Project Report

on

My Internship Report

Submitted

In Partial Fulfillment of

BACHELOR OF COMPUTER APPLICATIONS (BCA)

Submitted by:

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Declaration

I do hereby declare that this project work entitled "My Internship Report" submitted by me for the partial fulfillment of the requirement for the award of BACHELOR OF COMPUTER APPLICATIONS (BCA) is a record of my own work. The report embodies the findings based on my study and observation and has not been submitted earlier for the award of any degree or diploma to any Institute or University.

SIGNATURE

Name: Riaz Mohammad
Roll No: 24/SCA/BCA(AI&ML)/39
Date: 15-07-2025

Certificate from the Guide

This is to certify that the project report entitled "My Internship Report" submitted in partial fulfillment of the degree of BACHELOR OF COMPUTER APPLICATIONS (BCA) to Manav Rachna International Institute of Research and Studies, Faridabad is carried out by Mr. Riaz Mohammad (Roll No: 24/SCA/BCA(AI&ML)/39) under my guidance.

Signature of the Guide
Name: Dr. Shruti Gupta

Head of Department
Name: Prof. (Dr.) Suhail Javed Quraishi
Date: 15-07-2025

Acknowledgement

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Introduction

About the Organization:

CODTECH IT SOLUTIONS PVT. LTD is a leading provider of IT services and internship programs focused on nurturing technical skills among students and freshers. The company offers a real-world experience in development, design, and deployment of modern software systems through task-based learning environments.

Aims & Objectives:

The primary objective of this internship was to enhance practical frontend development skills by engaging in four structured projects, each reflecting a real-world problem. The internship aimed to improve knowledge of HTML, CSS, JavaScript, and React.js while working on responsive designs and interactive UIs.

Manpower:

The internship program was overseen by Dr. Shruti Gupta, who guided the progress and quality of each task. Interns were grouped under project mentors and communication was maintained through online platforms including WhatsApp and GitHub.

Existing System:

In traditional learning and communication systems, users often rely on static platforms or manual setups. Portfolio showcases are done manually through PDFs or offline resumes. Real-time communication lacked web-based channels, and quiz assessments were conducted using paper formats.

Proposed System:

The new system includes four modern web-based applications that address these gaps:

1. **Quiz Application** (JavaScript)

2. **Real-Time Chat Application** (React.js)

3. **Personal Portfolio Website** (HTML/CSS)

4. **E-learning Platform UI** (React.js)

These systems are user-friendly, dynamic, and accessible via web browsers with mobile responsiveness.

Feasibility Study

Technical Feasibility:

The applications use web technologies like HTML, CSS, JavaScript, and React.js, which are supported on all major platforms. The developer was already familiar with these technologies, ensuring smooth development.

Economic Feasibility:

All development was done using free and open-source tools. No additional costs were incurred for licenses, hosting, or deployment. Thus, the project is highly economical.

Behavioral Feasibility:

The interfaces are simple and easy to use, based on standard UX/UI practices. Positive feedback was received during testing and peer reviews.

Project Monitoring System

Gantt Chart (Weekly Plan):

- **Week 1**: Project planning, GitHub setup, Quiz App layout

- **Week 2**: Quiz functionality, Chat UI layout

- **Week 3**: Chat features, Portfolio website development

- **Week 4**: E-learning UI, testing, and documentation

Progress was tracked through GitHub commits and milestone checklists.

System Analysis

Requirement Specification:
Each application had the following key features:

- **Quiz App**: Dynamic question loading, score calculation, answer feedback

- **Chat App**: Real-time messaging, responsive layout, scrollable history

- **Portfolio Website**: Navigation bar, project sections, responsive design

- **E-learning Platform**: Course list, video embedding, progress tracking

Task 1.

Quiz App

Project Title: Quiz Application (Web-Based)

👨‍💻 **Developed By: Riaz Mohammad**

GitHub Repository: Riaz1909/quiz_app
Live Demo: Click to View (if live)

📌 **Project Overview**

This project is a simple yet elegant web-based quiz application built using HTML, CSS, and JavaScript. It allows users to attempt multiple-choice questions, track their progress, and view their final score.

