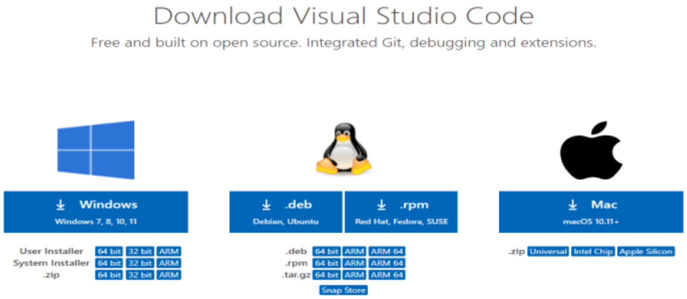
1. Installation of VS Code:

- ### Describe the steps to download and install Visual Studio Code on Windows 11 operating system. Include any prerequisites that might be needed.

a) Download: Go to https://code.visualstudio.com/Download Under the "Download Visual Studio Code" section, click "Download for Windows".



Download Visual Studio Code

Free and built on open source. Integrated Git, debugging and extensions.

b) Under the "Download Visual Studio Code" section, click "Download for Windows". This will start the download of VSCode installer (VSCodeUserSetup-x64-1.X64-1.XX.X.exe).

c) Installation Settings: Accept default settings or customize as needed.

d) Finish Installation: Click "Finish" when installation completes.

e) Launch VS Code: Open from Start Menu or desktop shortcut.

f) Optional: Check for updates and install extensions from the VS Code Marketplace

2. First-time Setup:

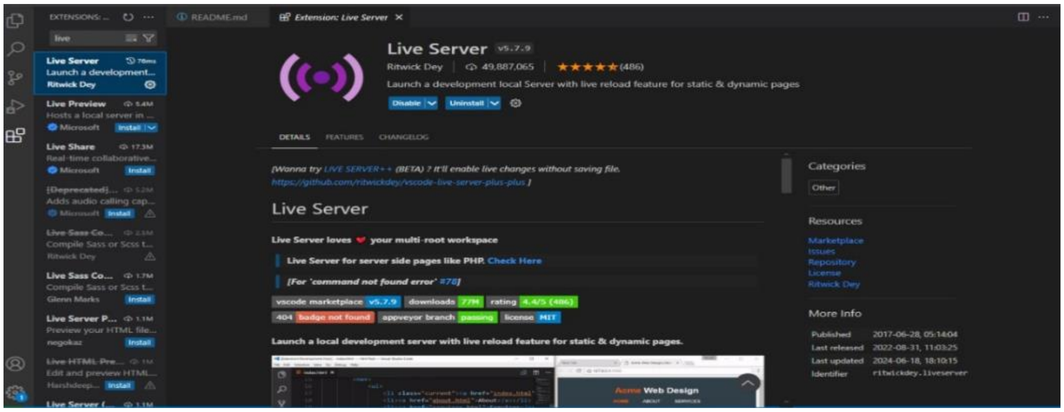
- ### After installing VS Code, what initial configurations and settings should be adjusted for an optimal coding environment? Mention any important settings or extensions.

a. Basic Settings:

- Font and Theme: Choose a comfortable font (e.g., "Fira Code") and theme (e.g., "Dark+").
- Editor Settings: Configure tab size, spaces vs. tabs, and word wrap.
- File Associations: Associate file types for syntax highlighting.
- Terminal Settings: Customize integrated terminal preferences.

b. Essential Extensions:

- Install from Marketplace: Get extensions like Python, Prettier, Git Lens, and Live Server.



Launch a development local Server with live reload feature for static & dynamic pages

[Wanna try LIVE SERVER++ (BETA) ? It'll enable live changes without saving file. https://github.com/ritwickdey/vscode-live-server-plus-plus]

Live Server

Live Server loves ❤ your multi-root workspace

Live Server for server side pages like PHP. Check Here

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Published	2017-06-28, 05:14:04
Last released	2022-08-31, 11:03:25
Last updated	2024-06-18, 18:10:15
Identifier	ritwickdey.liveserver

c. Workspace Settings:

- Customize: Adjust settings per project in .vscode/settings.json.

