

Institute of Space Technology, Islamabad



LAB FINAL REPORT

COURSE INSTRUCTOR

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SUBMITTED BY

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Question 1

Index.html:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Online Course Platform</title>
    <!-- Bootstrap CSS -->
    <link
        href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
        rel="stylesheet">
        <!-- Custom CSS -->
        <link rel="stylesheet" href="style.css">
</head>
<body>
    <!-- Header with Navigation -->
    <header>
        <nav class="navbar navbar-expand-lg navbar-dark bg-dark">
            <div class="container">
                <a class="navbar-brand" href="#">LearnHub</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="#">Home</a></li>
                        <li class="nav-item"><a class="nav-link"
                            href="#">Courses</a></li>
                        <li class="nav-link"><a class="nav-link"
                            href="#">Instructors</a></li>
                        <li class="nav-item"><a class="nav-link"
                            href="#">Contact</a></li>
                    </ul>
                </div>
            </div>
        </nav>
    </header>

    <!-- Hero Section -->
    <section class="hero-section py-5 text-center">
```

```
<div class="container">
    <h1 class="display-4">Master Skills with Expert-Led Courses</h1>
    <p class="lead">Learn at your own pace with our comprehensive online
courses</p>
    <button class="btn btn-primary btn-lg enroll-btn">Start Learning
Free</button>
</div>
</section>

<!-- Courses Section -->
<section class="courses py-5">
    <div class="container">
        <h2 class="text-center mb-5">Popular Courses</h2>
        <div class="row g-4">
            <!-- Course Card 1 -->
            <div class="col-md-4">
                <div class="card h-100 course-card">
                    
                    <div class="card-body">
                        <h5 class="card-title">Web Development</h5>
                        <p class="card-text">Learn HTML, CSS, JavaScript, and
React to build modern websites.</p>
                        <p class="price">$49.99</p>
                        <button class="btn btn-success enroll-btn">Enroll
Now</button>
                    </div>
                </div>
            </div>
            <!-- Course Card 2 -->
            <div class="col-md-4">
                <div class="card h-100 course-card">
                    
                    <div class="card-body">
                        <h5 class="card-title">Data Science</h5>
                        <p class="card-text">Master Python, statistics, and
machine learning algorithms.</p>
                        <p class="price">$59.99</p>
                        <button class="btn btn-success enroll-btn">Enroll
Now</button>
                    </div>
                </div>
            </div>
            <!-- Course Card 3 -->
        </div>
    </div>
</section>
```

```

        <div class="col-md-4">
            <div class="card h-100 course-card">
                
                <div class="card-body">
                    <h5 class="card-title">UI/UX Design</h5>
                    <p class="card-text">Design beautiful and user-
friendly interfaces with Figma.</p>
                    <p class="price">$39.99</p>
                    <button class="btn btn-success enroll-btn">Enroll
Now</button>
                </div>
            </div>
        </div>
    </div>
</section>

<!-- Footer -->
<footer class="bg-dark text-white py-4">
    <div class="container text-center">
        <p>&copy; 2025 LearnHub. All rights reserved.</p>
        <p>Contact: info@learnhub.com | Phone: +92 300 1234567</p>
    </div>
</footer>

<!-- Bootstrap JS -->
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"
></script>
</body>
</html>

```

Style.css:

```

.hero-section {
    background: linear-gradient(135deg, #6a11cb 0%, #2575fc 100%);
    color: white;
}

/* Button Custom Styling */
.enroll-btn {
    background-color: #28a745;
    border: none;
    padding: 12px 30px;
}

```

```
    font-weight: bold;
    transition: all 0.3s ease;
}

.enroll-btn:hover {
    background-color: #218838;
    transform: translateY(-3px);
    box-shadow: 0 5px 15px rgba(0,0,0,0.3);
}

.course-card {
    border: 1px solid #ddd;
    border-radius: 10px;
    transition: transform 0.3s ease;
}

