**UECS2194/ UECS2094**

**WEB APPLICATION DEVELOPMENT**

**PRACTICAL Test**

**Jan 2024 Trimester**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Sim Jingjia | Q1: /10 | Total  Marks:  /60 |
| ID | 2207626 | Q2: /20 |
| Group | P5 | Q3: /10 |
|  |  | Q4: /20 |  |

**Course Outcomes.**

In this assessment, you are assessed based on the following **course outcomes**:

|  |  |
| --- | --- |
| **CO5** | Demonstrate the skill to use dependency managers to manage web application dependencies in web application development. |

**Assessment Contribution**

This assignment contributes **15%** to the overall assessment for this course.

**Date and Time**

The date and time for this assessment is **22 March 2024 06:00 PM - 08:30 PM**.

**Instructions for the answer file:**

1. This is an open-book test. Answer all questions. You have 2 hours to complete this test. The time is extendable to half an hour more if students need more time.
2. Use this MS Word file, and rename it with your practical class group and student ID. For example, if your practical class group is P01 and your student ID is 123456, your file shall be named P01\_123456.

**\*\*Important\*\***

**To avoid missing your answer, save your answers and codes frequently into a USB or Google drive.**

1. Answer every question and sub-question in the corresponding section. The answer sections are located after the questions.
2. Take screenshots for every webpage, form, database, the files in the project folder and attach them to the corresponding section. For the piece of codes, you can paste it directly to the corresponding section, or take screenshot of them.
3. Upload your MS Word file (or PDF if available) into your **WBLE** account.
4. All the screenshots should be **clear** and **cover** all the requirements of the question.

Assuming you're tasked with designing a website for an upcoming international conference on big data and computing, your goal is to ensure a smooth user experience from the homepage to the registration form, ensuring accurate data collection and validation. Here's what you need to include in your project:

Task 1. Homepage: [10 Mark]

1. Begin by designing a homepage featuring a header section with the conference title "International Conference on Big Data and Computing." (2 Marks)
2. Incorporate the conference logo after the header. Students may refer to the logo provided in the exam question folder. (2 Marks)
3. Write engaging content to describe the conference objectives, keynote speakers, agenda highlights. Students may refer to the text provided in the exam question folder. (2 Marks)
4. Create a link that directs users to the registration form page. (2 Marks)
5. Conclude with a footer section containing the text: "The 2nd International Conference on Big Data and Computing." (2 Marks)

Task 2. Registration Form Development: [20 Marks]

1. Build the registration form page where attendees can sign up for the conference when users click on the link that developed in the task 1, section (d). A sample form can be found in the following figure: (5 Marks)

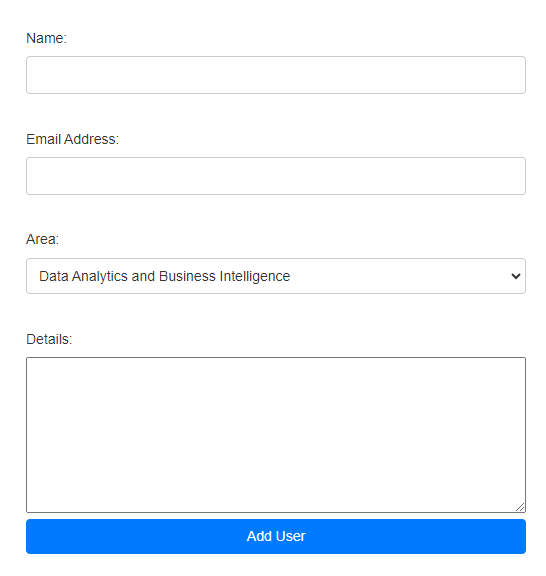


Figure - Registration Form

1. Start by adding fields to capture essential information such as the attendee's name and email address, crucial for communication purposes. (5 Marks)
2. Create a dropdown menu (select box) offering attendees a selection of three distinct research topics: (5 Marks)

* Data Analytics and Business Intelligence
* Data Engineering and Infrastructure
* Internet of Things (IoT) and Sensor Data

1. Ends the form with details area and a submit bottom. (5 Marks)

Task 3. client-side validation:

1. Implement client-side validation to ensure users provide accurate and complete information before submitting the form. Validation criteria include: [10 Marks]

* No empty fields. (each 1 Marks)
* Email address must follow the standard format. (4 Marks)
* Email address will have two different validations: 1- not empty field, 2- following the standard format.