It is fully responsive, fast, and designed with clean UI/UX in mind. The project focuses on front-end logic, making it a strong demonstration of interactive web development skills.

🖼 **Screenshots**

1. Quiz Interface

Users are presented with a question and four clickable answer options styled in orange. The interface is centered and minimalistic for distraction-free answering.

2. Final Score Display

After completing the quiz, the user is shown a score summary like "You scored 2 out of 2!" This screen confirms the completion of the quiz in a clean format.

⬚ Project Structure

bash

CopyEdit

```
quiz_app/
├── index.html      # Main entry screen with Start/Cancel buttons
├── quiz.html       # Quiz interface page with questions
├── script.js       # JavaScript controlling quiz logic and flow
├── style.css       # Styling for layout, buttons, fonts, etc.
├── README.md       # Project documentation
```

✖ Tech Stack

Technology	Role
HTML5	Markup structure
CSS3	Styling and layout
JavaScript (ES6)	Logic, interactivity, quiz handling

🔁 Quiz Logic Flow (script.js)

- **The quiz starts on index.html with a button.**

- **When the user clicks "Start Quiz", they are redirected to quiz.html.**

- **The script dynamically loads a set of quiz questions.**

- **Each question is displayed one by one.**

- **Clicking on an answer checks correctness and advances the quiz.**

- **After all questions, the score is displayed.**

✨ Key Features

- **Clean and modern UI**

- **Responsive layout for desktop and mobile**

- **Multiple-choice quiz system**

- **Final score feedback**

- **Fully client-side—no backend required**

⬜ Learning & Experience

This project helped strengthen my knowledge in:

