

## **FRONTEND WEB DEVELOPMENT TASK**

# **EDUQUEST**

***Hari Harshavardhan Manohar***

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***25951A05A1***

# **EDUQUEST**

## **FRONT-END WEB DEVELOPMENT TASK DESCRIPTION**

**Bachelor of Technology**  
**in**  
**Computer Science and Engineering**  
**by**

**Hari Harshavardhan**  
**Manohar**  
**25951A05A1**



**Department of Computer Science and Engineering**

**INSTITUTE OF AERONAUTICAL ENGINEERING**

**(Autonomous)**

**Dundigal, Hyderabad – 500 043, Telangana**

**December, 2025**

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- d. I have conformed to the norms and guidelines given in the Code of Conduct of the Institute.
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Place: Hyderabad

Hari Harshavardhan

Date: 06/01/2025

25951A05A1

## **APPROVAL SHEET**

This Front-End Web Development Task Description – Projects entitled “Eduquest” submitted by Hari Harshavardhan is approved for B.Tech First Year (Regular).

Supervisor

Head of the Department

Date:

Place:

## Abstract

This report presents the design and development of front-end web application, **Eduquest** , created as part of a Front-End Web Development task. The objective of these projects is to apply core web technologies—**HTML, CSS, and JavaScript**—to build interactive, responsive, and user-friendly applications that address real-world problems.

EduQuest is an interactive web-based learning platform designed to make self-paced education engaging and organized. It enables users to browse through lessons, view progress, and track completed topics in an intuitive dashboard format. The platform supports structured learning with lesson categorization, progress visualization, and goal-based tracking. Optional enhancements like quizzes, certificates, or visual analytics can further enrich the learning experience. EduQuest aims to create a unified environment where learners can explore content, monitor growth, and stay motivated throughout their learning journey..

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## 1. INTRODUCTION

In today's rapidly evolving digital era, technology has transformed the way education is delivered and consumed. Learners increasingly seek flexible, personalized, and self-paced learning solutions that adapt to their individual needs and schedules. Traditional learning systems often lack effective progress tracking, organization of content, and learner engagement, creating a need for smarter and more interactive educational platforms.

**EduQuest** is an interactive web-based learning platform designed to address these challenges by providing a structured, user-friendly, and engaging self-learning environment. The platform enables learners to organize lessons into categories or modules, track completed and pending lessons, and visually monitor their learning progress through intuitive dashboards and charts. By integrating progress tracking, goal-based learning, and optional enhancements such as quizzes, badges, and certificates, EduQuest motivates learners to stay consistent and focused throughout their educational journey.

The primary objective of EduQuest is to create a unified learning ecosystem where users can explore content efficiently, assess their progress in real time, and remain motivated to achieve their learning goals. With responsive design support for all devices and local data storage for user progress, EduQuest offers a scalable and accessible solution suitable for modern learners. This project demonstrates the practical application of web technologies to build an effective digital learning management system that enhances both learning experience and productivity.

## 2. OBJECTIVES

- Develop a self-paced web-based learning platform
- Organize lessons into modules or categories
- Track completed and pending lessons
- Display learning progress visually using charts
- Provide a responsive and user-friendly interface
- Store user progress data locally
- Improve learner motivation through quizzes and milestones
- Ensure scalability for future enhancements

## 3. TOOLS & TECHNOLOGIES USED



- **HTML5** – Used to create the basic structure and content of the web application.
- **CSS3** – Used for styling, layout design, animations, and responsive behaviour.
- **JavaScript** – Used to implement dynamic functionality, logic, and user interactivity.
- **Visual Studio Code** – Used as the code editor for writing and managing source code.
- **Web Browser (Chrome/Firefox)** – Used for testing and running the web application.

## 4. Problem Statement

In the current digital learning environment, many learners lack a structured system to organize educational content, track learning progress, and stay motivated throughout their self-learning journey. Existing platforms often fail to provide simple progress visualization, effective lesson management, and personalized motivation features in a single, user-friendly solution. This creates difficulty for learners in monitoring their performance, maintaining consistency, and achieving learning goals efficiently. Hence, there is a need for an interactive, responsive, and self-paced web-based learning platform that enables organized content delivery, real-time progress tracking, and enhanced learner engagement.

