ?></td>
67 <td><?php echo htmlspecialchars($activity['activity_name']); ?></td>
68 <td><?php echo htmlspecialchars($activity['description']); ?></td>
69 <td><?php echo htmlspecialchars($activity['duration']); ?></td>
70 <td><?php echo htmlspecialchars($activity['Fees']); ?></td>
71 <td><?php echo htmlspecialchars($activity['created_at']); ?></td>
72 <td><?php echo htmlspecialchars($activity['updated_at']); ?></td>
73 <td>" style="width:100px;
    height:auto;"></td>
74
75 <!-- Action Buttons -->
76 <td>
77 <!-- Edit Button -->
78 <form method="get" action="manage_activity.php" style="display:inline;" enctype="
    multipart/form-data">
79 <input type="hidden" name="edit" value="<?php echo htmlspecialchars($activity
    ['activity_id']); ?>">
80 <button type="submit" class="edit-btn">Edit</button>
81 </form>
82
83 <!-- Delete Button -->
84 <form method="post" style="display:inline;" enctype="multipart/form-data">
85 <input type="hidden" name="activity_id" value="<?php echo htmlspecialchars($
    activity['activity_id']); ?>">
86 <button type="submit" name="delete" class="delete-btn" onclick="return
    confirm('Are you sure you want to delete this activity?');">Delete</
    button>
87 </form>
88 </td>
89 </tr>
90 </tbody>
91 <?php endforeach; ?>
92 </table>
93

```

Figure – 4.3.2 : Creating Table by separating tbody

[Home](#)
[Events](#)
[Activities](#)
[Admin](#)
[Contact Us](#)

[Back](#)

Activities Info

Activity ID	Activity Name	Description	Duration (minutes)	Fees	Created At	Updated At	Image	Actions
A-01	Yoga Classes	Here's organized a day or weekend retreat focused on yoga and mindfulness in a natural setting.	180	25000	2025-03-12 14:14:00	2025-03-12 14:31:36		Edit Delete
A-02	Pottery Classes	An evening where participants can unwind by creating pottery and engaging in other artistic activities.	240	25000	2025-03-12 14:22:00	2025-03-12 14:38:22		Edit Delete
A-03	Hiking Adventures	Nature Connection Day, a day of group hikes to explore local trails, promoting physical activity and connection with nature.	300	25000	2025-03-12 14:23:00	2025-03-12 14:38:30		Edit Delete
A-04	Mindfulness Meditation	Stress Relief Day, Offer a day dedicated to stress management techniques, including guided meditation sessions and relaxation exercises.	240	20000	2025-03-12 14:24:00	2025-03-12 14:38:39		Edit Delete
A-05	Cycling Groups	Community Cycling Day, a day for community members to join group rides, promoting fitness and social interaction.	300	25000	2025-03-12 14:26:00	2025-03-12 14:39:18		Edit Delete

Figure – 4.3.3 : Output Using Table

JavaScript Redirection

```

<script>
    function redirectToActivityForm() {
        window.location.href = 'Enroll_Form.php';
    }
</script>

```

Figure – 4.3.4 : JavaScript Redirection

5. Task – 2 Key Features

1. HTML Validations

```

19      <tr>
20      <td><label>Enter Image: </label></td>
21      <td><input type="file" name="uploadimage"><br><p class="warning-message"
22      >">The image file name must not have spaces between each word. It
23      should be like_this.</p></td>
24      </tr>
25      <tr>
26      <td><label>Enter Activity Name:</label></td>
27      <td><input type="text" name="activity_name" id="activity_name" required
28      ></td>
29      </tr>
30      <tr>
31      <td><label>Enter Description:</label></td>
32      <td><textarea name="description" id="description" rows="4" cols="50"
33      required></textarea></td>
34      </tr>
35      <tr>
36      <td><label>Enter Duration (minutes):</label></td>
37      <td><input type="text" name="duration" id="duration" required></td>
38      </tr>

```

Figure – 5.1 : HTML validations

A form field for uploading an image and another for providing the activity name are created by this HTML code snippet. Users can choose a file in the picture input box while a warning indicates that the file name must adhere to a certain naming convention (such as "like_this") and not contain spaces. In order to prevent empty submissions, the activity name input field is marked as `required`, requiring users to complete it before completing the form.

2. JavaScript (Client-Side) Validations