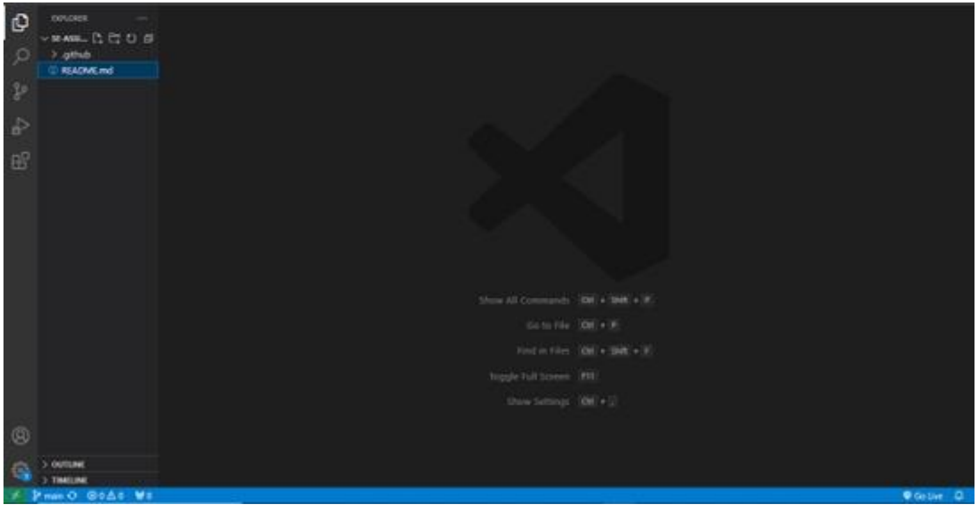
d. Best Practices:

- Version Control: Use Git for managing project versions.
- Key bindings: Customize shortcuts for efficiency.

3. User Interface Overview:

- **Explain the main components of the VS Code user interface. Identify and describe the purpose of the Activity Bar, Side Bar, Editor Group, and Status Bar.**

a. Activity Bar: Navigation hub for different views and functionalities.
b. Side Bar: Provides contextual information and actions related to files and extensions.
c. Editor Group: Central area for text editing with support for multiple tabs and layouts.
d. Status Bar: Displays workspace and file-specific information, Git status, and notifications.



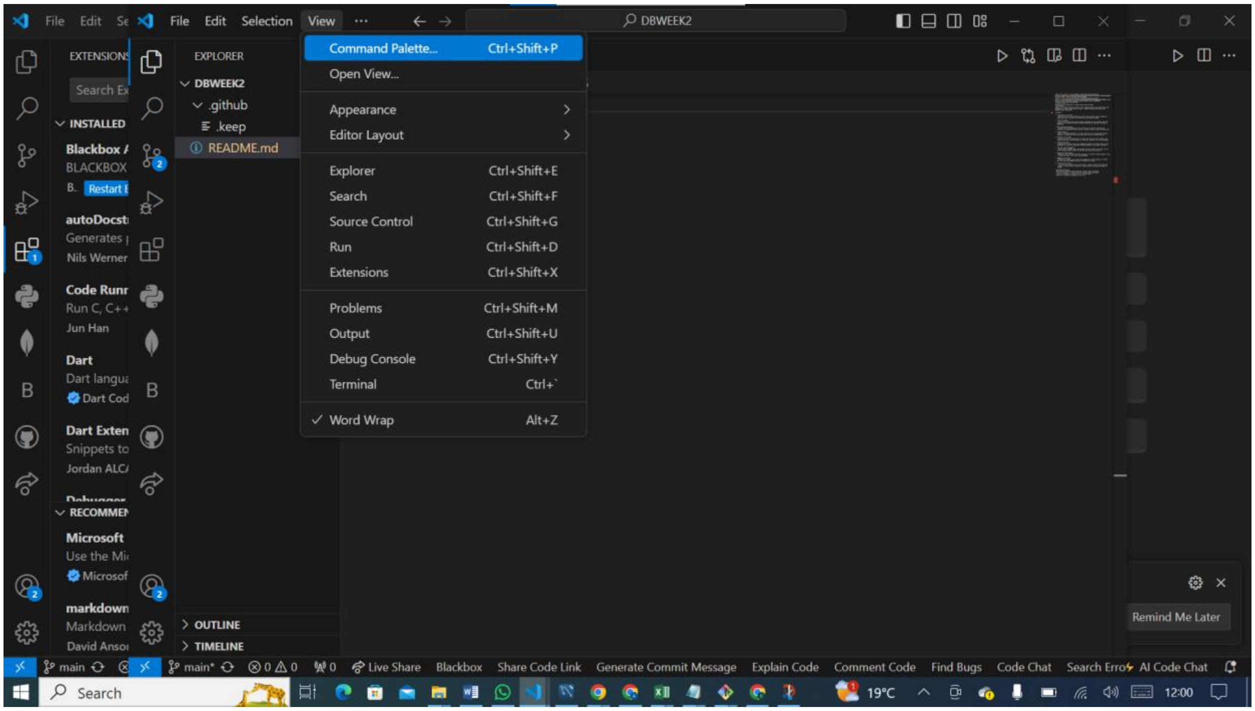
4. Command Palette:

