

WEEK 1 - DAY 1: WEB DEVELOPMENT OVERVIEW

****Duration:**** 2 Hours | ****Level:**** Beginner

LESSON OBJECTIVES

By the end of this lesson, students will be able to:

1. Explain what web development is and its importance
2. Differentiate between frontend and backend development
3. Set up a development environment with VS Code
4. Create their first HTML file
5. Understand the client-server model

LESSON STRUCTURE

PART 1: Introduction (30 minutes)

What is Web Development? (15 minutes)

- ****Discussion Starter:**** "What websites do you use daily?"
- Definition: Process of creating websites and web applications
- Examples of popular websites and their technologies
- Career opportunities in web development

Frontend vs Backend (15 minutes)

- ****Frontend (Client-side):****
 - What users see and interact with
 - Technologies: HTML, CSS, JavaScript
 - Examples: Buttons, forms, animations
- ****Backend (Server-side):****
 - Behind-the-scenes functionality
 - Technologies: PHP, Python, Java, databases
 - Examples: User authentication, data processing

****Visual Aid:**** Client-Server Architecture Diagram

PART 2: Development Environment Setup (45 minutes)

Installing VS Code (20 minutes)

****Step-by-step walkthrough:****

1. Download from <https://code.visualstudio.com/>
2. Installation process for Windows/Mac
3. Initial setup and interface tour
4. Essential extensions:

- Live Server
- HTML Snippets
- Prettier Code Formatter
- Auto Rename Tag

Browser Developer Tools (15 minutes)

- Opening developer tools (F12)
- Elements tab overview
- Console tab introduction
- Network tab basics

File Organization (10 minutes)

- Creating project folders
- Naming conventions
- File structure best practices
- Creating first project folder

PART 3: Your First Web Page (40 minutes)

HTML Introduction (20 minutes)

- What is HTML?
- HTML structure and syntax
- Basic HTML template explanation
- Creating index.html file

Hands-on Activity (20 minutes)

****Create first HTML page:****

```
```html
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1.0">
 <title>My First Web Page</title>
</head>
<body>
 <h1>Welcome to Web Development!</h1>
 <p>This is my first HTML page.</p>
 <p>I am learning web development at Wisdom Tutoring Academy.</p>
</body>
</html>
```
```

PART 4: Understanding How Web Works (20 minutes)

Client-Server Model (10 minutes)

- How browsers request web pages
- Role of web servers
- HTTP basics (request/response)
- Domain names and hosting

Web Technologies Overview (10 minutes)

- HTML: Structure
- CSS: Styling
- JavaScript: Interactivity
- PHP: Server-side logic
- MySQL: Database storage

PART 5: Wrap-up & Preview (5 minutes)

- Recap key concepts
- Preview next lesson (HTML fundamentals)
- Homework assignment
- Q&A session

RESOURCES NEEDED

- Projector/Screen for demonstrations
- Student computers with internet access
- VS Code installer files (backup)
- Handout: Web Development Terminology
- Diagram: Client-Server Architecture

ASSESSMENT

Formative Assessment:

- Observation during setup process
- Participation in discussions
- Successful creation of first HTML file

Exit Ticket Questions:

1. What is the difference between frontend and backend?
2. Name three technologies used in web development
3. What does HTML stand for?

HOMEWORK ASSIGNMENT

Task: Research and write 2 paragraphs about:

1. A website you admire and why
2. What career path in web development interests you most

****Due:**** Next class session

****Points:**** 10 points

DIFFERENTIATION STRATEGIES

****For Advanced Students:****

- Explore additional VS Code extensions
- Research other code editors
- Look into version control (Git) basics

****For Struggling Students:****

- Pair with tech-savvy classmate
- Provide step-by-step written guides
- Extra practice with file creation

COMMON ISSUES & SOLUTIONS

1. ****VS Code won't install:**** Use portable version or alternative editor
2. ****Extensions not working:**** Reload VS Code, check internet connection
3. ****File not displaying:**** Check file extension (.html), use Live Server
4. ****HTML not rendering:**** Check for syntax errors, proper tags

REFLECTION NOTES

Instructor notes section for post-lesson reflection and improvements

****What worked well:****

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****Areas for improvement:****

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****Student feedback:****

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****Next Lesson Preview:**** HTML Fundamentals - We'll dive deeper into HTML tags, attributes, and structure!