ENHANCING DIGITAL GOVERNMENT AND ECONOMY

Digital Skills for Students

Final Project

Self-Learn – (Video/Resources) Platform

Submitted By

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Unique Batch Number: 03

Training Track/Course Name: Front-End Development (ReactJS)

Project Description: Self-Learn – (Video/Resources) Platform

1. Project Overview

Self-Learn is a responsive and user-friendly web learning platform built entirely with HTML, CSS, and JavaScript. It is designed to help beginners learn web development — specifically HTML, CSS, and JavaScript — in a clean, modern interface. The platform includes interactive learning roadmaps, embedded YouTube playlists, and curated blog/resource links. The UI is highly polished with a focus on smooth transitions and responsive design across all device types.

2. Project Objective

The objective of Self-Learn is to deliver a professional-grade, frontend-only educational experience that mirrors the standard of global learning platforms. It enables users to learn web development through video-based tutorials and supplemental blogs/resources, all while tracking their video progress automatically via browser localStorage.

3. Features

1. **Homepage Roadmap:**
   - Interactive roadmap introducing HTML, CSS, and JavaScript.
   - Each topic card includes a brief description and a “Learn with Videos” button that redirects to the Video section with the relevant tab preselected.
2. **Sticky Header with Two Navigation Tabs:**
   - Video: Contains three tabs — HTML, CSS, and JavaScript — each embedding a YouTube playlist relevant to the selected subject.
   - Resources: Also has HTML, CSS, and JavaScript tabs. Each tab presents a modern UI featuring curated blog links, articles, cheat sheets, and learning resources in card-based layouts.
3. **Tabbed Interface:**
   - Clean and smooth tab-switching interface both inside the Video and Resources sections.
   - Enhanced with CSS transitions and focused UI effects.
4. **Dark/Light Mode:**
   - Theme can be toggled manually.
5. **Embedded Playlists:**
   - Each subject tab contains an embedded YouTube playlist.
   - The playlist is scrollable and neatly formatted for user convenience.
6. **Learning Progress Tracking:**
   - Automatically saves the user's current video tab and timestamp using localStorage.

4. Technical Details

Frontend Development:

- **HTML5**: Structures all sections, including homepage, tabs, video embedding, and blog content..
- **CSS3**: Provides visual styling, color themes, responsive design, smooth animations, and interactive UI states.
- **JavaScript (ES6)**: Manages tab switching, dark/light theme toggle, localStorage handling for learning progress, and dynamic navigation.

Game Logic:

- **Tab Navigation:** Smooth switching between HTML, CSS, and JavaScript tabs in both Video and Resources sections.
- **Playlist Embeds:** YouTube playlists are embedded with accurate aspect ratio, ensuring video content remains consistent.
- **Progress Tracking:** Saves the current tab and video timestamp in localStorage so users can resume where they left off.
- **Responsive Design:** Ensures all UI components adapt to various screen sizes including desktops, tablets, and phones.

UI Elements:

- **Sticky Header:** Contains logo, website name, and navigation for easy access to all sections.
- **Two Navigation Tabs:** 'Video' for video-based learning, 'Resources' for curated blogs and useful links.
- **Topic Cards:** On the homepage, introducing HTML, CSS, and JavaScript with redirection buttons.
- **Themed Design:** Manual toggle between dark and light mode for enhanced reading experience.

5. Future Improvements

- **Floating Continue Button:** Navigate users to the exact video and timestamp they left off.
- **Dynamic Playlist Management:** Use JSON files to fetch playlists dynamically.
- **Auto System Theme Detection:** Apply light/dark theme based on system preference.
- **Toaster Notifications:** Provide visual feedback on user actions.
- **Gamification:** Add progress badges, XP, and completion streaks.
- **AI Personalization:** Recommend content based on user interaction.

6. Conclusion

Self-Learn offers a clean, structured, and mobile-responsive platform that delivers core web development learning content. By focusing on a high-quality frontend experience with intuitive navigation and visual aesthetics, the platform provides an effective environment for self-paced learners. This project showcases practical skills in responsive web design, UI/UX optimization, and client-side JavaScript programming — all essential for building modern educational web applications.