## 5. Design Screen

- Simple and clean home screen layout
- Displays learning modules or lessons clearly
- Shows completed and pending lesson status
- Includes progress bars for each module
- Visual progress representation using charts
- Easy navigation with clearly labeled buttons
- Responsive design for mobile and desktop
- User-friendly interface with consistent colors

## 6. Task Implementation

- ☐ Designed the user interface using HTML and CSS for a clean and responsive layout
- ☐ Developed interactive functionalities using JavaScript
- ☐ Implemented lesson/module creation and display functionality
- ☐ Added feature to mark lessons as completed or pending
- ☐ Stored user progress data using LocalStorage / JSON
- ☐ Implemented progress tracking logic to calculate completion percentage
- ☐ Integrated charts to visualize learning progress
- ☐ Tested the application across different devices and browsers

## 7. Code

### HTML

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>EduQuest – Smart Learning Dashboard</title>

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<style>

@import

url('https://fonts.googleapis.com/css2?family=Poppins:wght@300;400;600&display=swap');

:root {

--grad: linear-gradient(135deg,#667eea,#764ba2);

--glass: rgba(255,255,255,0.18);

}

\* {

box-sizing: border-box;

font-family: 'Poppins', sans-serif;

}

body {

margin: 0;

background: var(--grad);

min-height: 100vh;

}

/\* HEADER \*/

header {

text-align: center;

padding: 30px;

color: #fff;

}

header h1 {

margin: 0;

font-size: 38px;

}

header p {

opacity: 0.9;

}

/\* MAIN CARD \*/

.container {

max-width: 1100px;

margin: auto;

padding: 30px;

background: var(--glass);

backdrop-filter: blur(12px);

border-radius: 20px;

box-shadow: 0 25px 50px rgba(0,0,0,0.25);

}

/\* PROGRESS \*/

.progress-card {

display: flex;

---

```
justify-content: space-between;  
align-items: center;  
margin-bottom: 30px;  
flex-wrap: wrap;  
}
```

```
.circle {  
width: 140px;  
height: 140px;  
border-radius: 50%;  
background: conic-gradient(#4ade80 0deg, #ddd 0deg);  
display: flex;  
align-items: center;  
justify-content: center;  
color: #222;  
font-weight: 600;  
font-size: 20px;  
background-color: #fff;  
}
```

```
.progress-info h2 {  
margin: 0;  
color: #fff;  
}
```

```
.progress-info p {  
color: #eee;  
}
```

```
/* MODULES */
```

---

```
.module {  
background: rgba(255,255,255,0.85);  
border-radius: 18px;  
padding: 20px;  
margin-bottom: 20px;  
transition: transform 0.3s;  
}  
.module:hover {  
transform: translateY(-5px);  
}
```

```
.module-title {  
display: flex;  
justify-content: space-between;  
cursor: pointer;  
}  
.module-title h3 {  
margin: 0;  
}
```

```
.topics {  
margin-top: 15px;  
display: none;  
}
```

```
.topic {  
background: #f4f6fb;  
padding: 12px 15px;  
border-radius: 12px;
```

---

```
display: flex;  
justify-content: space-between;  
align-items: center;  
margin-bottom: 10px;  
transition: 0.3s;  
}
```

```
.topic.completed {  
background: #dcfce7;  
}
```

```
.topic button {  
border: none;  
padding: 6px 16px;  
border-radius: 20px;  
cursor: pointer;  
background: var(--grad);  
color: #fff;  
font-size: 13px;  
}
```

```
footer {  
text-align: center;  
padding: 20px;  
color: #eee;  
font-size: 14px;  
}
```

```
</style>
```

```
</head>
```