- **What is the Command Palette in VS Code, and how can it be accessed? Provide examples of common tasks that can be performed using the Command Palette.**

The Command Palette in Visual Studio Code (VS Code) is a powerful tool that allows users to access various commands and features through a searchable interface. It's particularly useful for executing commands quickly without having to navigate through menus or remember specific keybindings.

Access:

Use **Ctrl + Shift + P** shortcut or navigate to **View > Command Palette...**from the menu.



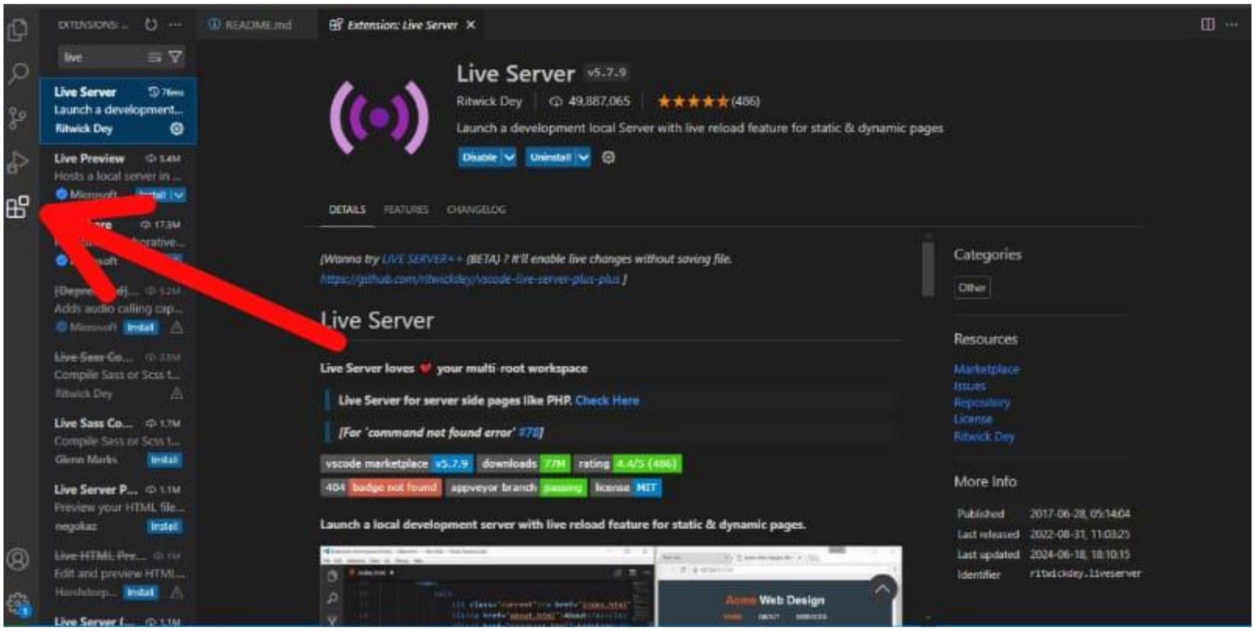
Common Tasks:

a) **Open Files/Folders:** File: Open File, File: Open Folder
b) **Run Tasks:** Tasks: Run Task
c) **Change Theme:** Preferences: Color Theme
d) **Install Extensions:** Extensions: Install Extensions
e) **Search and Replace:** Replace in Files
f) **Navigate Files:** View: Open View (Explorer, Search)
g) **Git Operations:** Git: Push, Git: Pull
h) **Debugging:** Debug: Start Debugging
i) **Terminal:** Terminal: Create New Integrated Terminal

5. Extensions in VS Code:

- **Discuss the role of extensions in VS Code. How can users find, install, and manage extensions? Provide examples of essential extensions for web development.**

➢ Extensions play a crucial role in extending the functionality of Visual Studio Code (VS Code), allowing users to customize and enhance their coding environment to suit specific needs and workflows.