- **DOM manipulation and event handling in JavaScript**

- **Responsive design using CSS Flexbox**

- **Building dynamic single-page-like web apps**

- **Structuring frontend projects on GitHub**

- **Hosting static websites via GitHub Pages**

☑ **Improvements & Future Scope**

- **Add timer-based questions**

- **Include multiple quiz categories**

- **Store high scores using localStorage**

- **Integrate Firebase for storing user attempts and scores**

Demo :
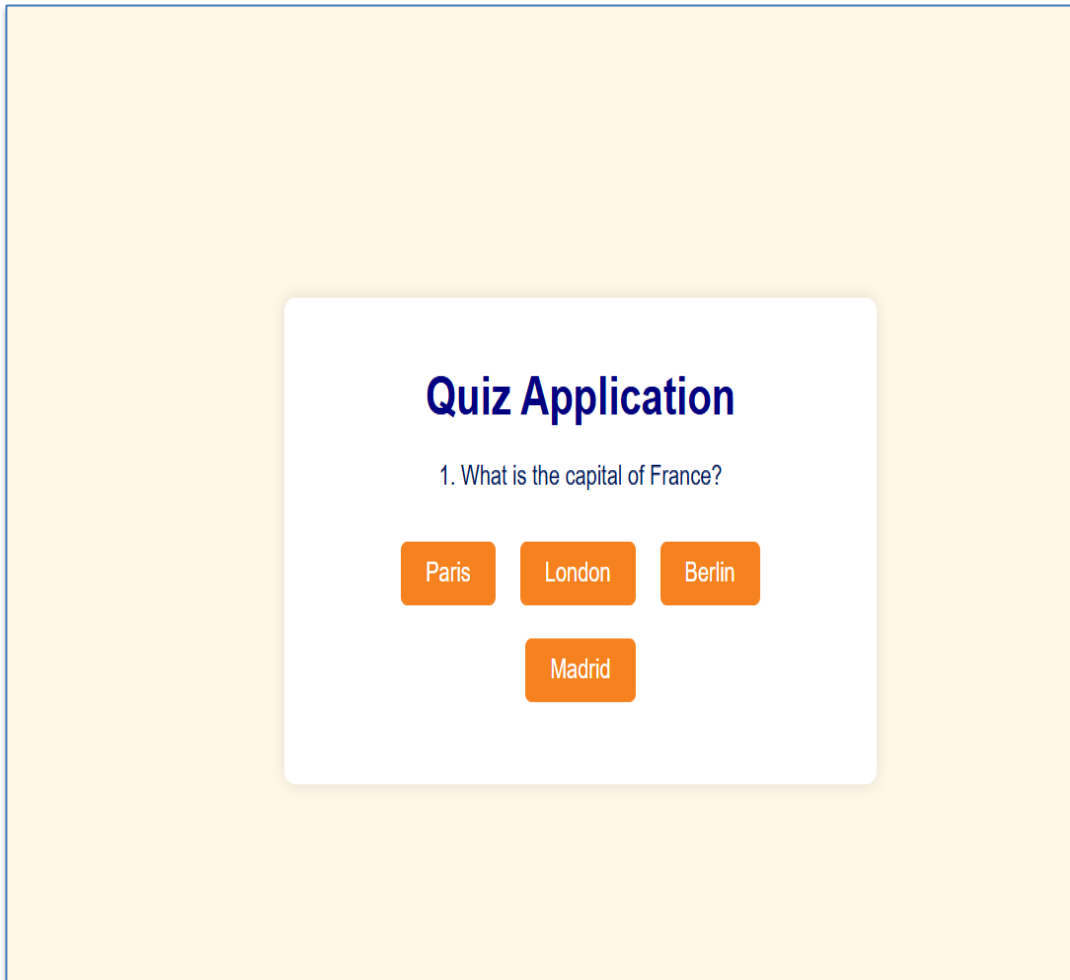
Quiz Application

You scored 2 out of 2!

Task 2. Chat App

Project Overview

During the internship, I developed a fully responsive real-time chat application using React.js and WebSockets. The app connects users to a public echo server, where messages typed by the user are immediately sent and bounced back, simulating a live chat experience.

The objective was to demonstrate WebSocket communication in a frontend application while maintaining a clean and mobile-friendly UI.

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2. Features Implemented

- **▤ Responsive UI: Compatible across mobile, tablet, and desktop screens.**

- **⚡ Real-time Chat: Messages are sent instantly using WebSockets.**

- **💬 Echo Server Integration: Using Postman's WebSocket echo service.**

- **▢ Clean UI: CSS-styled chat bubbles with automatic scroll and alignment.**

- **⌨ Keyboard Shortcut: Pressing Enter sends a message.**

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3. Folder Structure

pgsql

CopyEdit

react-responsive-chat/

├── public/

│   └── index.html

```
├── src/
│   ├── App.js
│   ├── App.css
│   └── index.js
├── package.json
```

---

4. Development Process

a. Initialize Project

Used Create React App for bootstrapping:

Bash

```
npx create-react-app react-responsive-chat

cd react-responsive-chat
```

