July 1st Assignment 2

Installation and Navigation of Visual Studio Code (VS Code)

1. Installation of VS Code

Steps to Download and Install Visual Studio Code on Windows 11:

1. Download VS Code:

- Go to the [official Visual Studio Code website](https://code.visualstudio.com/).

- Click on the "Download for Windows" button. This will download the VS Code installer.

2. Run the Installer:

- Once the download is complete, run the installer by double-clicking the downloaded file.

3. Follow the Installation Wizard:

- Read and accept the license agreement.

- Choose the destination folder where you want to install VS Code.

- Select additional tasks: It's recommended to check the options to add VS Code to the PATH and create a desktop icon.

- Click "Install" to begin the installation process.

4. Complete the Installation:

- Once the installation is complete, click "Finish" to launch VS Code.

Prerequisites:

- Ensure your system meets the minimum requirements (Windows 11, 64-bit).

- It's helpful to have Git installed for version control, which can be downloaded from [Git's official website](https://git-scm.com/).

2. First-time Setup

Initial Configurations and Settings:

1.Themes and Appearance:

- Go to `File > Preferences > Color Theme` and choose a theme that suits your preference.

2. Font Size:

- Navigate to `File > Preferences > Settings`, search for "Font Size," and adjust it as needed.

3. Extensions:

- Install essential extensions for an optimal coding environment:

- Prettier - Code formatter: For code formatting.

- ESLint: For JavaScript linting.

- Live Server: For a local development server with live reload.

4. Settings Sync:

- Enable Settings Sync under `File > Preferences > Settings Sync` to synchronize your settings across different machines.

3. User Interface Overview

Main Components of the VS Code User Interface:

1.Activity Bar:

- Located on the far left, the Activity Bar allows you to switch between different views such as Explorer, Search, Source Control, Run and Debug, and Extensions.

2. Side Bar:

- Next to the Activity Bar, the Side Bar displays different views and panels like the Explorer, Search results, and Extensions.

3. Editor Group:

- The main area where you edit your code. You can have multiple editor groups (tabs) open side by side.

4. Status Bar:

- Located at the bottom of the window, the Status Bar shows information about your poject, such as the current Git branch, file encoding, and line/column number.

4. Command Palette

What is the Command Palette and How to Access It:

- The Command Palette is a powerful tool that allows you to execute commands and perform tasks efficiently.

- Access it by pressing `Ctrl+Shift+P` (Windows) or `Cmd+Shift+P` (Mac).

- Examples of Common Tasks:

- Opening a file: Type `Open File`.

- Running a task: Type `Run Task`.

- Installing extensions: Type `Install Extensions`.

5. Extensions in VS Code

Role of Extensions:

- Extensions enhance the functionality of VS Code by adding features and tools for various programming languages, frameworks, and utilities.

Finding, Installing, and Managing Extensions:

1. Finding Extensions:

- Click on the Extensions icon in the Activity Bar or press `Ctrl+Shift+X`.

2. Installing Extensions:

- Search for the desired extension and click `Install`.

3. Managing Extensions:

- View installed extensions in the Extensions panel, disable or uninstall them as needed.

Examples of Essential Extensions for Web Development:

- HTML CSS Support

- JavaScript (ES6) code snippets

- Debugger for Chrome

- Auto Close Tag

6. Integrated Terminal

How to Open and Use the Integrated Terminal:

- Open the terminal by pressing `Ctrl+` or navigating to `View > Terminal`.

- The integrated terminal allows you to run command-line tools directly within VS Code, maintaining the context of your project.

Advantages:

- Seamless integration with the editor.

- Easier to manage and navigate without switching windows.

7. File and Folder Management

Creating, Opening, and Managing Files and Folders:

1. Creating:

- Right-click in the Explorer panel and select `New File` or `New Folder`.

2. Opening:

- Drag and drop files/folders into the editor or use `File > Open Folder`.

3. Navigating:

- Use the `Ctrl+P` shortcut to quickly open files by name.

8. Settings and Preferences

Customizing Settings:

- Access settings via `File > Preferences > Settings` or press `Ctrl+,`.

- Examples of Customizations:

- Theme: Search for "Color Theme" and select your preferred theme.

- Font Size: Search for "Editor Font Size" and adjust it.

- Keybindings:Navigate to `File > Preferences > Keyboard Shortcuts` to customize keybindings.

9. Debugging in VS Code

Setting Up and Starting Debugging:

1. Set Up:

- Click on the Run and Debug icon in the Activity Bar or press `Ctrl+Shift+D`.

- Click `Create a launch.json file` to configure the debugger for your project.

2. Start Debugging:

- Set breakpoints by clicking in the gutter next to the line numbers.

- Click the green play button or press `F5` to start debugging.

Key Debugging Features:

- Breakpoints

- Watch Expressions

- Call Stack

- Variable Inspection

10. Using Source Control

Integrating Git with VS Code:

1. Initialize a Repository:

- Open the Source Control view by clicking the Source Control icon in the Activity Bar.

- Click `Initialize Repository`.

2. Making Commits:

- Stage changes, write a commit message, and click the checkmark icon to commit.

3. Pushing Changes to GitHub:

- Set up a remote repository on GitHub.

- Use the integrated terminal or Source Control panel to push changes with `git push`.

Submission Guidelines

- Ensure your answers are well-structured and concise.

- Provide screenshots where applicable to illustrate steps and settings.

- Cite any references or sources used in your answers.

- Submit your completed assignment by 1st July.

References

Microsoft. (2024). \*Visual Studio Code documentation\*. Microsoft. <https://code.visualstudio.com/docs>

Ferrara, J. (2020). \*Learn Visual Studio Code: A beginner’s guide to code editing with Visual Studio Code\*. Packt Publishing.