Visual Studio Code (VS Code) Installation and Navigation Instructions

Installation of VS Code

To download and install Visual Studio Code on a Windows 10 operating system, follow these steps:

1. Prerequisites:

- Ensure you have administrative privileges on your Windows 10 machine.

- Ensure you have a stable internet connection for downloading the installer.

2. Download VS Code:

- Visit the Visual Studio Code website (https://code.visualstudio.com/).

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

3. Install VS Code:

- Once the installer is downloaded, locate the file (usually in your Downloads folder) and double-click it to run the installer.

- Follow the installation prompts:

  - Accept the license agreement.

  - Choose the installation location (the default location is usually fine).

  - Select the additional tasks you want (such as adding VS Code to the PATH and creating desktop icons).

- Click on “Install” and wait for the installation to complete.

- Once installed, you can choose to launch VS Code immediately.

First-time Setup

After installing VS Code, you should adjust the following configurations and settings for an optimal coding environment:

1. Themes:

- Go to File > Preferences > Color Theme or press Ctrl+K and then Ctrl+T.

- Choose a theme that suits your preferences.

2. Extensions:

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

- Install essential extensions such as:

  - Python (for Python development)

  - ESLint (for JavaScript linting)

  - Prettier (for code formatting)

  - Live Server (for a local development server)

3. Settings:

- Go to File > Preferences > Settings or press Ctrl+,.

- Adjust settings such as font size, tab size, and autosave preferences.

User Interface Overview

The main components of the VS Code user interface include:

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:

- Displays different views like the file explorer, search results, source control changes, etc., depending on the Activity Bar selection.

3. Editor Group:

- The central area where files are opened and edited. You can have multiple editor groups for side-by-side editing.

4. Status Bar:

- Located at the bottom, the Status Bar provides information about the opened project, such as current Git branch, errors, warnings, line and column number, and language mode.

Command Palette

The Command Palette is a powerful tool in VS Code that allows you to access various commands and settings.

1. Accessing the Command Palette:

- Press Ctrl+Shift+P (Windows/Linux) or Cmd+Shift+P (Mac).

2. Common Tasks:

- Open files: > Open File

- Install extensions: > Extensions: Install Extensions

- Toggle terminal: > Terminal: Toggle Terminal

- Change theme: > Preferences: Color Theme

Extensions in VS Code

Extensions enhance the functionality of VS Code by adding new features and integrations.

1. Finding and Installing Extensions:

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

- Search for the desired extension and click on “Install”.

2. Managing Extensions:

- Installed extensions can be enabled, disabled, or uninstalled from the Extensions view.

- Some essential extensions for web development include:

  - HTML CSS Support

  - JavaScript (ES6) code snippets

  - Debugger for Chrome

Integrated Terminal

The integrated terminal in VS Code allows you to run command-line tasks directly from the editor.

1. Opening the Integrated Terminal:

- Go to View > Terminal or press Ctrl+` (backtick).

2. Advantages:

- Convenient access without switching windows.

- Allows for multiple terminals and shell integration (e.g., Git Bash, PowerShell).

File and Folder Management

Managing files and folders in VS Code is straightforward:

1. Creating Files and Folders:

- Right-click in the Explorer view (Side Bar) and select New File or New Folder.

- Alternatively, use the File menu or press Ctrl+N for a new file.

2. Opening Files and Folders:

- Use File > Open File or File > Open Folder.

- Quickly open files using Ctrl+P.

3. Navigation:

- Use the Explorer view to browse the file structure.

- Use Ctrl+Tab to switch between open files.

Settings and Preferences

Settings in VS Code can be customized to suit your preferences.

1. Accessing Settings:

- Go to File > Preferences > Settings or press Ctrl+,.

2. Changing Theme:

- File > Preferences > Color Theme or Ctrl+K Ctrl+T.

3. Adjusting Font Size:

- Search for Font Size in the Settings.

4. Changing Keybindings:

- Go to File > Preferences > Keyboard Shortcuts or press Ctrl+K Ctrl+S.

Debugging in VS Code

Setting up debugging in VS Code is simple and efficient.

1. Steps:

- Open the file you want to debug.

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

- Go to the Run and Debug view in the Activity Bar or press F5.

- Configure the debugger if required (launch.json).

2. Key Features:

- Breakpoints, watch expressions, call stack, and variable inspection.

Using Source Control

Integrating Git with VS Code for version control is seamless.

1. Initializing a Repository:

- Open the folder you want to version control.

- Go to the Source Control view in the Activity Bar.

- Click on “Initialize Repository”.

2. Making Commits:

- Stage changes by clicking the + icon next to the files.

- Write a commit message and click the checkmark icon to commit.

3. Pushing to GitHub:

- Ensure you have a remote repository set up on GitHub.

- Add the remote URL using the terminal: git remote add origin <URL>.

- Push your changes: git push -u origin master.

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