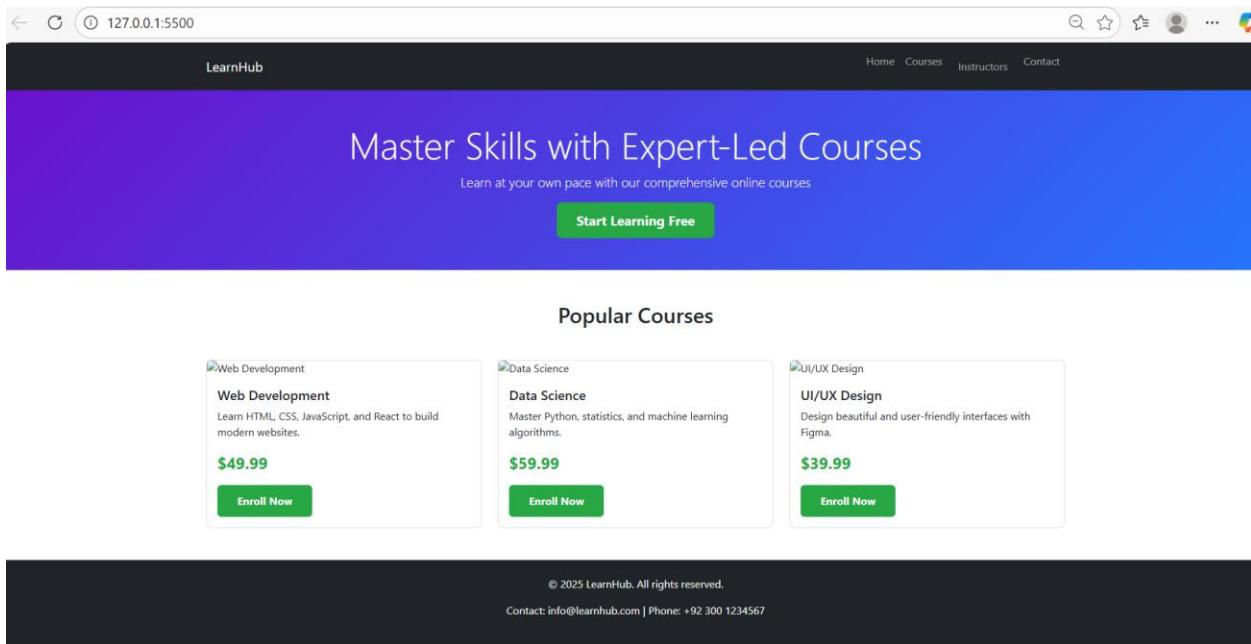
.course-card:hover {
    transform: translateY(-10px);
    box-shadow: 0 10px 20px rgba(0,0,0,0.1);
}

.course-card .price {
    font-size: 1.5rem;
    color: #28a745;
    font-weight: bold;
}

/* Responsive adjustments */
@media (max-width: 768px) {
    .hero-section h1 {
        font-size: 2rem;
    }

    .courses .card {
        margin-bottom: 20px;
    }
}
```

Output:



Question 2

App.jsx:

```
import React, { useState } from 'react';

import CourseModule from './components/CourseModule';
import './App.css';

function App() {
  // Parent component state and course data
  const [totalEnrollments, setTotalEnrollments] = useState(0);

  // Course data to pass as props
  const courseData = {
    title: "React Masterclass",
    description: "Learn React from scratch including Hooks, Router, and State Management",
    instructor: "Ali Ahmed",
    duration: "8 weeks",
    price: "$49.99"
  };

  // Function to update total enrollments
}
```

```

const handleEnrollment = () => {
  setTotalEnrollments(prev => prev + 1);
};

return (
  <div className="App container py-5">
    <h1 className="text-center mb-4">Online Course Platform</h1>
    <div className="row justify-content-center">
      <div className="col-md-8">
        {/* Passing props to child component */}
        <CourseModule
          course={courseData}
          onEnroll={handleEnrollment}
        />

        <div className="mt-4 p-3 bg-light rounded">
          <h4>Platform Statistics</h4>
          <p>Total Course Enrollments: <strong>{totalEnrollments}</strong></p>
        </div>
      </div>
    </div>
  );
}

export default App;

```

CourseModule.jsx:

```

import React, { useState } from 'react';

function CourseModule({ course, onEnroll }) {
  const [isEnrolled, setIsEnrolled] = useState(false);
  const [availableSeats, setAvailableSeats] = useState(30);

  // Handle enrollment button click
  const handleEnrollClick = () => {
    if (availableSeats > 0 && !isEnrolled) {
      setIsEnrolled(true);
      setAvailableSeats(prev => prev - 1);
      onEnroll();
    }
  };
}

```

```
return (
  <div className="card shadow">
    <div className="card-body">
      <h2 className="card-title">{course.title}</h2>
      <p className="card-text">{course.description}</p>

      {/* Course details from props */}
      <div className="mb-3">
        <p><strong>Instructor:</strong> {course.instructor}</p>
        <p><strong>Duration:</strong> {course.duration}</p>
        <p><strong>Price:</strong> {course.price}</p>
      </div>

      {/* Enrollment section with state */}
      <div className="enrollment-section p-3 bg-light rounded">
        <h5>Enrollment Status</h5>
        <p>Available Seats: {availableSeats}</p>
        <p>Status: {isEnrolled ? '☑ Enrolled' : '☒ Not Enrolled'}</p>