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Role of Extensions

a) Enhanced Functionality: Extensions expand VS Code's capabilities beyond its core features, adding tools for languages, frameworks, and development processes.
b) Customization: They allow users to personalize their editing experience with themes, key bindings, and workflow optimizations.
c) Integration: Extensions integrate with external tools like version control systems, debuggers, linters, and build systems, streamlining development workflows.

<u>Finding, Installing, and Managing Extensions</u>:

a) Finding Extensions:
b) Access the VS Code Marketplace through the Extensions view (Ctrl + Shift + X).
c) Browse or search for extensions by name, category (e.g., languages, themes), or functionality.

Installing Extensions:

a) Click on an extension to view details and click Install to add it to VS Code.
b) Some extensions may require additional setup or configuration after installation.

Managing Extensions:

a) Use the Extensions view to manage installed extensions.
b) Enable, disable, update, or uninstall extensions as needed.
c) VS Code notifies users of available updates to installed extensions.
e.g.- ESLint: JavaScript and Typescript listing.
Prettier: Code formatting.
Live Server: Local development server with live reload.

6. Integrated Terminal:

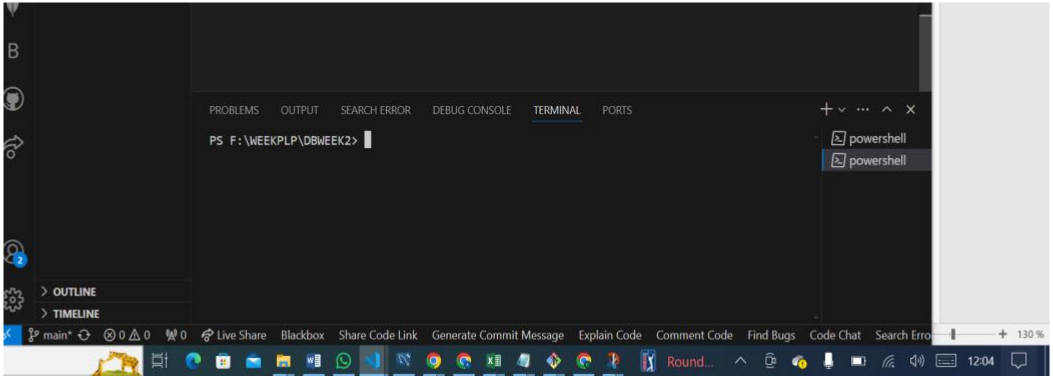
- **Describe how to open and use the integrated terminal in VS Code. What are the advantages of using the integrated terminal compared to an external terminal?**

Opening the Integrated Terminal:

a. Open VS Code: Launch Visual Studio Code on your computer.

b. Access Terminal:

- Use the shortcut Ctrl + and ` key.



```
PS F:\WEEKPLP\DBWEEK2>
```

7. File and Folder Management:

- **Explain how to create, open, and manage files and folders in VS Code. How can users navigate between different files and directories efficiently?**

Creating Files and Folders:

i**). Creating a File:**

a) Click on the Explorer icon in the Activity Bar (or use Ctrl + Shift + E).

b) Right-click on the parent directory where you want to create the file.

c) Select New File and enter the file name with the desired extension (e.g., .js, .html).

ii). **Creating a Folder:**

a) In the Explorer, right-click on the parent directory.

b) Choose New Folder and provide a name for the new directory.

iii**).Opening Files and Folders:**

1).Opening a File:

a) Use the Explorer to navigate to the file you want to open.

b) Double-click on the file name to open it in the editor.