1. Enhance the user experience by providing clear error messages below each field to guide users through the form. (2 Marks)

Task 4. Database Configuration and Scripting: [20 Marks]

1. Create a database named "conf\_db," with the collation set to "utf8\_general\_ci." (6 Marks)
2. Write SQL statements to create a table named "conference" within the "conf\_db" database, with the structure outlined in the following table. (6 Marks)

|  |  |  |
| --- | --- | --- |
| Attribute | Type | Key |
| ID | INT(11) AUTO\_INCREMENT | Primary |
| Name | VARCHAR(255) |  |
| Email | Text |  |
| Area | Text |  |
| Details | Text |  |

1. Store all the information that users input in the registration form created in task 2 into the "conference" table in the "conf\_db" database. (8 Marks)

Note: Ensure to write the SQL CREATE DATABASE and TABLE statements and save them in a file named "db.sql." Creating database and table in the “phpMyAdmin” is not acceptable.

Answers:

Task 1 – HTML, PHP, JS, MySQL code:

Paste the codes or screenshot of them in the following box.

\*Note\*

Extend the boxes if it is needed.

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>      <title>International Conference on Big Data and Computing</title>      <link rel="stylesheet" href="stylehome.css">  </head>  <body>      <div class = header>          <h1>International Conference on Big Data and Computing</h1>      </div>      <div id = "home">          <h1 style = "text-align: center">What do we provide? </h1>          <li style = "text-align: center">              <ul>Talk about future of datascience by DR Lee Kah Wing</ul>              <ul>Discussion panels with industry experts</ul>              <ul>Lunch and Dinner provided</ul>              <ul>Networking opportunities</ul>          </li>          <h1 style = "text-align: center"> What are you waiting for? </h1>          <a style = "text-align: center;" href="project/index.php"  >Register Now!</a>      </div>      <div id = "footer" style = "text-align: center">          <h1>The 2nd International Conference on Big Data and Computing</h1>      </div>    </body>  body{      font-style : arial;  }  .header{      padding: 10px;      background-color: lightblue;      background: url('image/logo.jpg');      color:#fff;      text-align:center;  }  .home{      padding: 10px;      display:flex;      background-color: #fff;      color:#fff;      text-align:center;      align-content: center;  }  .footer{      margin-top:50px;      background-color: grey;      color: #fff;  } |

Task 1 – Web page screenshot:

Paste the screen shot of home page in the following box.

|  |
| --- |
|  |

Task 2 – HTML, PHP, JS, or MySQL code:

Paste the codes or screenshot of them in the following box.

|  |
| --- |
| <!DOCTYPE html>  <html>  <head>      <title>Registration for International Conference on Big Data and Computing</title>      <link rel="stylesheet" href="style.css">  </head>  <body>      <div class = header>          <h1>Registration</h1>          <h4>Welcome to International Conference on Big Data and Computing</h4>      </div>      <div class = "form-wrapper">          <form action = "#", method = "POST", class = "registration-form">              <div id = "error-message"></div>              <div class = "form-group">                  <label for = "name">Name:</label><br>                  <input type = "text" name = "name" class = "name" placeholder = "Insert your name here">                  <div id = "error-message"></div>              </div>              <div class = "form-group">                  <label for = "email">Email Address:</label><br>                  <input type = "text" name = "email" class = "email" placeholder = "Insert your email here">                  <div id = "error-message"></div>              </div>              <div class = "form-group">                  <label for = "Area">Area: </label><br>                  <select id = "area" name = "area" class = "area" size = '1'>                      <option value="Data Analytics and Business Intelligence">Data Analytics and Business Intelligence</option>                      <option value = "Data Engineering and Infrastructure">Data Engineering and Infrastructure</option>                      <option value="Internet of Things (IoT) and Sensor Data">Internet of Things (IoT) and Sensor Data</option>                  </select><br>              </div>              <div class = "form-group">                  <label for = "details">Details:</label><br>                  <textarea name = "details" row = '4' class = "details" placeholder = "Enter your details here"></textarea>                  <div id = "error-message"></div>              </div><br>              <input type = "submit" value = 'Add User' class = "submit-button">          </form>      </div>  </body>  CSS  body{      font-style : arial;      background-color: white;  }  .header{      padding: 10px;      background-color: lightblue;      color:#fff;      text-align:center;  }  .form-wrapper{      background-color: #f2f2f2;      display: flex;      flex-direction: column;      margin-top: 20px;      padding: 20px;      margin-left:150px;      margin-right:150px;    }  .name,  .email,  .area,  .details{      height: 40px;      width: 100%;      background: white;      border-radius: 4px;      box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);      border: 1px solid #ccc;      box-sizing: border-box;      padding: 8px;      margin-bottom: 10px;  }  .details{      height:80px;  }  .submit-button{      width:100%;      background-color:#191970;      color: white;      height:40px;  } |