Chat UI

- **Sent messages appear on the right.**

- **Received (echoed) messages appear on the left.**

- **Messages are displayed in a scrollable container.**

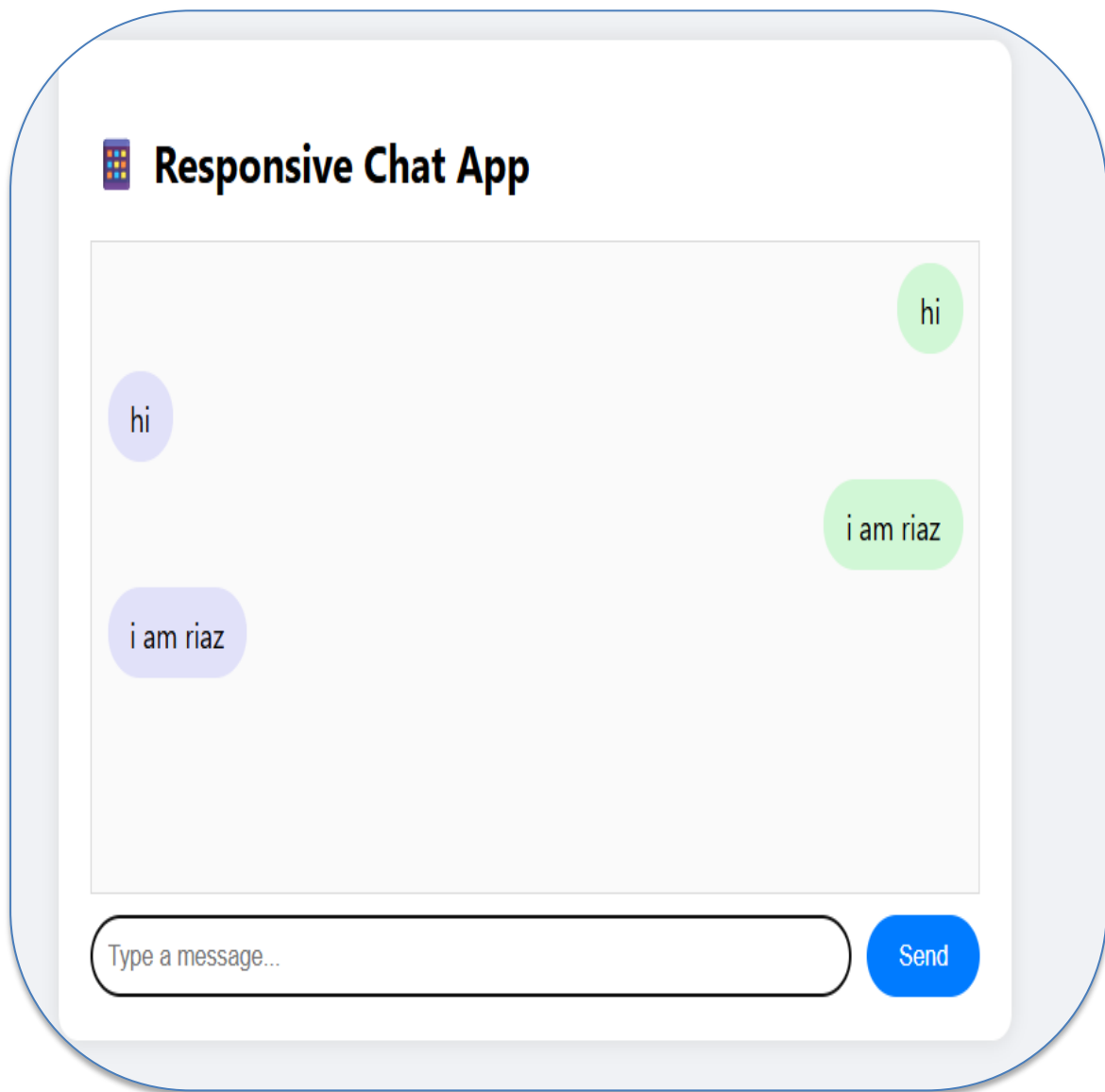---

5. ⬜ Testing and Output

Test Scenario:

1. **Start the server using npm start.**

2. **Type a message like Hello from Riaz.**

3. **Press Enter or click Send.**

4. **You will see the message echo back instantly.**

Screenshot

6. 💡 Learnings and Takeaways

- **Gained practical experience with WebSocket APIs.**

- **Improved React skills (state management, effects).**

- **Understood the importance of responsive design using CSS.**

- **Enhanced debugging skills via browser dev tools and live reload.**

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7. 📌 Conclusion

This project served as a practical demonstration of integrating real-time capabilities in frontend applications using WebSocket. It laid a strong foundation for future real-time apps like group chat, notifications, or live dashboards.

Task 3: Personal Portfolio Website (HTML/CSS)

1. ▯ Project Overview

As part of my internship, I developed a personal portfolio website to showcase my professional profile, skills, certifications, and projects. The goal was to present my identity as a web developer in a structured and visually engaging format, while practicing responsive design and static site deployment.

The project was developed from scratch using HTML, CSS, and JavaScript and deployed using GitHub Pages.