2).Opening a Folder:

a) Use File > Open Folder... from the menu bar or Ctrl + K Ctrl + O.

b) Select the folder you want to open in the file explorer dialog.

iv).Managing Files and Folders:

a)Renaming:

a) Right-click on the file or folder in the Explorer.

b) Select Rename and enter the new name.

b).Deleting:

a) Right-click on the file or folder.

b) Choose Delete from the context menu (careful, this action is irreversible).

c)Moving/Copying:

a) Drag and drop files or folders within the Explorer to move them.

b) Use Copy and Paste for duplicating files or moving them to different directories.

Navigating Efficiently:

a.File Navigation:

a) Use Ctrl + P to quickly open files by typing part of their name.

b) Use Ctrl + Tab to cycle through recently opened files.

c) Use breadcrumbs at the top of the editor to navigate within a file.

b.Folder Navigation:

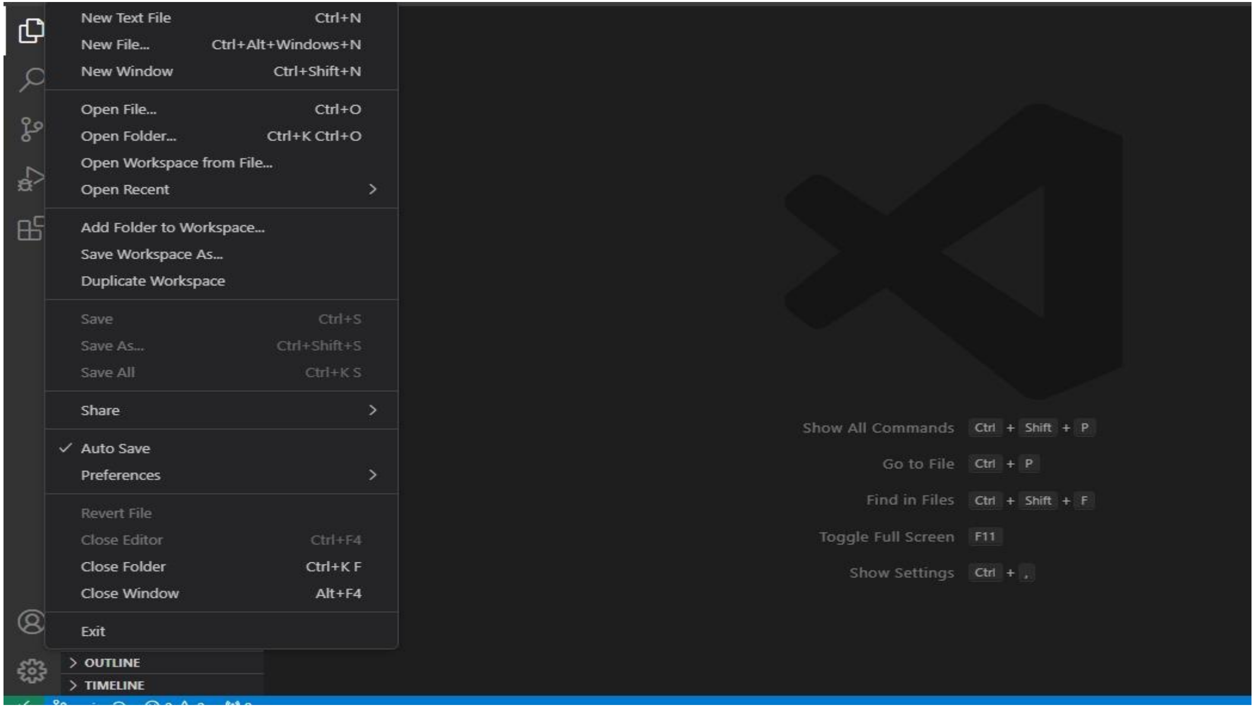
a) Utilize the Explorer view (Ctrl + Shift + E) to browse through files and folders.

b) Pin frequently used folders to the Explorer for quick access.

c.Search and Navigate:

a) Use Ctrl + Shift + F for global search across files in the workspace.

b) Use Ctrl + Shift + G to open the Git view for managing version control.



