

# **Human Computer Interaction and Graphics**

Laboratory Manual

Course code: CSC6503

**Department of Computer Science**



**Lahore Garrison University**  
**Main Campus,**  
**Sector-C Phase-VI,**  
**DHA Lahore**

## **Guidelines for Laboratory Procedure**

The laboratory manual is the record of all work on your experiments. A complete, neat, and organized data record is as important as the experiment itself. Please follow these guidelines for efficient performance in the laboratory:

1. Attend the lab orientation to familiarize yourself with the lab setup.
2. Follow the designated lab schedule and complete assignments on time.
3. Write clear and well-documented code, avoiding plagiarism and unauthorized collaboration.
4. Seek help from lab instructors or peers if you encounter difficulties with programming concepts.
5. Regularly back up your code and project files to prevent data loss.
6. Use lab resources responsibly, including computers and software licenses.
7. If collaboration is allowed, work effectively with peers, ensuring each member contributes meaningfully.
8. Maintain a clean and organized workspace for better focus and efficiency.
9. Thoroughly test your code to identify and fix errors before submission.
10. Engage in lab discussions, share insights, and actively participate to enhance the learning experience.

## **Safety Precautions**

- 1.** Handle equipment carefully to prevent damage and avoid placing liquids near electronic devices.
- 2.** Maintain an ergonomic workspace for comfortable and strain-free programming.
- 3.** Save work frequently and use surge protectors to prevent data loss due to power issues.
- 4.** Keep software and antivirus programs up to date and avoid downloading from untrusted sources.
- 5.** Regularly back up code and important files to prevent data loss.
- 6.** Establish clear communication and collaboration guidelines when working with others.
- 7.** Be aware of emergency exits, fire extinguisher locations, and evacuation procedures.

## **Safety Undertaking**

**I have read all the above, and I agree to conform to its contents.**

Name: \_\_\_\_\_

Roll No.: \_\_\_\_\_

Student Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Lab Instructor : \_\_\_\_\_

## Lab's Course Learning Outcomes

- **Course Title:** Human Computer Interaction and Graphics
- **Instructor:** Sir Hamza Awan, Sir Abid, Sir Naseer, Sir Husnain Ali
- **Designation:** Lecturer
- **E-mail:** [husnainmunir@cs.lgu.edu.pk](mailto:husnainmunir@cs.lgu.edu.pk)

Students will be able to:

To provide a classroom and laboratory environment that enables students to become proficient in multiple UI/UX making software.

- Students are not assumed to have a background in multiple UI/UX making software and therefore introductory material on enhancing the interaction between user and software's and development will be presented.
- However, most of the courses will be on the UI making software's( Figma, HTML/ CSS/JS, Adobe, Canva etc.).
- Students completing this course will be able to compile various programs on the user-interface computer.