<body>

<header>

<h1>EduQuest</h1>

<p>Beautiful • Smart • Interactive Learning</p>

</header>

<div class="container">

<div class="progress-card">

<div class="progress-info">

<h2>Your Learning Progress</h2>

<p>Track topics, modules & completion visually</p>

</div>

<div class="circle" id="circle">0%</div>

</div>

<div id="modules"></div>

</div>

<footer>

© 2026 EduQuest | Smart Learning Platform

</footer>

<script>

const modulesData = [

{ name: "HTML", topics: ["Intro", "Elements", "Forms", "Tables"] },

---



```
{ name: "CSS", topics: ["Selectors", "Box Model", "Flexbox", "Responsive UI"] },  
{ name: "JavaScript", topics: ["Variables", "Functions", "DOM", "Events"] }  
];
```

```
let completed = JSON.parse(localStorage.getItem("eduquest")) || {};
```

```
const modulesDiv = document.getElementById("modules");
```

```
const circle = document.getElementById("circle");
```

```
function render() {
```

```
  modulesDiv.innerHTML = "";
```

```
  let total = 0, done = 0;
```


```
  modulesData.forEach((m, mi) => {
```

```
    const moduleDiv = document.createElement("div");
```

```
    moduleDiv.className = "module";
```

```
    const title = document.createElement("div");
```

```
    title.className = "module-title";
```

```
    title.innerHTML = `<h3> ${m.name}</h3><span>▼</span>`;
```

```
    const topicsDiv = document.createElement("div");
```

```
    topicsDiv.className = "topics";
```

```
    title.onclick = () => {
```

```
      topicsDiv.style.display = topicsDiv.style.display === "block" ? "none" : "block";
```

```
    };
```

```
    m.topics.forEach((t, ti) => {
```

```

    total++;

    const key = `${mi}-${ti}`;

    const topicDiv = document.createElement("div");

    topicDiv.className = "topic";


    if (completed[key]) {
        topicDiv.classList.add("completed");

        done++;
    }


    topicDiv.innerHTML = `
        <span>${t}</span>
        <button onclick="toggle('${key}')">
            ${completed[key] ? "Completed ✓" : "Mark"}
        </button>
    `;

    topicsDiv.appendChild(topicDiv);

});


moduleDiv.appendChild(title);
moduleDiv.appendChild(topicsDiv);
modulesDiv.appendChild(moduleDiv);

});


const percent = Math.round((done / total) * 100);

circle.textContent = percent + "%";

circle.style.background = `conic-gradient(#4ade80 ${percent*3.6}deg, #ddd 0deg)`;
}

```

```
function toggle(key) {  
  completed[key] = !completed[key];  
  localStorage.setItem("eduquest", JSON.stringify(completed));  
  render();  
}
```

```
render();
```

```
</script>
```

```
</body>
```

```
</html>
```

### **CASCADING STYLE SHEET( eduquest.css)**

```
@import  
url('https://fonts.googleapis.com/css2?family=Poppins:wght@300;400;600&dis  
play=swap');
```

```
:root {  
  --gradient: linear-gradient(135deg, #667eea, #764ba2);  
  --glass: rgba(255, 255, 255, 0.18);  
  --white: #ffffff;  
  --dark: #222;  
  --success: #4ade80;  
}
```

```
* {  
  margin: 0;  
  padding: 0;
```

```
box-sizing: border-box;  
font-family: 'Poppins', sans-serif;  
}
```

```
body {  
min-height: 100vh;  
background: var(--gradient);  
}
```

```
/* HEADER */  
header {  
text-align: center;  
padding: 30px;  
color: var(--white);  
}
```

```
header h1 {  
font-size: 38px;  
font-weight: 600;  
}
```

```
header p {  
opacity: 0.9;  
margin-top: 6px;  
}
```

/\* MAIN CONTAINER \*/

.container {

  max-width: 1100px;

  margin: auto;

  padding: 30px;

  background: var(--glass);

  backdrop-filter: blur(14px);

  border-radius: 22px;

  box-shadow: 0 25px 50px rgba(0, 0, 0, 0.25);

}

/\* PROGRESS CARD \*/

.progress-card {

  display: flex;

  justify-content: space-between;

  align-items: center;

  flex-wrap: wrap;

  margin-bottom: 35px;

}

.progress-info h2 {

  color: var(--white);

  font-weight: 500;

}

.progress-info p {

color: #eee;

margin-top: 5px;

}

/\* CIRCULAR PROGRESS \*/

.circle {

width: 140px;

height: 140px;

border-radius: 50%;

background: conic-gradient(var(--success) 0deg, #ddd 0deg);

display: flex;

align-items: center;

justify-content: center;

font-size: 22px;

font-weight: 600;

color: var(--dark);

background-color: var(--white);

box-shadow: inset 0 0 12px rgba(0,0,0,0.1);