8. Settings and Preferences:

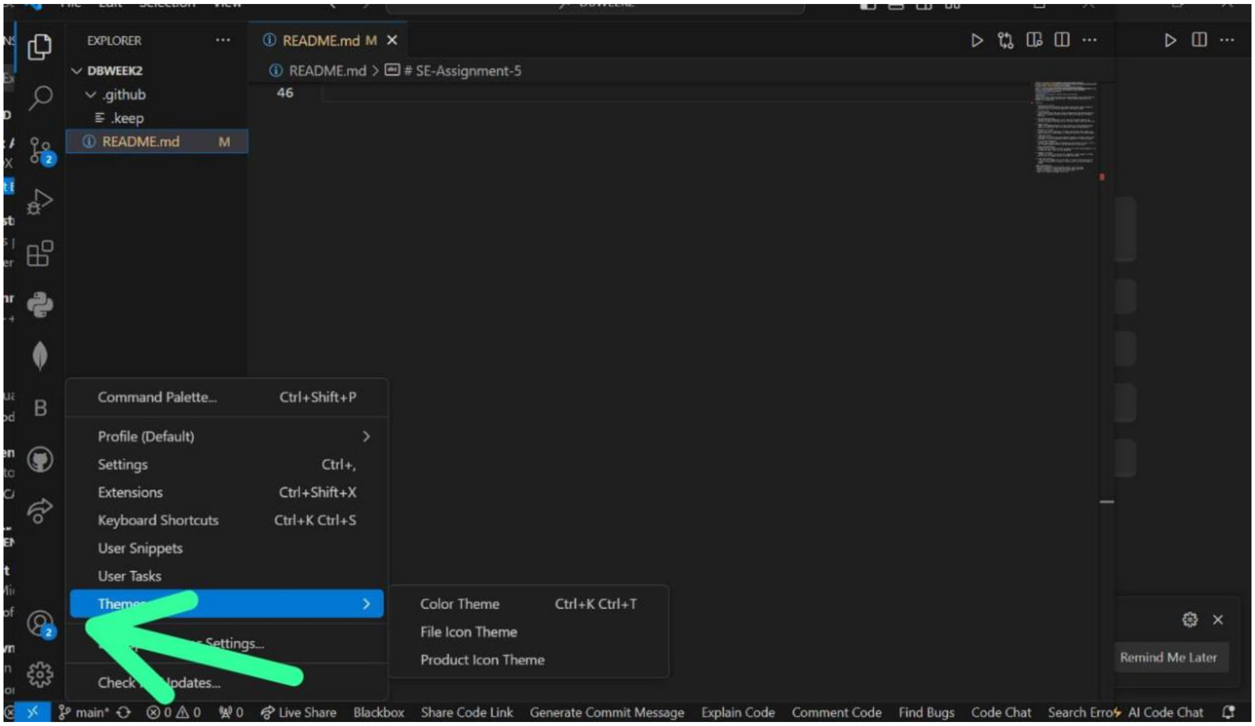
- **Where can users find and customize settings in VS Code? Provide examples of how to change the theme, font size, and keybindings**.

➢ Users customize settings in VS Code via **Ctrl + ,** or the gear icon:

a) **Change Theme:** Search "Color Theme" and select.

b) **Adjust Font Size:** Modify "Editor: Font Size".

c) **Customize Keybindings:** Edit keybindings in keybindings.json.