Task 2 – Web page screenshot:

Paste the screen shot of the form page in the following box.

|  |
| --- |
|  |

Task 3 – HTML, PHP, JS, or MySQL code:

Paste the codes or screenshot of them in the following box.

|  |
| --- |
| <script>          var form = document.getElementById('registration-form');          form.addEventListener('submit', function(event){              event.preventDefault();              var name = form.querySelector('.name').value;              var email = form.querySelector('.email').value;              var details = form.querySelector('.details').value;              var errorMessages = [];              if(name === ""){              errorMessages.push("Please enter your name");              form.querySelector('.name').nextElementSibling.innerHTML = "Please enter your name";              form.querySelector('.name').nextElementSibling.style.color = "red";              } else {              form.querySelector('.name').nextElementSibling.innerHTML = "";              }              if(email === ""){              errorMessages.push("Please enter your name");              form.querySelector('.email').nextElementSibling.innerHTML = "Please enter your email";              form.querySelector('.email').nextElementSibling.style.color = "red";              }              else if(!isValidEmail(email)){              errorMessages.push("Please enter your name");              form.querySelector('.email').nextElementSibling.innerHTML = "Please enter a valid email";              form.querySelector('.email').nextElementSibling.style.color = "red";              }              else {              form.querySelector('.email').nextElementSibling.innerHTML = "";              }              if(details === ""){              errorMessages.push("Please enter your details");              form.querySelector('.details').nextElementSibling.innerHTML = "Please enter your name";              form.querySelector('.details').nextElementSibling.style.color = "red";              } else {              form.querySelector('.details').nextElementSibling.innerHTML = "";              }              if(errorMessages.length === 0){              orderForm.submit();             }            });          function isValidEmail(email) {          var emailRegex = /^[\w-\.]+@([\w-]+\.)+[\w-]{2,4}$/;          return emailRegex.test(email);          }      </script> |

Task 3 – Web page screenshot:

Paste the screenshot of the form page with error messages in the following box.

|  |
| --- |
|  |

Task 4 – HTML, PHP, JS, or MySQL code:

Paste the codes or screenshot of them in the following box.

|  |
| --- |
| CREATE DATABASE conf\_db;  CHARACTER SET utf8  COLLATE utf8\_general\_ci;  USE conf\_db;  CREATE TABLE conference(      ID int(11) AUTO\_INCREMENT,      Name VARCHAR(225),      Email TEXT,      Area TEXT,      Details TEXT,      PRIMARY KEY (ID)  );  <?php       $servername = 'localhost';       $username = 'root';       $dbName = "conf\_db";       $conn = mysqli\_connect($servername, $username, "", $dbName);       if(!$conn){          die("Connection failed" .mysqli\_error\_connect());       }       if($\_SERVER["REQUEST\_METHOD"] == "POST"){          $stmt = mysqli\_prepare($conn, 'INSERT INTO conference(Name, Email, Area, Details ) VALUES (?,?,?,?)');          mysqli\_stmt\_bind\_param($stmt, 'ssss', $name, $email, $area, $details);          $name = $\_POST['name'];          $email = $\_POST['email'];          $area = $\_POST['area'];          $details = $\_POST['details'];            if (mysqli\_stmt\_execute($stmt)) {              echo "Register successfully!";          } else {              echo "Error: " . mysqli\_error($conn);          }          mysqli\_stmt\_close($stmt);      }      mysqli\_close($conn);      ?>  </body> |

Task 4 – Screenshot of database, table, and the rows:

Paste the screenshot of database, table, and the rows in the following box.

\*Add some information by the form page to be stored in the conference table and then take the screenshot. \*

|  |
| --- |
|  |

\*Take screenshot of all files in the project folder in the following box. \*

|  |
| --- |
|  |

**This is end of the questions.**

**Good luck! :)**