}

/\* MODULE CARD \*/

.module {

background: rgba(255, 255, 255, 0.88);

border-radius: 20px;

padding: 22px;

margin-bottom: 22px;

```
transition: transform 0.35s ease, box-shadow 0.35s ease;  
}
```

```
.module:hover {  
  transform: translateY(-6px);  
  box-shadow: 0 18px 30px rgba(0,0,0,0.15);  
}
```

```
/* MODULE TITLE */  
.module-title {  
  display: flex;  
  justify-content: space-between;  
  align-items: center;  
  cursor: pointer;  
}
```

```
.module-title h3 {  
  font-weight: 500;  
  color: var(--dark);  
}
```

```
/* TOPICS */  
.topics {  
  margin-top: 18px;  
  display: none;  
  animation: fadeIn 0.4s ease-in-out;
```

}

@keyframes fadeIn {

from {

opacity: 0;

transform: translateY(-6px);

}

to {

opacity: 1;

transform: translateY(0);

}

}

/\* TOPIC ITEM \*/

.topic {

background: #f4f6fb;

padding: 12px 16px;

border-radius: 14px;

display: flex;

justify-content: space-between;

align-items: center;

margin-bottom: 10px;

transition: background 0.3s ease, transform 0.3s ease;

}

.topic:hover {



transform: scale(1.01);

}

/\* COMPLETED TOPIC \*/

.topic.completed {

background: #dcfce7;

}

/\* BUTTON \*/

.topic button {

border: none;

padding: 7px 18px;

border-radius: 20px;

background: var(--gradient);

color: var(--white);

cursor: pointer;

font-size: 13px;

transition: transform 0.3s ease, opacity 0.3s ease;

}

.topic button:hover {

opacity: 0.9;

transform: scale(1.05);

}

/\* FOOTER \*/

```
footer {  
  text-align: center;  
  padding: 22px;  
  color: #eee;  
  font-size: 14px;  
}
```

```
/* RESPONSIVE */  
@media (max-width: 768px) {  
  .progress-card {  
    flex-direction: column;  
    gap: 20px;  
  }  
}
```

```
header h1 {  
  font-size: 30px;  
}  
}
```

### **JAVASCRIPT(eduquest.js)**

```
/* =====
```

EduQuest - JavaScript Logic

```
===== */
```

```
// Module & Topic Data
```

```
const modulesData = [
```

```
{
```

---

```

    name: "HTML",
    topics: ["Introduction", "Elements & Tags", "Forms", "Tables"]
  },
  {
    name: "CSS",
    topics: ["Selectors", "Box Model", "Flexbox", "Responsive Design"]
  },
  {
    name: "JavaScript",
    topics: ["Variables", "Functions", "DOM Manipulation", "Events"]
  }
];

// Load completed topics from LocalStorage
let completedTopics = JSON.parse(localStorage.getItem("eduquestProgress")) || { };

// DOM Elements
const modulesContainer = document.getElementById("modules");
const progressCircle = document.getElementById("circle");

// Render Modules and Topics
function renderModules() {
  modulesContainer.innerHTML = "";

```

```

let totalTopics = 0;

let completedCount = 0;


modulesData.forEach((module, moduleIndex) => {

  const moduleDiv = document.createElement("div");

  moduleDiv.className = "module";


  // Module title

  const titleDiv = document.createElement("div");

  titleDiv.className = "module-title";

  titleDiv.innerHTML = `

### ${module.name}</h3><span>▼</span>`; // Topics container const topicsDiv = document.createElement("div"); topicsDiv.className = "topics"; // Toggle expand / collapse titleDiv.addEventListener("click", () => { topicsDiv.style.display = topicsDiv.style.display === "block" ? "none" : "block"; }); // Topics module.topics.forEach((topic, topicIndex) => {