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2. 🚀 Features Implemented

- 🎨 **Custom personal branding and theme**

- 📄 Embedded certificate gallery

- 😊💼 About Me, Skills, and Project sections

- 🌐 Live hosted version using GitHub Pages

- 📱 Mobile-friendly responsive layout

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3. 🗁 Folder Structure

Portfolio/

```
├── index.html          # Main HTML file (renamed from riazmohd.html)

├── profile.jpg         # Profile image

├── dark_background.jpg    # Website background

├── cert1.png - cert6.png   # Certificate images in PNG

├── cert7.jpg           # Certificate in JPG

├── README.md           # Project documentation
```

---

4. 💡 Key Sections

◈ About Me

Introduces who I am, my background in BCA (AI & ML), and my passion for frontend development.

◈ Projects

Highlighted projects include:

- **Portfolio Website**

- **Java-based Vehicle Management App**

- **JavaScript Quiz Game**

◈ **Skills**

- **HTML5, CSS3**

- **Java, C Programming**

- **Git & GitHub**

- **Responsive Web Design**
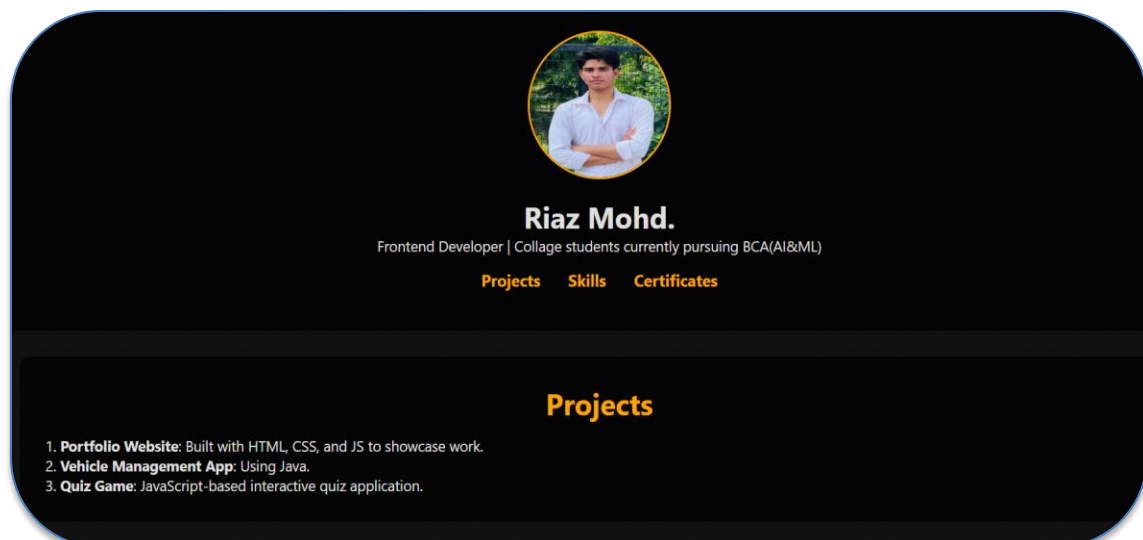
- **Video Editing**

◈ **Certifications**

Visually embedded using <img> tags, for example:

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5. ⬜ Output Screenshot

Here's a live view of the portfolio page:

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6. 🌐 Live Demo

👉 [**View My Portfolio on GitHub Pages**](#)

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7. ⬜ Learning Outcomes

- **Mastered use of HTML/CSS layout techniques**

- **Gained experience in image optimization and embedding**

- **Practiced version control with Git & GitHub**

- **Deployed website using GitHub Pages**

- **Understood the importance of structured presentation of achievements**

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8. 📌 Conclusion

This portfolio project is not only a reflection of my web development skills but also a gateway for employers, peers, and collaborators to understand my potential and past work.

Task 4: **E-learning Platform UI** (React.js)

Project Overview

The E-Learn Platform is a simulated e-learning website developed using only HTML and CSS. It demonstrates the ability to build a clean, responsive, and structured user interface, including navigation across multiple pages like Home, Courses, and Progress. The project emphasizes static content management, page layout design, and user experience principles.

This project was a part of my internship assignment to create a functional front-end user experience for an educational platform, which could be expanded in the future to include dynamic behavior using JavaScript or backend technologies.

