## Comprehensive Guide to Using Visual Studio Code (VS Code)

### 1. Installing Visual Studio Code on Windows 11

To download and install Visual Studio Code (VS Code) on Windows 11:

1. Visit the Visual Studio Code website: <https://code.visualstudio.com/>.
2. Download: Click on the download button for Windows.
3. Install: Run the VSCodeSetup.exe file and follow the installation prompts.

### 2. Initial Configurations and Settings in VS Code

After installing VS Code, configure these settings for an optimal coding environment:

* Theme and Appearance: Choose a theme (File > Preferences > Color Theme).
* Font and Editor Settings: Adjust font size and family (File > Preferences > Settings).
* Auto Save: Configure auto save settings (File > Preferences > Settings).
* Extensions: Install and manage extensions (Extensions view).

### 3. Main Components of the VS Code User Interface

Key components include:

* Activity Bar: Provides quick access to different views.
* Side Bar: Displays content based on the selected view.
* Editor Group: Central area for editing files.
* Status Bar: Displays information such as current branch and line number.

### 4. Understanding the Command Palette in VS Code

Access with Ctrl+Shift+P:

* Perform tasks like opening files (Open File), changing settings (Preferences: Open Settings), and installing extensions.

### 5. Opening and Using the Integrated Terminal in VS Code

Open with `Ctrl+``:

* Execute commands, run scripts, and manage tasks within the VS Code window.
* Customize shell and terminal settings (File > Preferences > Settings).

### 6. Creating, Opening, and Managing Files and Folders in VS Code

* Creating: Use Explorer view or Command Palette (Ctrl+Shift+P).
* Opening: Double-click files in Explorer or use File > Open File/Folder.
* Managing: Rename, delete, and move files using context menus in Explorer.

### 7. Where to Find and Customize Settings in VS Code

Access settings with Ctrl+,:

* Customize theme (Color Theme), font size (Editor: Font Size), and keybindings (Keyboard Shortcuts).
* Edit settings.json for advanced customization.

### 8. Setting Up and Starting Debugging in VS Code

Setup process:

1. Open project folder.
2. Install relevant debugger extensions.
3. Create a launch.json configuration.
4. Set breakpoints and start debugging (F5).

Key debugging features include breakpoints, watch variables, call stack, debug console, and step controls.

There’s is also a run, debug, and and integrated run and debug icons. Having installed the necessary debugging extensions.

### 9. Integrating Git with VS Code for Version Control

Setup process:

1. Initialize a repository (Source Control view > Initialize Repository).
2. Stage changes and commit (+ to stage, enter commit message, Ctrl+Enter to commit).
3. Connect to a remote repository (add remote URL using Git: Add Remote in Command Palette).
4. Push changes to GitHub (... in Source Control view > Push).

### 10. Essential Extensions for Web Development in VS Code

* ESLint: Linting and code quality for JavaScript/TypeScript.
* Prettier - Code formatter: Automatic code formatting.
* Live Server: Local development server with live reload.
* HTML CSS Support: IntelliSense and validation for HTML/CSS.
* Debugger for Chrome: Debugging for JavaScript in Chrome.
* Path Intellisense: Autocompletion for file paths.