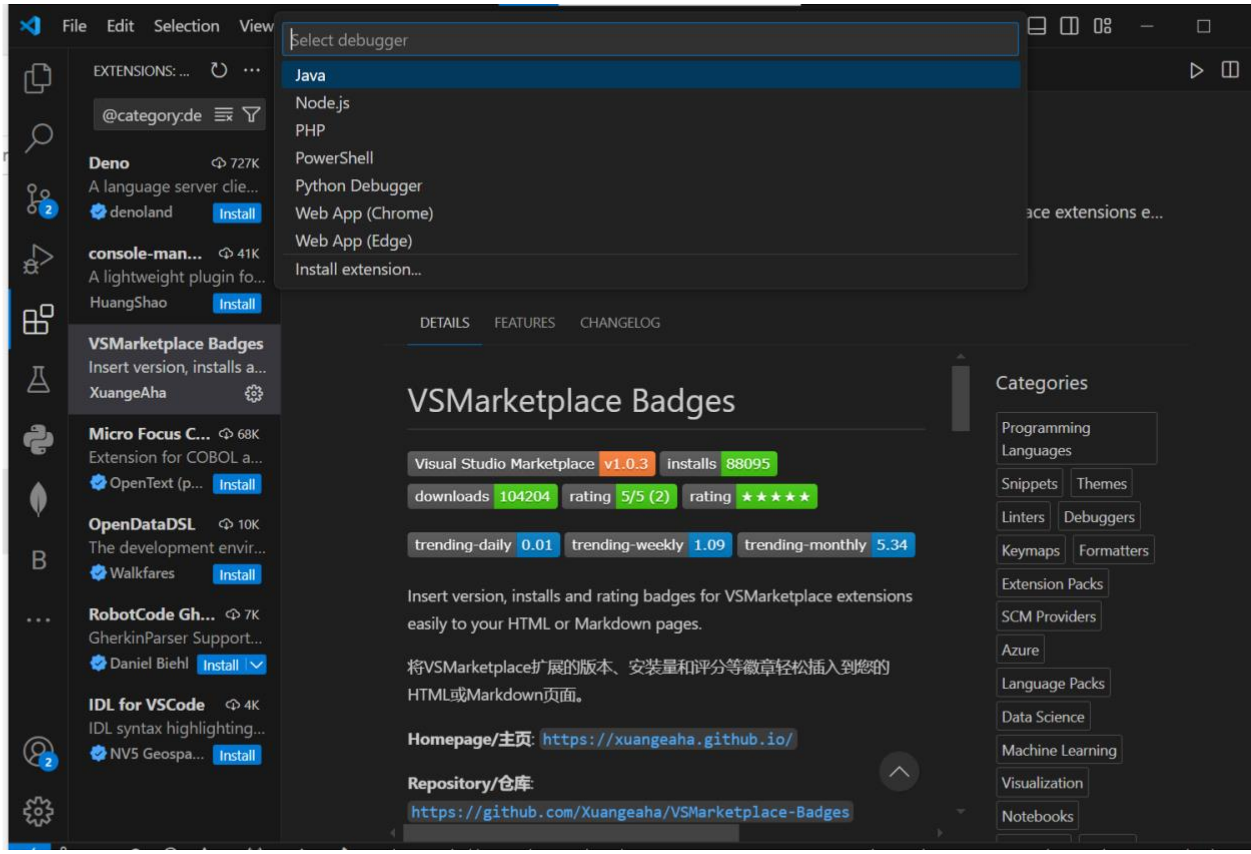


9. **Debugging in VS Code:**
    - **Outline the steps to set up and start debugging a simple program in VS Code. What are some key debugging features available in VS Code?**

Debugging in VS Code

Setup and Starting:

1. **Install Required Extensions:**
    - Ensure relevant extensions are installed for your language (e.g., Node.js, Python).
2. **Open Project:**
    - Navigate to your project folder in VS Code.
3. **Configure Launch:**
    - Click the debug icon (bug symbol) → configure (`create a launch.json`).
    - Choose or create a configuration for your environment (e.g., Node.js).
4. **Set Breakpoints:**
    - Click in the gutter to set breakpoints (red dot).
5. **Start Debugging:**
    - Press **F5** or click play in the Debug view to begin.
    - Step through code with debugging controls.



VSMarketplace Badges

Visual Studio Marketplace v1.0.3 installs 88095 downloads 104204 rating 5/5 (2) rating ★★★★★

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Homepage/主页: https://xuangeaha.github.io/

Repository/仓库: https://github.com/Xuangeaha/VSMarketplace-Badges

Key Features:

- **Variable Inspection:** View current variable values.
- **Call Stack:** See function call sequence.
- **Watch Expressions:** Monitor specific variables.
- **Debug Console:** Interact with program output.
- **Conditional Breakpoints:** Trigger based on conditions.

10. Using Source Control:

   - How can users integrate Git with VS Code for version control? Describe the process of initializing a repository, making commits, and pushing changes to GitHub.

a) Initialize: Use git init to start a new Git repository in your project folder.
b) Commit: Stage changes with VS Code's Source Control view and commit with a commit message.
c) Push: Add a remote with git remote add origin <URL> and push changes with git push -u origin master (or your branch name).