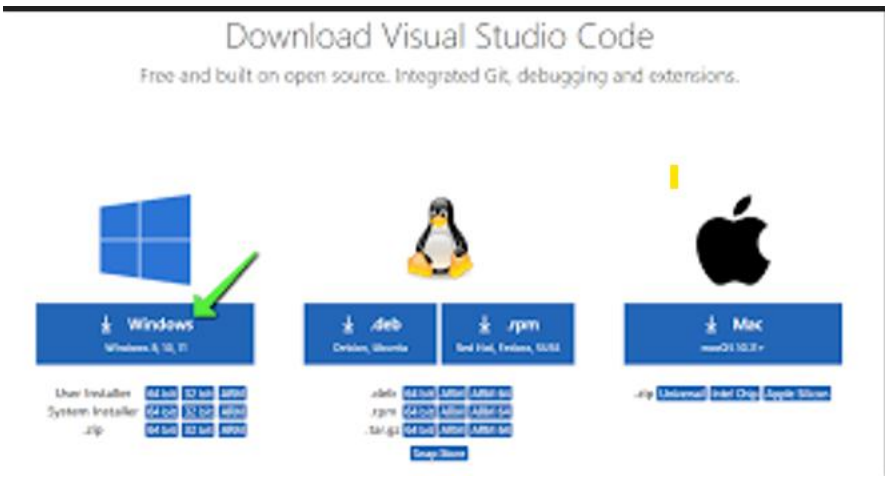
1. **Installation of VS Code:**

   a. **Download:**

   Step one:

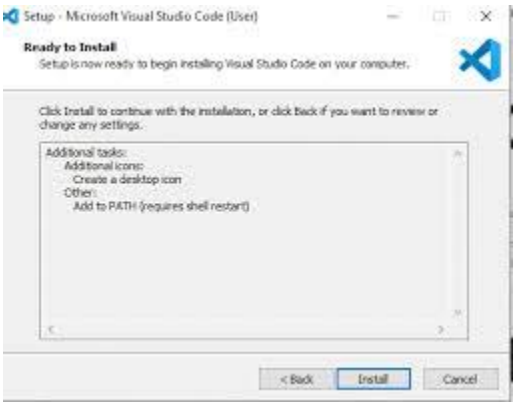
   - visit website: code.visualstudio.com and click on the Download for windows

   b. **Install:**




Step two:

- Run the downloaded file for VsCode
- Follow the installation steps
  - Accept the license agreement
  - Choose the installation location {best pick where your windows is }
  - Select additional task such as creating a desktop icon, adding to PATH and registering the context menu for easy file opening
  -




Then click Install

c. **Prerequisites:**
   - Ensure you have window 11 and administrative privileges to install VsCode software.
   - Ensure you have an internet connection to download the vscode installer and extension.

2. **First-time Setup:**

**Initial Configuration and Settings**

a. **Theme and Layout**
   - Open vscode application and navigate to File > Preferences > Color Theme to choose a preferred color them.

b. **Extensions**
   - Open the application navigate Extension icon in the Activity bar
   - Install essential extensions such as:
     - Prettier for code formatting.
     - Python for python support

c. **Settings**
   - Access setting via File > preference > settings
   - Adjust setting such as font size, auto-save, and tab size to optimize your coding environment.

3. **User Interface Overview:**

**Main components of vscode**

a. **Activity Bar**
   - It is located on the left side on the application interface
   - It provide quick access to different views such as Explore, Search, Source Control, Run and Debug and Extensions.

b. **Side Bar**
   - Next to the activity Bar
   - Displays the contents of the selected view from the activity Bar, such as the file explorer or search results**.**

c. **Editor Group**
   - Open the edit your file, multiple file can be opened in tabs within this space

d. **Status Bar**
   - Located at the bottom
   - It show information about the current file, such as encoding, line ending and active branch in version control

4. **Command Palette**

- The Command Palette is a powerful tool in VS code that provide access to many commands and features
- Access it by pressing CTRL + Shift + p

**Examples of common tasks**

- Opening file by typing open FILE
- Running tasks by typing Run Task
- Accessing setting by typing Preferences: open settings

5. **Extension in VS Code**
    - Extensions is used to enhance the functionality of VS Code by adding support for additional languages, debuggers, and tools and features

**Finding, Installing and Managing Extensions:**

- Go to extension view
- Search for extension using keywords
- Click in stall on the extension
- Mange installed extension from extension view

- **Essential extensions for web development.**

    - HTML CSS Support
    - Live Server
    - JavaScript (ES6) code snippets

6. **Integrated Terminal:**

**How to Open and use the Integrated Terminal:**

- Open the terminal by selecting View > Terminal
- Use the terminal just like an external terminal to run commands, install packages, and execute scripts

**Advantages:**

- Directly interact with your project's file and environment without leaving the editor
- Easily view and edit code while running commands

7. **File and Folder Management:**

**Creating, Opening and Managing File and Folder:**

- Create a new file or folder using the Explorer view by right-clicking and selecting New File or New Folder.

- Open files by double-clicking in the Explorer or using Ctrl+O.
- Navigate between files using the Explorer or by pressing Ctrl+P to quickly open files by name.

8. **Setting and Preference:**

**Customizing Settings:**

- Access settings via File > Preferences > Settings
- Change themes: Color Theme in the settings.
- Adjust font size: Editor: Font Size in settings.

9. **Debugging in VS code**

**Setting Up and Starting Debugging:**

a. **Configuration:**
   - Go to Run > Add Configuration to create a launch configuration file (launch.json).

b. **Start Debugging:**
   - Set breakpoints by clicking in the gutter next to the line numbers.
   - Start debugging by pressing F5 or selecting Run > Start Debugging.

c. **Key Debugging Features:**
   - Breakpoints, step through code, watch variables, and evaluate expressions

10. **Using Source Control**:

**Integrating Git with VS Code:**

a. **Initialize a Repository:**
   - Open your project folder in VS Code.
   - Go to the Source Control view by clicking the Source Control icon in the Activity Bar.
   - Click Initialize Repository.

b. **Making Commits:**
   - Stage changes by clicking the + icon next to the file.
   - Enter a commit message and click the check mark icon to commit.

c. **Pushing Changes to GitHub:**
   - Use the terminal to add the remote repository:
   - git remote add origin <repository-url>.
   - Push changes using git push.

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