```

56      <!-- JavaScript for confirmation -->
57      <script>
58      function confirmSubmission() {
59      return confirm("Are you sure you want to register this activity?");
60      }
61
62      function confirmReset() {
63      return confirm("Are you sure you want to reset this form?");
64      }
65      </script>

```

Figure – 5.2 : JavaScript (Client-Side) Validations

The two functions defined by this JavaScript code, `confirmSubmission()` and `confirmReset()`, show a confirmation dialog to the user when they try to submit or reset a form. In order to confirm their action, the user is prompted with the `confirm()` method, which returns `true` if they click "OK" and `false` if they click "Cancel." By requiring user verification and employing these functions as event handlers for form submission and reset operations, the code helps prevent unintentional submissions or resets.

3. PHP (Server-Side) Validations

3.1. Sanitization:

```

67 <?php
68 if (isset($_POST['sub'])) {
69     // Accept user data and sanitize inputs
70     $activity_name = mysqli_real_escape_string($con, $_POST['activity_name']);
71     $description = mysqli_real_escape_string($con, $_POST['description']);
72     $duration = mysqli_real_escape_string($con, $_POST['duration']);

```

Figure – 5.3.3.1 : PHP's input sanitization feature

This piece of code illustrates PHP's input sanitization feature, which is an essential security measure that guards against SQL injection attacks. Before using special characters in database queries, it sanitizes user-submitted data for the `activity_name` and `description` fields using the `mysqli_real_escape_string()` function.

3.2. File Type Validation:

```

77 if (isset($_FILES['uploadimage']) && $_FILES['uploadimage']['error'] ===
    UPLOAD_ERR_OK) {
78     $filename = mysqli_real_escape_string($con, $_FILES['uploadimage']['name']);
79     $temp = $_FILES['uploadimage']['tmp_name'];
80     $folder = './image_1/' . $filename;

```

Figure – 5.3.3.2 : File Type Validation

The `uploadimage` input is used to determine whether a file has been uploaded, and the `UPLOAD_ERR_OK` constant is used to confirm that there were no upload issues. The destination file path where the picture will be placed on the server is created and the uploaded file's name is sanitized to prevent SQL injection if the requirements are satisfied.

3.3. Database Error Handling:

```

101 // Execute query
102 if (mysqli_query($con, $sql)) {
103     echo "<script>alert('Activity Successfully Registered!');</script>";
104 } else {
105     echo "Input Unsuccessful: " . mysqli_error($con); // Show error
    message
106 }

```

Figure – 5.3.3.3 : Database Error Handling

In order to enter or update data in the database, this code runs a SQL query using the `mysqli_query()` function. If the query is successful, a JavaScript alert is displayed to the user with a success message. An error message containing the exact MySQL fault is output if the query fails, aiding in the diagnosis of any problems with the query's execution.

4. Login Validation:

```

23 <div class="content3">
24   <!-- Login Page -->
25   <form action="admin.php" method="post" enctype="multipart/form-data">
26     <table>
27       <tr>
28         <td><label for="username">Enter Username:</label></td>
29         <td><input type="text" name="username" id="username" required></td>
30       </tr>
31       <tr>
32         <td><label for="password">Enter Password:</label></td>
33         <td><input type="password" name="password" id="password" required></td>
34       </tr>
35       <tr>
36         <td colspan="2">
37           <center><input type="submit" name="sub" value="Login"></center>
38         </td>
39       </tr>
40     </table>
41   </form>
42 </div>

```

Figure – 5.4: Login Validation

Users can enter their username and password in this code snippet, which generates a basic admin page login form. Both input fields are designated as necessary so that the user cannot submit the form without entering any data. The form submits the data to `admin.php` using the POST method. A table is used to organize the layout, and a centered submit button with the label "Login" is included for user interaction.

5. Enroll Form:

```

// Generate unique user_id
$result = mysqli_query($con, "SELECT MAX(user_id) AS max_id FROM enroll");
$row = mysqli_fetch_assoc($result);
$max_id = $row['max_id'];

// Increment the ID
if ($max_id) {
    $number = (int)substr($max_id, 2) + 1; // Get the numeric part and increment
} else {
    $number = 1; // Start from 1 if no records exist
}

$user_id = 'U-' . str_pad($number, 2, '0', STR_PAD_LEFT); // Format to U-01, U-02, etc.

```

Figure – 5.5.1 : Enroll Form

This snippet of code mainly queries the database to determine the maximum existing `user_id` before creating a unique `user_id` for new records in the `enroll` table. The ID's numeric component is then increased; if there are no records, the ID is initialized to 1. The new `user_id` is then formatted as a string containing a zero-padded two-digit number (such as 'U-01' or 'U-02') after the prefix 'U-'.