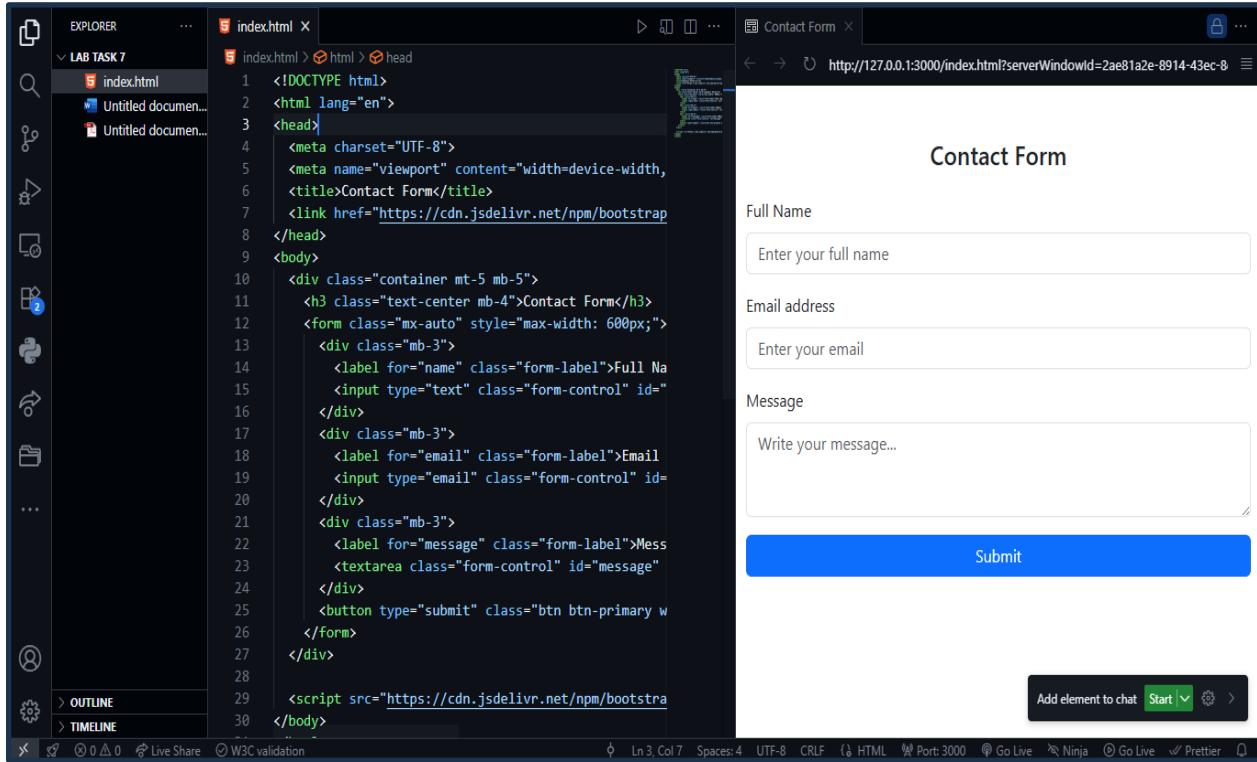
### Mapping of Course Learning Outcomes (CLO) to Program Learning Outcomes (PLO) / Graduate Attributes

Course Code	CLOs / PLOs	PLO 1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO 10
CSC6503	CLO 1				X						
	CLO 2		X								
	CLO 3										

- PLO1: Academic Education
- PLO2: Knowledge of Solving Computing Problems
- PLO3: Problem Analysis
- PLO4: Design/ Development of Solution
- PLO5: Modern Tool Usage
- PLO6: Individual and Teamwork
- PLO7: Communication
- PLO8: Computing Professionalism and Society
- PLO9: Ethics
- PLO10: Lifelong Learning

# Lab Task number 6

- Create a Form using HTML, Bootstrap



The screenshot shows the Visual Studio Code interface. On the left is the Explorer sidebar with a file tree containing 'LAB TASK 7' and 'index.html'. The main area has two tabs: 'index.html' (active) and 'Contact Form'. The code editor shows the HTML code for a contact form. The browser preview on the right shows a 'Contact Form' page with fields for Full Name, Email address, and Message, along with a Submit button.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Contact Form</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
  <div class="container mt-5 mb-5">
    <h3 class="text-center mb-4">Contact Form</h3>
    <form class="mx-auto" style="max-width: 600px;">
      <div class="mb-3">
        <label for="name" class="form-label">Full Name</label>
        <input type="text" class="form-control" id="name" placeholder="Enter your full name">
      </div>
      <div class="mb-3">
        <label for="email" class="form-label">Email address</label>
        <input type="email" class="form-control" id="email" placeholder="Enter your email">
      </div>
      <div class="mb-3">
        <label for="message" class="form-label">Message</label>
        <textarea class="form-control" id="message" rows="3" placeholder="Write your message..."></textarea>
      </div>
      <button type="submit" class="btn btn-primary w-100">Submit</button>
    </form>
  </div>
</body>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
```

- Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Contact Form</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">
</head>
<body>
  <div class="container mt-5 mb-5">
    <h3 class="text-center mb-4">Contact Form</h3>
    <form class="mx-auto" style="max-width: 600px;">
      <div class="mb-3">
        <label for="name" class="form-label">Full Name</label>
        <input type="text" class="form-control" id="name" placeholder="Enter your full name">
      </div>
      <div class="mb-3">
        <label for="email" class="form-label">Email address</label>
        <input type="email" class="form-control" id="email" placeholder="Enter your email">
      </div>
      <div class="mb-3">
        <label for="message" class="form-label">Message</label>
        <textarea class="form-control" id="message" rows="3" placeholder="Write your message..."></textarea>
      </div>
      <button type="submit" class="btn btn-primary w-100">Submit</button>
    </form>
  </div>
</body>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
```

```

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>

```

- Create the portfolio webpage that contains your name, bio, image, navbar, Education, footer

The screenshot shows a code editor with two tabs: 'index.html' and 'index2.html'. The 'index2.html' tab is active, displaying the content of the portfolio page. The page has a header 'Portfolio - Hafiz Muhammad Hamza Khalid', a bio section with a profile picture and text, an 'Education' section listing three items, and a 'Contact Me' form. The code editor's sidebar shows 'LAB TASK 7' with files 'index.html', 'index2.html', 'Untitled document...', and 'Untitled document...'. The bottom status bar shows file paths, line numbers (Ln 84, Col 1), and various developer tools.

