Lesson:

Web Development Tools

PW SKILLS

Topics to be covered

1. Text Editor and IDE
2. Extensions
3. Web browser with developer tools
4. VCS

Text Editor and IDE

A text editor and IDE (Integrated Development Environment) are tools used by the developers for writing and editing the code.

Text Editor

A text editor is a software used for creating, editing plain text files, including the code files also. It also provides the basic functionality for modifying and saving text. Some popular text editors are Sublime Text, Atom etc.

Features of a text editor

1. Syntax highlighting

Color-coded highlighting of code elements for better readability.

2. Code completion

Suggestions and auto-completion of code snippets, functions, and variables.

3. Find and replace

Search for specific text and replace it with desired content.

4. Customization

Ability to customise themes, preferences, and plugins to personalise the editing environment.

5. Light-weight

Text editors are generally lightweight, fast, and consume fewer system resources.

6. Basic debugging

Limited or no built-in debugging capabilities.

IDE (Integrated Development Environment)

IDE is a software suite that combines a text editor with additional tools and features to facilitate software development. It provides all in one environment for writing, testing, debugging, and deploying the code. For example VS Code, Eclipse, IntelliJ etc.

Features of an IDE

1. Advanced editing capabilities

Similar to text editors, IDEs offer syntax highlighting, code completion, and code formatting features.

2. Integrated compiler and debugger

Built-in tools for compiling and debugging code, allowing developers to find and fix errors directly within the IDE.

3. Project management

IDEs provide features to manage and organise projects, including file navigation, version control integration, and build system support.

4. Language-specific tools

IDEs often include language-specific features, such as refactoring tools, code templates, and documentation integration.

5. Integrated testing

Tools for unit testing, automated testing, and test result analysis.

6. Profiling and performance analysis

Capabilities to profile code execution and analyse performance bottlenecks.

7. Extensibility

Many IDEs support plugins and extensions to enhance functionality and support additional languages or frameworks.

Extensions

While using an IDE for our development, we can use extensions which are a software package that adds the additional features and functionality to the editor. Extensions allow a user to enhance the capabilities of VS Code or other IDE's.
We will discuss different extensions which will help you to boost your productivity while coding in further modules.

Web browser and developer tools

We are familiar with the web browsers, their features and usage. Developer tools popularly known as Dev Tools are built in features within the web browser that helps the developers in debugging, optimising and analysing the web pages.
We will learn about these dev tools in further modules.

VCS (Version Control System)

VCS is a software tool that helps the developers in managing the changes of their code and collaborate on projects effectively. It allows us to keep track of modifications, revert to previous versions, and work concurrently with others on the same codebase.
One of the most commonly used VCS is **git**, which is used a lot and will also be covered in this course. Apart from git we can use SVN, Mercurial, CVS (Concurrent Version Control), Perforce, SourceTree etc.
We will learn more about VCS in further modules.