```

```

totalTopics++;

const key = `${moduleIndex}-${topicIndex}`;

const topicDiv = document.createElement("div");
topicDiv.className = "topic";

if (completedTopics[key]) {
  topicDiv.classList.add("completed");
  completedCount++;
}

topicDiv.innerHTML = `
  <span>${topic}</span>
  <button>
    ${completedTopics[key] ? "Completed ✓" : "Mark"}
  </button>
`;

// Button click
topicDiv.querySelector("button").addEventListener("click", () => {
  toggleTopic(key);
});

topicsDiv.appendChild(topicDiv);

```

```
});
```

```
moduleDiv.appendChild(titleDiv);
```

```
moduleDiv.appendChild(topicsDiv);
```

```
modulesContainer.appendChild(moduleDiv);
```

```
});
```

```
updateProgress(completedCount, totalTopics);
```

```
}
```

```
// Toggle topic completion
```

```
function toggleTopic(key) {
```

```
    completedTopics[key] = !completedTopics[key];
```

```
    localStorage.setItem("eduquestProgress", JSON.stringify(completedTopics));
```

```
    renderModules();
```

```
}
```

```
// Update circular progress indicator
```

```
function updateProgress(done, total) {
```

```
    const percentage = Math.round((done / total) * 100);
```

```
    progressCircle.textContent = percentage + "%";
```

```
    progressCircle.style.background = `
```