- **Code:**

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Portfolio - Hafiz Muhammad Hamza Khalid</title>
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">
  <style>
    body { font-family: Arial, sans-serif; background-color: #f5f5f5; }
    .navbar { background-color: #0d6efd; }
    .navbar-brand, .nav-link { color: white !important; }
    .profile-img { width: 150px; height: 150px; border-radius: 50%; object-fit: cover; }
    footer { background-color: #0d6efd; color: white; text-align: center; padding: 10px; margin-top: 30px; }
  </style>
</head>
<body>

  <!-- Navbar -->
  <nav class="navbar navbar-expand-lg">
    <div class="container">
      <a class="navbar-brand" href="#">My Portfolio</a>
      <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarNav">
        <span class="navbar-toggler-icon"></span>
      </button>
      <div class="collapse navbar-collapse" id="navbarNav">
        <ul class="navbar-nav ms-auto">
          <li class="nav-item"><a class="nav-link" href="#bio">Bio</a></li>
          <li class="nav-item"><a class="nav-link" href="#education">Education</a></li>
          <li class="nav-item"><a class="nav-link" href="#contact">Contact</a></li>
        </ul>
      </div>
    </div>
  </nav>

```

```

</nav>

<!-- Bio Section -->
<section id="bio" class="container text-center mt-5">
  
  <h2>Hafiz Muhammad Hamza Khalid</h2>
  <p class="text-muted">A passionate Computer Science student learning UI/UX, Web Development, and Human-Computer Interaction.</p>
</section>

<!-- Education Section -->
<section id="education" class="container mt-5">
  <h3 class="text-center mb-4">Education</h3>
  <div class="row justify-content-center">
    <div class="col-md-6">
      <ul class="list-group">
        <li class="list-group-item"><strong>BS Computer Science</strong> – Lahore Garrison University</li>
        <li class="list-group-item"><strong>Intermediate (ICS)</strong> – Punjab Group of Colleges</li>
        <li class="list-group-item"><strong>Matriculation (Science)</strong> – Allied School</li>
      </ul>
    </div>
  </div>
</section>

<!-- Contact Form Section -->
<section id="contact" class="container mt-5 mb-5">
  <h3 class="text-center mb-4">Contact Me</h3>
  <form class="mx-auto" style="max-width: 600px;">
    <div class="mb-3">
      <label for="name" class="form-label">Full Name</label>
      <input type="text" class="form-control" id="name" placeholder="Enter your full name">
    </div>
    <div class="mb-3">
      <label for="email" class="form-label">Email address</label>
      <input type="email" class="form-control" id="email" placeholder="Enter your email">
    </div>
    <div class="mb-3">
      <label for="message" class="form-label">Message</label>
      <textarea class="form-control" id="message" rows="3" placeholder="Write your message..."></textarea>
    </div>
    <button type="submit" class="btn btn-primary w-100">Submit</button>
  </form>
</section>

<!-- Footer -->
<footer>
  <p>&copy; 2025 Hafiz Muhammad Hamza Khalid | All Rights Reserved</p>
</footer>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
</body>
</html>

```

CLO	PLO	LL
1	4	4

- **Conclusion:**

In this lab task, I created a responsive portfolio webpage using **HTML** and **Bootstrap**.

The webpage includes a **navbar**, **bio section**, **profile image**, **education list**, **contact form**, and **footer**.

Through this task, I learned how to structure a clean and user-friendly web interface and apply basic responsive design principles.

- **Rubrics:**

Description	Total Marks	Marks Obtained
Ability to Conduct Practical	5	
Data Analysis & Interpretation	5	
Structure	5	
Efficiency	5	
<b>Total Marks Obtained</b>	<b>20</b>	

**Instructor's Signature:** \_\_\_\_\_