



GenZscholars

4-Week Front-End Development

Goal:

Train students in HTML, CSS, JavaScript, and React.js — enabling them to build interactive, responsive, and real-world websites/applications.

Week 1: Web Development Fundamentals

| Day | Topic | Activity |
|----------|---|-----------------------------|
| 1 | Introduction to Web Development + Tools Setup | VS Code setup, GitHub intro |
| 2 | HTML5 Basics: Elements, Forms, Media | Build a Portfolio Skeleton |
| 3 | CSS3 Basics: Selectors, Colors, Box Model | Styling Portfolio Page |
| 4 | Responsive Design with Flexbox and Grid | Flexbox & Grid Mini-layout |
| 5 | Introduction to Bootstrap/Tailwind CSS | Rapid UI Prototyping |
| Saturday | Mini-project: Personal Portfolio (v1) | Practical |
| Sunday | Quiz 1 + Weekly Review | Test + Feedback |

Week 2: JavaScript Essentials

| Day | Topic | Activity |
|----------|--|-------------------------|
| 1 | JavaScript Basics: Variables, Loops, Functions | JS Playground |
| 2 | DOM Manipulation | Interactive Webpage |
| 3 | Events and Forms Validation | Form Validation Project |
| 4 | Fetch API and JSON Basics | API Data Fetch Exercise |
| 5 | Intro to ES6 Features (let/const, arrow functions) | Code Refactoring |
| Saturday | Mini-project: Build a Weather App (API Based) | Practical |
| Sunday | Quiz 2 + Coding Challenge | Fun Activity |

Week 3: Modern Front-End: React.js Basics

| Day | Topic | Activity |
|----------|---|---------------------------|
| 1 | Introduction to React.js and JSX | React Setup + Hello World |
| 2 | Components, Props, and State | Build a Component Tree |
| 3 | Handling Events and Forms in React | Interactive Form App |
| 4 | React Router Basics (SPA Concept) | Multi-page Website |
| 5 | Project Structure and Best Practices | Organizing Files |
| Saturday | Mini-project: React Task Tracker | Practical |
| Sunday | Quiz 3 + Debugging Session | Code Review |

Week 4: Advanced Front-End + Final Project

| Day | Topic | Activity |
|----------|--|----------------------|
| 1 | State Management Basics (useContext/Redux Intro) | Context API Practice |
| 2 | Working with APIs in React (useEffect) | API Data App |
| 3 | Deployment: Netlify, Vercel, GitHub Pages | Deploy First Project |
| 4 | Final Project Planning | Team Division |
| 5 | Final Project Development | Mentor Guidance |
| Saturday | Final Project Presentation | Showcase |
| Sunday | Certificate Ceremony + Feedback | Closing |

Additional Details:

- **Daily Hours:** 2-3 hours per day.
- **Tools Covered:** VS Code, GitHub, Netlify/Vercel, Chrome DevTools, React.js, TailwindCSS/Bootstrap.
- **Certifications:** Participation + Final Project Certificate
- **Outcome:** Students will learn to design, develop, and deploy full front-end applications.