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2. Objectives

- **Build a multi-page, responsive e-learning interface.**

- **Apply fundamental web design principles with HTML and CSS.**

- **Practice UI/UX elements like layout, structure, colors, and typography.**

- **Create visually distinguishable content zones using themes and background images.**

- **Demonstrate content separation using individual HTML files.**

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3. Features Implemented

- **Responsive Design: Mobile and desktop compatible layout.**

- **Multi-page Navigation: Includes pages for Home, Courses, and Progress.**

- **Dark Theme: Background styled with a dark image for a modern look.**

- **Semantic HTML: Organized content with clean structure and accessibility in mind.**

- **CSS Styling: Centralized in home.css for easier maintenance.**

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4. Folder Structure

E-learning-platform/

├── index.html   # Home page

├── courses.html   # Courses listing page

├── progress.html   # Progress tracking page

├── home.css   # Shared CSS stylesheet

├── dark-bg.jpg   # Thematic background

├── README.md   # Documentation

└── .gitattributes   # Git metadata

5. Pages Description

a. index.html – Home Page

Introduces the platform and its purpose. Contains site-wide navigation links to other sections. A clean layout provides users immediate access to course content or progress.

b. courses.html – Courses Page

Displays a list of available courses, each with a title and brief description. Layout designed to be expandable for future features like filtering or enroll buttons.
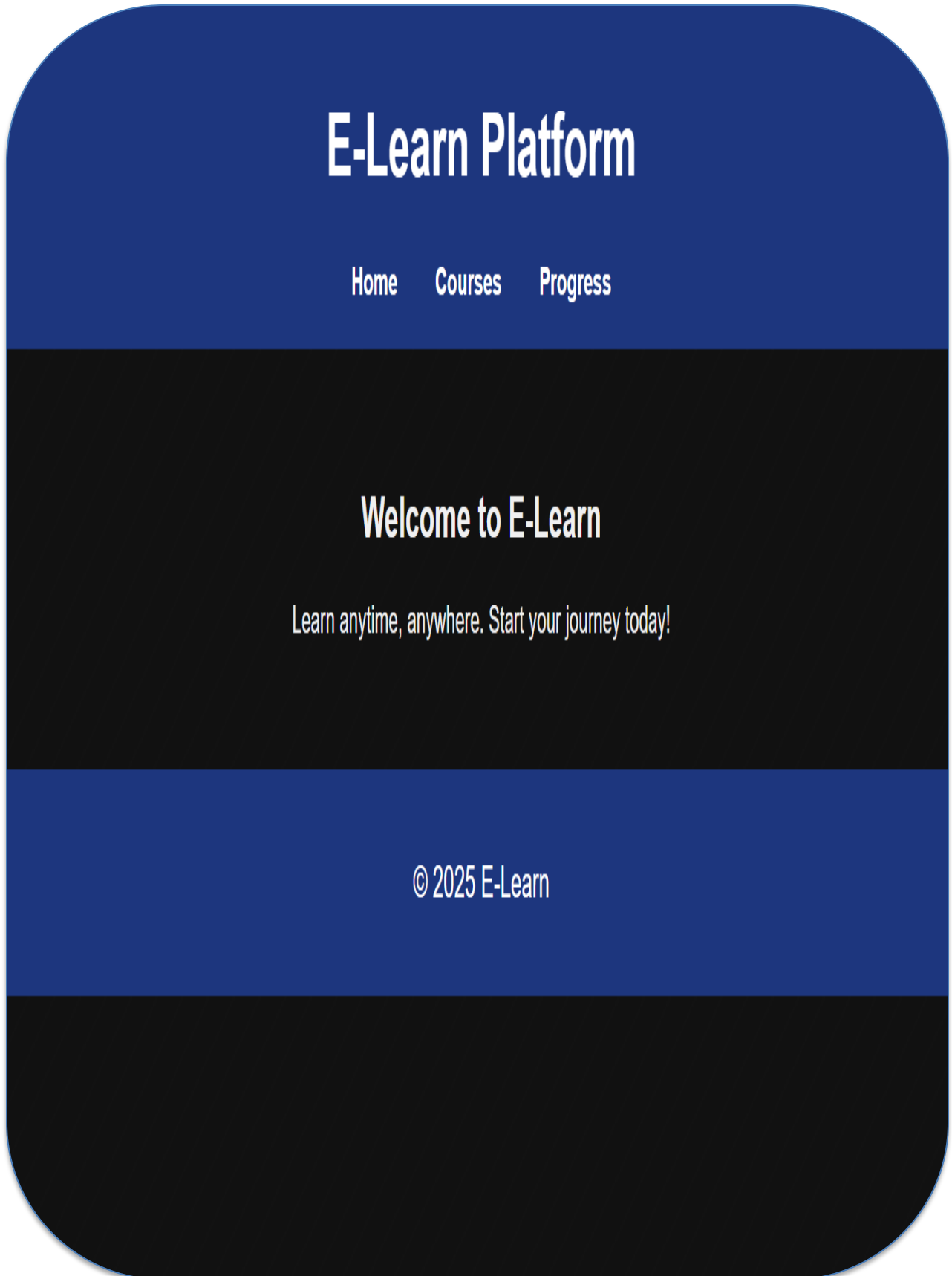
c. progress.html – Progress Tracker