```
191 // Determine event_id and activity_id based on the selected type
192 $event_id = null;
193 $activity_id = null;
194
195 if ($type == 'event') {
196     // Assign the selected activity/event ID to event_id
197     $event_id = mysqli_real_escape_string($con, $_POST['activity_event_id']);
198     // Ensure activity_id is NULL
199     $activity_id = null;
200 } elseif ($type == 'activity') {
201     // Assign the selected activity/event ID to activity_id
202     $activity_id = mysqli_real_escape_string($con, $_POST['activity_event_id']);
203     // Ensure event_id is NULL
204     $event_id = null;
205 }
206
```

Figure – 5.5.2 : Input based on Selected Type

The value of the `$type` variable, which specifies whether the selected type is a `event` or an `activity`, is used by this code snippet to determine the proper assignment of `event_id` and `activity_id`. The `activity_event_id` is retrieved and sanitized from the POST request to assign it to `event_id` if `$type` is `event`. It makes sure that `activity_id` is set to `null`. On the other hand, if `$type` is `activity`, it changes `event_id` to `null` and gives `activity_id` the same sanitized ID, guaranteeing that only one of the two IDs is populated at a time.

Redirection:

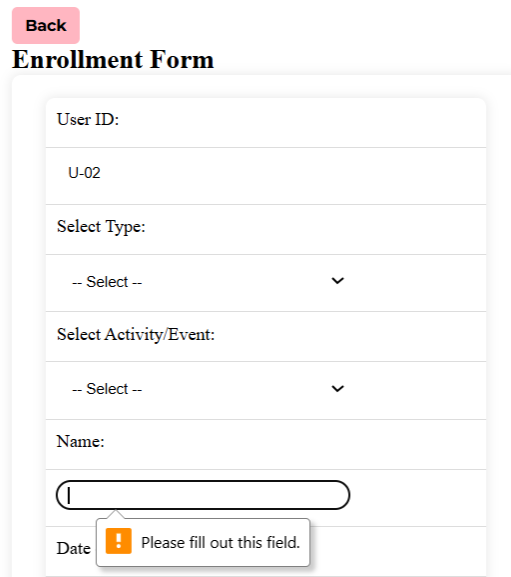
```
233 if (mysqli_query($con, $sql)) {
234     echo "<script>alert('Enrollment successful!');
235         window.location.href='Home.php';</script>";
236 } else {
237     echo "Error: " . mysqli_error($con); // Show error message
238 }

```

Figure – 5.5.3 : Redirection

6. Output key features

6.1. Enrollment Form

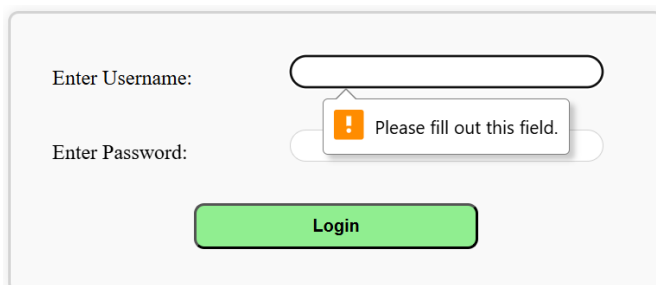


The image shows an 'Enrollment Form' with a 'Back' button at the top left. The form contains the following fields: 'User ID:' with the value 'U-02', 'Select Type:' with a dropdown menu showing '-- Select --', 'Select Activity/Event:' with a dropdown menu showing '-- Select --', 'Name:' with an empty text input field, and 'Date' with an empty text input field. A red validation message box with an exclamation mark icon is positioned over the 'Date' field, displaying the text 'Please fill out this field.'