        {/* Enrollment button with event handling */}
        <button
          className={`btn ${isEnrolled ? 'btn-secondary' : 'btn-primary'}`}
          onClick={handleEnrollClick}
          disabled={isEnrolled || availableSeats === 0}
        >
          {isEnrolled ? 'Already Enrolled' : 'Enroll Now'}
        </button>

        {availableSeats === 0 && !isEnrolled && (
          <p className="text-danger mt-2">☒ Course is full!</p>
        )}
      </div>
    </div>
  );
}

export default CourseModule;
```

Output:

The screenshot shows a web browser window with the URL `localhost:5173`. The page title is "Online Course Platform". A course card for "React Masterclass" is displayed, including details like "Learn React from scratch including Hooks, Router, and State Management", "Instructor: Ali Ahmed", "Duration: 8 weeks", and "Price: \$49.99". It also shows enrollment status with 30 available seats and a "Not Enrolled" status, along with an "Enroll Now" button. Below the course card, there's a section titled "Platform Statistics" showing "Total Course Enrollments: 0".

Question 3

The screenshot shows a terminal window with tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL (which is selected), and PORTS. The terminal output shows the command `npm install react-router-dom axios` being run, followed by the message "added 30 packages in 5s". It also indicates that 7 packages are looking for funding and provides a link to run `npm fund` for details. The terminal prompt ends with "2>".

App.jsx:

```
import React from 'react';
import { BrowserRouter as Router, Routes, Route, Link } from 'react-router-dom';
```

```
import Courses from './pages/Courses';
import Profile from './pages/Profile';
import './App.css';

function App() {
  return (
    <Router>
      <div className="App">
        {/* Navigation Bar */}
        <nav className="navbar navbar-expand-lg navbar-dark bg-dark">
          <div className="container">
            <Link className="navbar-brand" to="/">Course Platform</Link>
            <div className="navbar-nav">
              <Link className="nav-link" to="/courses">Courses</Link>
              <Link className="nav-link" to="/profile">Profile</Link>
            </div>
          </div>
        </nav>

        {/* Routes */}
        <div className="container mt-4">
          <Routes>
            <Route path="/" element={<Home />} />
            <Route path="/courses" element={<Courses />} />
            <Route path="/profile" element={<Profile />} />
          </Routes>
        </div>
      </div>
    </Router>
  );
}

// Home Component
function Home() {
  return (
    <div className="text-center py-5">
      <h1>Welcome to Online Course Platform</h1>
      <p>Navigate to Courses to see available courses</p>
    </div>
  );
}

export default App;
```

Courses.jsx:

```
import React, { useState, useEffect } from 'react';
import axios from 'axios';

function Courses() {
  const [posts, setPosts] = useState([]);
  const [loading, setLoading] = useState(true);
  const [error, setError] = useState(null);

  useEffect(() => {
    const fetchData = async () => {
      try {
        const response = await
axios.get('https://jsonplaceholder.typicode.com/posts');
        setPosts(response.data.slice(0, 5));
        setLoading(false);
      } catch (err) {
        setError(err.message);
        setLoading(false);
      }
    };
    fetchData();
  }, []);

  if (loading) return <div className="text-center">Loading courses...</div>;
  if (error) return <div className="text-danger">Error: {error}</div>;

  return (
    <div>
      <h1 className="mb-4">Available Courses</h1>
      <div className="row">
        {posts.map((post) => (
          <div className="col-md-6 mb-4" key={post.id}>
            <div className="card h-100">
              <div className="card-body">
                <h5 className="card-title">Course {post.id}: {post.title}</h5>
                <p className="card-text">{post.body}</p>
                <button className="btn btn-primary">View Details</button>
              </div>
            </div>
          </div>
        ))
      </div>
    </div>
  );
}
```

```
        <div className="card-footer text-muted">
          Course ID: {post.id} | User: {post.userId}
        </div>
      </div>
    ))}
</div>
<div className="mt-3">
  <p>Showing {posts.length} courses</p>
</div>
</div>
);
}

export default Courses;
```

Profile.jsx:

```
import React from 'react';

function Profile() {
  return (
    <div>
      <h1>Student Profile</h1>
      <div className="card mt-3">
        <div className="card-body">
          <h5 className="card-title">Student</h5>
          <p><strong>Name:</strong> Instructor</p>
          <p><strong>Registration No:</strong> CS</p>
          <p><strong>Email:</strong> student</p>
          <p><strong>Enrolled Courses:</strong> 3</p>
          <button className="btn btn-info">Edit Profile</button>
        </div>
      </div>
    </div>
  );
}

export default Profile;
```

Output:

Online Course Platform

React Masterclass

Learn React from scratch including Hooks, Router, and State Management

Instructor: Ali Ahmed

Duration: 8 weeks

Price: \$49.99

Enrollment Status

Available Seats: 30

Status:  Not Enrolled

[Enroll Now](#)