**SE-Assignment-5**

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.
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.
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.
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.
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.
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?
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?
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.
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?
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.

**PYTHON INSTALLATION**

**Step-by-Step Instructions**

**1. Download Python from the official website: https://www.python.org**

**2. Install Python on Your System**

**Windows**

1. **Download the Installer**

Click the button to download the latest Python installer for Windows.

1. **Run the Installer**

Locate the downloaded file (usually in your Downloads folder) and double-click it to run the installer.

1. **Customize Installation (Optional)**
   * **Add Python to PATH**: Ensure you check the box that says “Add Python 3.x to PATH”. This is crucial for running Python from the command line.
   * **Customize Installation**: You can customize the installation or proceed with the default settings by clicking “Install Now”.
2. **Complete the Installation**

Once the installation is complete, you will see a setup success screen. Click “Close” to finish the installation.

1. **Verify the Installation**

Open Command Prompt and type python --version. If Python is installed correctly, it will display the version number.

sh

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python --version

1. **Follow the Installation Steps**

Follow the prompts to install Python. The installer will guide you through the steps.

1. **Verify the Installation**

Open Terminal and type python3 --version. If Python is installed correctly, it will display the version number.

sh

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python3 --version

1. **Verify the Installation**

Check the installed Python version:

sh

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python3 --version

**3. Install pip (Python Package Installer)**

pip is a package management system used to install and manage Python packages.

**4. Set Up of a Virtual Environment**

Setting up a virtual environment is optional but recommended for managing dependencies for different projects.

1. **Install virtualenv**

Install the virtualenv package using pip:

pip install virtualenv

1. **Create a Virtual Environment**

Navigate to your project directory and create a virtual environment:

virtualenv venv

1. **Activate the Virtual Environment**
   * **Windows**:

.\venv\Scripts\activate

1. **Deactivate the Virtual Environment**

To deactivate the virtual environment, simply run:

sh

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deactivate

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.
* Submit your completed assignment by 1st July