Figure – 6.6.1 : Enrollment Form Validation

As shown in diagram, if user click enroll without filling the form. There validation to fill the form would be appeared.

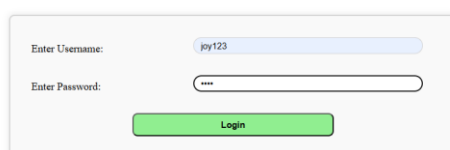
6.2. Admin Validation:



The image shows an 'Admin Login' form. It has two input fields: 'Enter Username:' and 'Enter Password:'. The 'Enter Username:' field is empty, and a red validation message box with an exclamation mark icon is positioned over it, displaying the text 'Please fill out this field.' Below the input fields is a green 'Login' button.

Figure – 6.6.2.1 : Admin Validation with null

Login Unsuccessful. Please try Again!



The image shows the 'Admin Login' form with the 'Enter Username:' field containing the text 'joy123' and the 'Enter Password:' field containing four asterisks '****'. The green 'Login' button is visible below the fields.

Figure – 6.6.2.2 : Admin Validation with wrong Username or Password

6.3. Main Admin Validation:

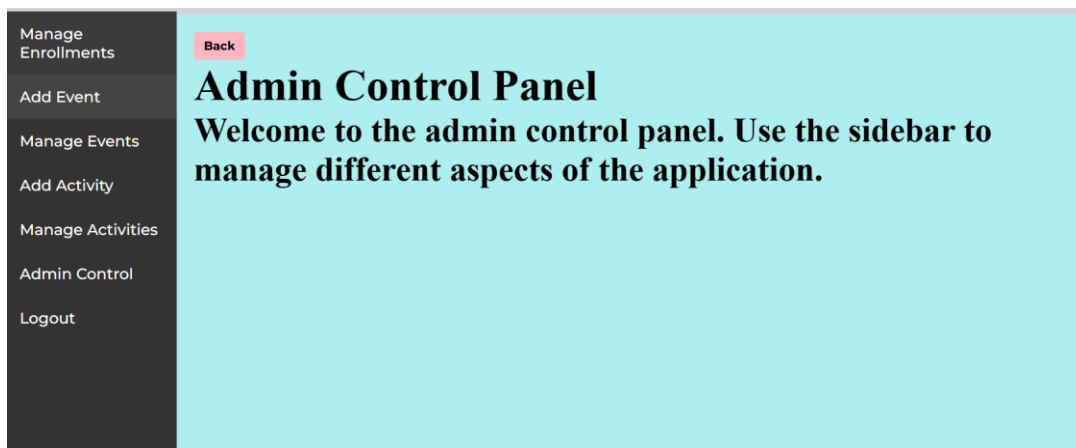


Figure – 6.3.1 : Main Admin Validation

According to the Image, only Main Admin can go to Admin Control Form, as there is another login form to login.

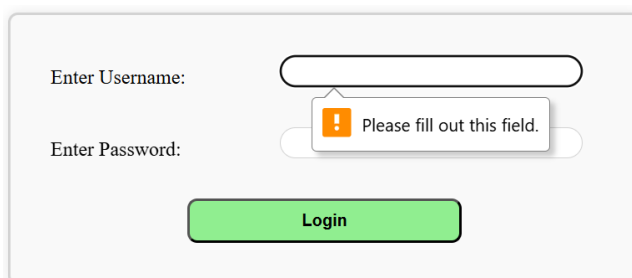
The image shows a login form with a light gray background. It contains two input fields: 'Enter Username:' and 'Enter Password:'. The 'Enter Username:' field is empty and has a validation error message 'Please fill out this field.' displayed below it. The 'Enter Password:' field is also empty. Below the input fields is a green 'Login' button.

Figure – 6.3.2 : Main Admin Validation with null

Reference list

Aigars Silkalns (2023). *Healthvest*. [online] Colorlib. Available at: <https://colorlib.com/wp/template/healthvest/> [Accessed 4 Mar. 2025].

COS-108 Sitemap.pdf and Thiri Win, C. (2025). *COS-108 Sitemap.pdf*. [online] Google Docs. Available at: https://drive.google.com/file/d/1ngmN5XJZAtAKX6jenhBbArsZDFpJAFVD/view?usp=drive_link [Accessed 12 Mar. 2025].

COS-108 Storyboard.drawio and Thiri Win, C. (2025). *COS-108 Storyboard.drawio*. [online] Google Docs. Available at: https://drive.google.com/file/d/1vYKTDYj5TiG-l_ZihpiHVUGF1aEzt14g/view?usp=drive_link [Accessed 12 Mar. 2025].