Installation and Navigation of Visual Studio Code (VS Code) Instructions: Answer the following questions based on your understanding of the installation and navigation of Visual Studio Code (VS Code). Provide detailed explanations and examples where appropriate.

Questions:

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.

### Prerequisites

Windows 11 Operating System: Ensure you are running Windows 11.

Administrator Access: You need to have administrative privileges to install software.

1.6 GHz or faster processor, 1 GB of RAM

* Open your web browser and go to the [Visual Studio Code download page](https://code.visualstudio.com/)
* Click on the download button for Windows. This will download the VS Code installer
* Locate the downloaded installer file (VSCodeUserSetup-x64-<version>.exe) in your Downloads folder or wherever you saved it.
* Double-click the installer to run it.
* You will be greeted with the setup wizard. Click on Next to proceed.
* Read and accept the license agreement, then click Next.
* Choose the destination location for the installation. The default location is usually fine. Click Next.
* ect any additional tasks you want to perform.After making your selections, click Next
* Click on Install to begin the installation process
* Wait for the installation to complete.

1. 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.

* Once the installation is complete, you can choose to launch VS Code immediately by checking the box that says Launch Visual Studio Code, then click Finish.
* Install Extensions: Extensions add functionality to VS Code. You can browse and install extensions from the Extensions view (Ctrl+Shift+X).
* Customize Settings: Customize your VS Code settings by navigating to File > Preferences > Settings or using the shortcut (Ctrl+,).
* By configuring these settings and installing these extensions, you will create a more efficient and productive coding environment in Visual Studio Code. Adjust additional settings based on your specific development needs and preferences.eg User and Workspace Settings,Theme.

1. 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.

The main components of the Visual Studio Code (VS Code) user interface are designed to provide a streamlined and efficient coding environment,making your coding experience more efficient and enjoyable.. Here are the key components and their purposes

**Activity Bar**: Provides quick access to different views and functionalities.

**Side Bar**: Displays detailed views and panels related to the selected activity

**Editor Group**: The main area for writing and viewing code, supporting multiple tabs and split views.

**Status Bar**: Offers status information and indicators related to the current workspace and file.

1. 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.

Opening Files, Running Tasks, Git Commands( Git: Clone, Git: Commit,Git: Push), Running and Debugging(F5).

1. 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 let you add languages, debuggers, and tools to your installation to support your development workflow.VS Code lets extension authors plug directly into the VS Code UI and contribute functionality through the same APIs used by VS Code.

You can bring up the Extensions view by clicking on the Extensions icon in the Activity Bar on the side of VS Code or the View: Extensions command (Ctrl+Shift+X).

To install an extension, select the Install button. Once the installation is complete, the Install button will change to the Manage gear button

VS Code makes it easy to manage your extensions. You can install, disable, update, and uninstall extensions through the Extensions view, the Command Palette (commands have the Extensions: prefix) or command-line switches

1. 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?

From the menu, use the Terminal > New Terminal or View > Terminal menu commands

Or In the Explorer, you can use the Open in Integrated Terminal context menu command to open a new terminal from a folder. To create a new terminal, use the Ctrl+Shift+`

1. 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?

you can access it directly within the same window where you're editing your code. This eliminates the need to switch between different applications. enhances productivity by providing a unified, context-aware environment for both coding and command-line tasks, reducing context switching and streamlining your development workflow.

1. 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.

In Visual Studio Code (VS Code), users can find and customize settings through the Settings interface.

* Use the methods above to open the Settings UI.
* In the search bar at the top of the Settings UI, type Color Theme.
* Click on Color Theme under Workbench to open the theme selector.
* Choose your preferred theme from the list. For example, Dark+ or Light+.
* Adjusting Font Size:In the search bar, type Font Size
* Adjust the Editor: Font Size setting to your desired size. For example, change it to 14 for a font size of 14 pixels
* Customizing Keybindings; Open the Command Palette (Ctrl+Shift+P or Cmd+Shift+P) and type Preferences: Open Keyboard Shortcut
* Open the Command Palette with Ctrl+Shift+P. Type and select Preferences: Open Settings (UI) to open the Settings UI.or Alternatively, click on Keyboard Shortcuts in the Settings UI.

1. 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?
2. 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.

Open your project folder in VS Code

Open the integrated terminal

Run the following command to initialize a Git repository: git init

Making commits:

### Pushing Changes to GitHub

* Create a Repository on GitHub:

Go to [github.com](https://github.com/) and create a new repository (if you haven't already).

* Link Local Repository to GitHub Repository:

Copy the URL of your GitHub repository (e.g., https://github.com/username/repository.git).

In the integrated terminal in VS Code, add the remote repository using the following command: git remote add origin <URL>

Push your commits to GitHub using the following command:git push -u origin master

If prompted, enter your GitHub credentials to authenticate and complete the push operation.

Submission Guidelines:

* Your answers should be well-structured, concise, and to the point.
* Provide screenshots or step-by-step instructions where applicable.
* Cite any references or sources you use in your answers.

OpenAI. “ChatGPT .” *ChatGPT*, 2024, chatgpt.com/. Accessed 28 June 2024.

Visual Studio Code. “Requirements for Visual Studio Code.” *Code.visualstudio.com*, 6 May 2024, code.visualstudio.com/docs/supporting/requirements#:~:text=VS%20Code%20is%20lightweight%20and.

Visual studio code. “Managing Extensions in Visual Studio Code.” *Code.visualstudio.com*, 6 May 2024, code.visualstudio.com/docs/editor/extension-marketplace#:~:text=VS%20Code%20makes%20it%20easy. Accessed 30 June 2024.

* Submit your completed assignment by 1st July