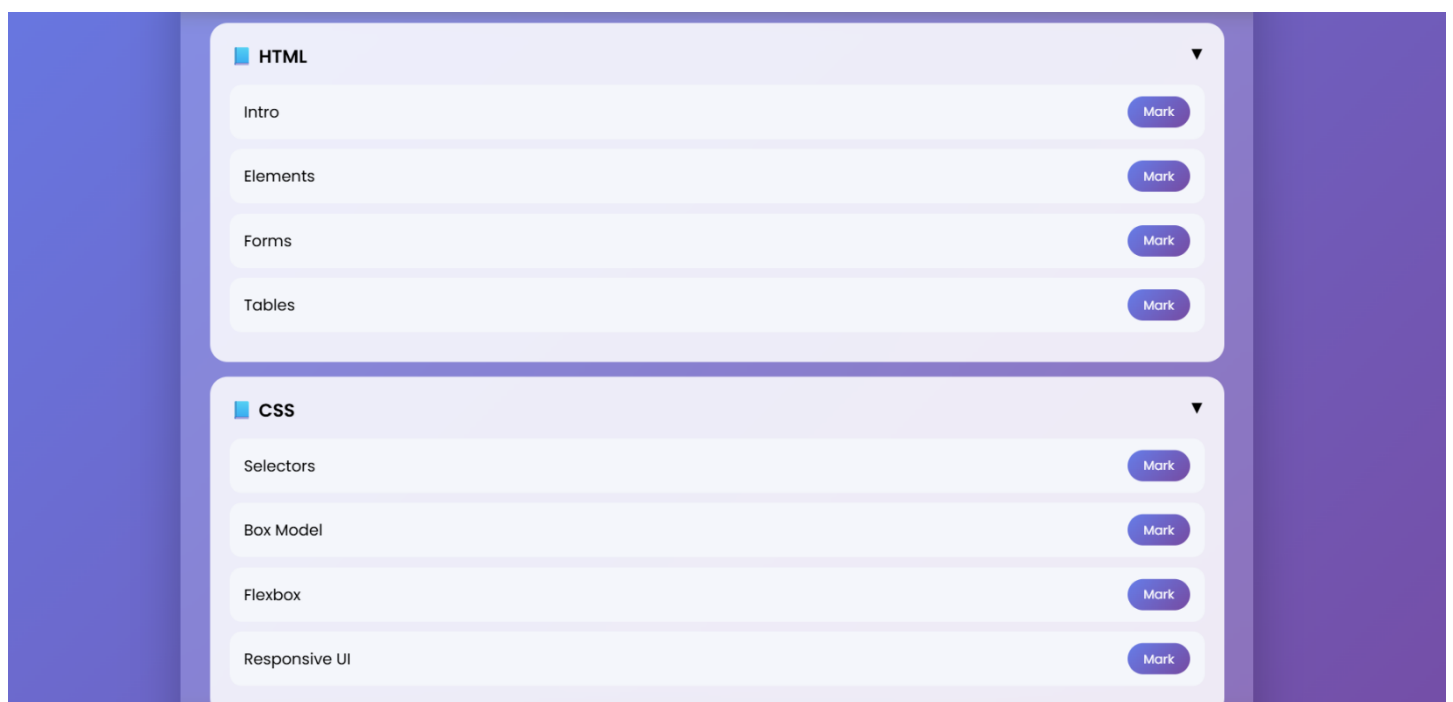
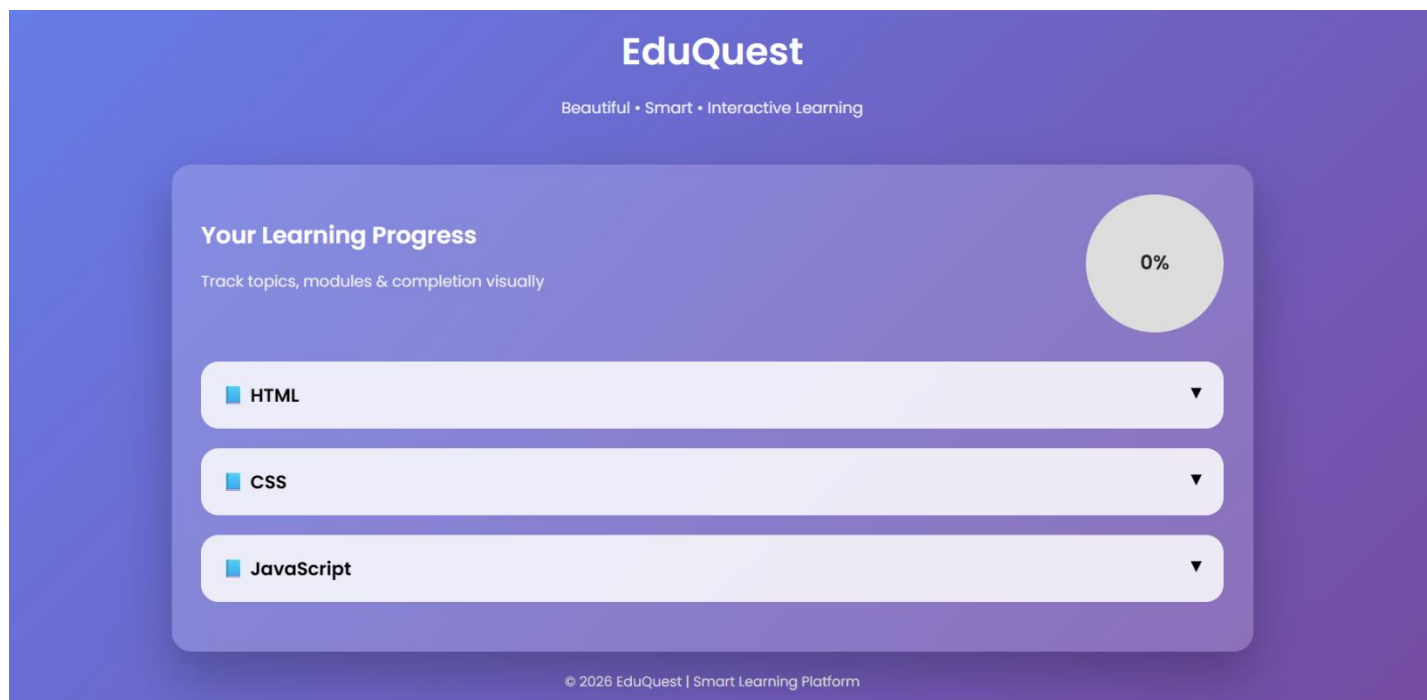
```
        conic-gradient(#4ade80 ${percentage * 3.6}deg, #ddd 0deg)
```