Shows how much content a user has covered or completed. Structured using semantic elements with scope to integrate dynamic progress bars in future.

6. Output Screenshot

A sample screenshot of the site is provided below to illustrate the final result of the work:

Screenshot:

E-Learn Platform

Home   Courses   Progress

Welcome to E-Learn

Learn anytime, anywhere. Start your journey today!

© 2025 E-Learn

E-Learn Platform

ourses

HTML Basics

E-Learn Platform

Your Progress

HTML Basics - ✅ Completed

CSS for Beginners - ⏳ In Progress

JavaScript Essentials - ❌ Not Started

7. Live Preview

You can view the deployed version here:

[**Visit E-Learn Platform on GitHub Pages**](#)

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8. Learnings and Takeaways

- **Improved understanding of semantic HTML and structured layout.**

- **Gained practical experience with responsive CSS techniques.**

- **Learned how to use GitHub for project hosting and version control.**

- **Practiced organizing code into modular, maintainable files.**

- **Developed a better sense of design consistency and content flow.**

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9. Conclusion

The E-Learn Platform project has been an excellent learning exercise in web design fundamentals. It highlights how simple HTML and CSS can be used to create clean, multi-page educational websites. This foundation can be extended in the future using JavaScript, animations, and database-driven content to provide a more immersive learning experience.

System Design

File/Data Design:

- **Quiz App**: Local JSON question set, score variable

- **Chat App**: State variables using React Hooks

- **Portfolio**: Static HTML sections with CSS for layout

- **E-learning**: Components for course cards, progress bars, and videos

Input / Output Form Design

Input Forms:

- Quiz answers (radio buttons)

- Chat message input

- Portfolio contact form

Output:

- Quiz scores displayed after completion

- Real-time chat messages

- Navigation transitions in portfolio and E-learning site

System Testing

Preparation of Test Data:

- Dummy quiz questions

- Sample user messages

- Test project entries and course titles

Testing with Live Data:

- All apps tested on Chrome and Edge

- Responsive design validated using browser dev tools

Test Cases and Results:

Test Case	Input	Expected Output	Result
Quiz answer	Correct option	Score increases	Pass
Chat message	Text input	Message appears instantly	Pass
Portfolio nav	Click "Projects"	Scroll to project section	Pass
E-learning video	Play button	Video starts	Pass

System Implementation

Hardware Requirements:

- Any modern PC/laptop

- Internet connection

- Minimum 4GB RAM

Software Requirements:

- Visual Studio Code

- Web browser (Chrome)

- Git & GitHub

- Node.js (for React projects)

Documentation

Each application was modularly developed. Comments were included to improve readability. GitHub repositories were maintained for version control and collaborative tracking.

Scope of the Project

This internship demonstrated the practical implementation of frontend development techniques. It provided experience with real-world tools and strengthened skills in UI/UX, JavaScript logic, React components, and GitHub versioning.

Bibliography

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