

WEB DEVELOPMENT BOOTCAMP

Goal: Teach students the fundamentals of designing and developing websites/apps, progressing from HTML and CSS to JavaScript and a final project. The official page describes this bootcamp as learning the process of designing and developing apps and websites.

Module 1: Introduction to the Web

- What is a website?
- How the Internet works
- Websites vs web applications
- Web browsers
- Domains and hosting
- Front-end vs back-end
- Introduction to HTML, CSS and JavaScript

Activity: Explore the structure of a website.

Module 2: HTML Fundamentals

- HTML document structure
- Headings
- Paragraphs
- Links
- Images
- Lists
- Tables
- Forms
- Semantic HTML

Project: Create a Personal Profile Webpage.

Module 3: CSS Fundamentals

- What is CSS?
- Colors
- Fonts
- Backgrounds
- Borders
- Margins and padding
- Classes and IDs
- Basic styling

Project: Style the Personal Profile Website.

Module 4: Page Layout & Responsive Design

- Box model
- Flexbox
- Page layouts
- Responsive design
- Mobile-friendly websites

Project: Build a responsive landing page.

Module 5: Website Design Principles

- User interface basics
- User experience
- Color selection
- Typography
- Navigation
- Accessibility
- Good vs poor website design

Activity: Design a website wireframe.

Module 6: Introduction to JavaScript

- What is JavaScript?
- Variables
- Data types
- Operators
- Conditions
- Functions
- Events

Project: Interactive webpage.

Module 7: JavaScript & User Interaction

- Buttons
- Forms
- Input validation
- DOM basics
- Changing webpage content
- Event handling

Project: Interactive Quiz App.

Module 8: Working with Data

- JavaScript arrays
- Objects
- Loops
- JSON basics
- Fetching data from an API
- Displaying data on a webpage

Project: Simple Data/Weather-style Web App using a suitable public API.

Module 9: Website Development & Publishing

- Organizing project files
- Debugging
- Browser developer tools
- Basic performance concepts
- Website testing
- Introduction to Git/GitHub
- Publishing a website

Activity: Publish a student website.

Module 10: Final Web Development Project

Students create a complete website such as:

- Personal Portfolio
- School Website
- Educational Quiz Website
- Small Business Website
- Science Project Website
- Student Blog

The final project should include:

- HTML structure
- CSS styling
- Responsive design
- JavaScript interaction
- Forms or user input
- Testing
- Presentation

Final Outcome: Students understand the complete basic workflow of designing, developing, testing and publishing a website.