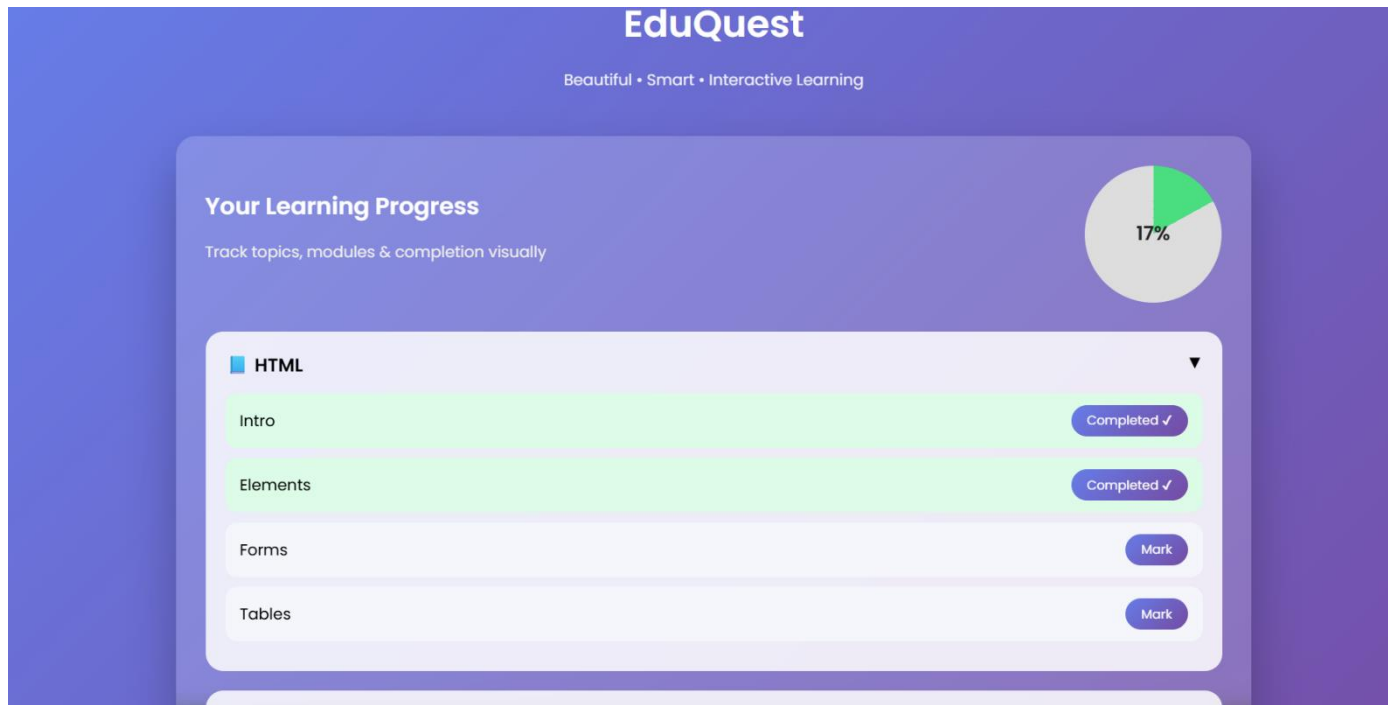
```
`;  
}
```

```
// Initial render
```

```
renderModules();
```

## 8. Output Screen





9.

- ☐ Application header with project title (EduQuest) and tagline
- ☐ Gradient background with glassmorphism design layout
- ☐ Learning progress section with circular progress indicator (%)
- ☐ Overall progress description panel
- ☐ Module cards (HTML, CSS, JavaScript, etc.)
- ☐ Expandable/collapsible module sections
- ☐ Internal topic list under each module
- ☐ Topic completion status indicators (Completed / Mark)
- ☐ Interactive buttons for marking topic completion
- ☐ Visual check marks for completed topics
- ☐ Responsive layout for desktop and mobile screens
- ☐ Footer displaying project name and copyright



# **REFERENCES**

## **1. Web Development Documentation:**

- [MDN Web Docs – HTML](#)
- [MDN Web Docs – CSS](#)
- [MDN Web Docs – JavaScript](#)

## **2. Tutorials / Guides / Articles:**

- W3Schools: HTML, CSS, JavaScript tutorials (<https://www.w3schools.com>)
- FreeCodeCamp tutorials on JavaScript and DOM manipulation (<https://www.freecodecamp.org>)

## **3. Books / Study Material :**

- “HTML and CSS: Design and Build Websites” by Jon Duckett
- “JavaScript and JQuery: Interactive Front-End Web Development” by Jon Duckett