**Setup Guide for Visual Studio Code**

**1. Downloading and Installing Visual Studio Code**

1. Go to <https://code.visualstudio.com/>.
2. Click the **Download** button for your operating system (Windows/Mac/Linux).
3. Once downloaded, run the **VSCodeUserSetup.exe** file.
4. Follow the setup instructions:
   * Read and agree to the Microsoft Software License Terms.
   * A screenshot of a computer

     Description automatically generatedChoose any additional tasks (optional):
     + Create a desktop icon.
     + Add “Open with Code” to Windows Explorer context menu.
     + Register Code as an editor for supported file types.
     + Add to PATH (this requires a shell restart).
5. Click **Install** to complete the setup.

**2. Downloading and Installing Python**

1. Visit <https://www.python.org/downloads/>.
2. Click **Download Python** for your system.
3. Run the downloaded installer:
   * Choose **Install Now** for default settings or **Customize installation** for custom options.
   * (Optional) Check **Add python.exe to PATH**.
4. After installation, you can choose to **Disable path length limit** (optional, but recommended to bypass file path limits).
5. Open your terminal and run py --version to confirm that the installation worked.

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1. Open Visual Studio Code.
2. Create a new Python file by adding the **.py** extension (e.g., my\_script.py).
3. To enable Python features (IntelliSense, formatting, debugging):
   * Click the **Extensions** button on the left sidebar.
   * Search for **Python** and install it.
   * This extension includes the Python Debugger.

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1. Use **Ctrl + Shift + P** to open the command palette and run Python: Select Interpreter to choose your installed Python version.
2. To use the Code Runner extension:
   * Click the **Extensions** button on the left sidebar.
   * Search for **Code Runner** and install it.
   * Click the play button on the top right of the Visual Studio Code window or use **Ctrl + Shift + N** to run your code or click on the pull down arrow to the right of the play button and select **Run Python File** (for our purposes)

**4. Setting Up Git in Visual Studio Code**

1. **Check if Git is installed**:
   * Open a terminal and run git --version. If a version number appears, Git is installed.
2. A computer screen with text and images

   Description automatically generatedIf not installed, go to <https://git-scm.com/downloads> and choose the appropriate installer for your OS.
3. For Mac users, install Git via Homebrew or MacPorts, or download Xcode from the App Store.
   * If you choose to use Homebrew or MacPorts, go to the respective home pages through the git-scm MacOS downloads page and then run brew install git and sudo port install git, respectively
   * If you choose to use Xcode, then simply download and install Xcode from the Apple App Store, and Git will come with it.
4. For Windows users, download the installer from the **Downloads** page.
5. During the install, you can choose whichever settings you want, but I recommend keeping all of the default settings, except for the following:​

* For the **Adjusting the name of the initial branch in new repositories** section, choose **Override the default branch name for new repositories,** make sure that **main** is typed in the textbox.​
* For the **Configuring the line ending conversions** section, choose **Change to checkout as-is, commit Unix-style line endings**.​
* For the **Configuring extra options** section, ***uncheck*** *both check boxes.*

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1. Sign into Visual Studio Code with your GitHub account:
   * Click your profile in the bottom-left of the Activity bar.
   * Either select **Backup and Sync Settings** or **Sign in to Sync Settings**
   * Sign into GitHub.

**5. Opening a GitHub Repository in Visual Studio Code**

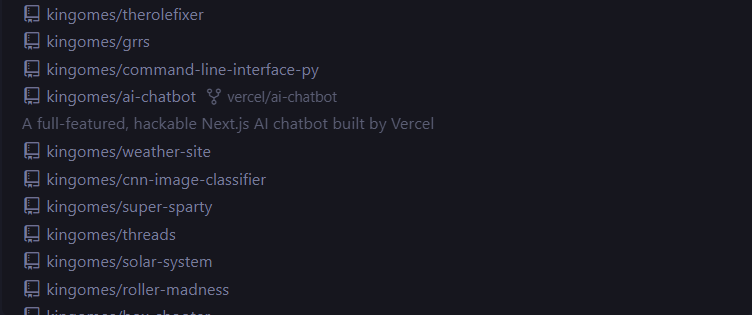
* A screenshot of a computer

  Description automatically generated**Method 1: Clone an existing repository**:
  1. Open the command palette (Ctrl + Shift + P).
  2. Run Git: Clone, select **Clone from GitHub**, and choose the repository you want to clone.
  3. Navigate to the folder where you want to clone the repository.

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* **Method 2: Initialize a new repository**:
  1. Open a folder in Visual Studio Code.
  2. Go to the **Source Control** view and click **Initialize Repository** or **Publish to GitHub**



* **Method 3: Using GitHub Repositories**:
  1. Install the **GitHub Repositories** extension.
  2. Run Remote Repositories: Open Remote Repository to open a GitHub repository of your choice.

**6. Committing, Pushing, and Pulling in Visual Studio Code**

1. A screenshot of a computer

   Description automatically generatedWrite your code and save it locally.
2. To commit changes:
   * Go to the **Source Control** view.
   * Stage files by clicking the **+** button.
   * Type a commit message and click **Commit**.
   * If prompted with “Author identity unknown,” either run git config --global user.email “your email” or git config --global user.name “your username”
3. To push and pull changes to the remote repository, click **Sync Changes**.
4. To push changes, click the **…** button in the Source Control Menu and choose **Push**.
5. To pull changes, click the **…** button in the Source Control Menu and choose **Pull**.

**7. Using Branches in Visual Studio Code**

1. Check your branch by looking at the branch indicator at the bottom of the screen.
2. To create or switch branches:
   * Click the branch indicator and select the option to create or switch.
3. To publish a new branch:
   * Go to the **Source Control** view and click **Publish Branch**.

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**8. Creating and Reviewing GitHub Pull Requests**

1. A screenshot of a computer

   Description automatically generatedInstall the **GitHub Pull Requests and Issues** extension.
2. To create a pull request:
   * Push your changes to the remote repository.
   * In the Source Control view, click **Create Pull Request**.
3. To review a pull request:
   * Click **Review Pull Request**, select the pull request, and review the changes.
   * If the changes are sufficient, add a comment and click **Approve**.
   * If the changes are not sufficient, either just add a comment and click **Comment** or add a comment and click **Request Changes** to notify the user that you want changes.
   * If there are no merge conflicts, you can now click **Merge Pull Request** to merge the two branches.
   * If there are merge conflicts, open the pull request in the GitHub website and use the web editor to resolve the conflict and then click **Merge Pull Request**.

**9. Using the Live Share Extension in Visual Studio Code**

1. Install the **Live Share** extension.
2. Sign in with your Microsoft or GitHub account.
3. Start a session by clicking **Live Share** in the bottom bar to generate a shareable link.
4. Invite collaborators by sharing the link.
5. Collaborators can follow your actions, edit code, or access the terminal and server.
6. To access the terminal, the collaborator must attempt to type in the terminal, which will make Visual Studio Code give him or her an option to request Read/Write Access from the sharer.
7. Once the sharer grants access, the collaborator will be able to use the terminal.

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Submission Guidelines:

Submit all of this inside a PDF document:

1. Post a screenshot of Visual Studio Code’s homepage open on your PC to confirm you installed it successfully.

1. Post a screenshot of your terminal where you have typed in “py --version” to confirm if Python is installed on your machine.

1. Post a screenshot of your extensions list within Visual Studio Code. Go to extensions and then on the left sidebar there should be a list of all current extensions that you have installed. On this list you should have the “Code Runner” extension by Jun Han and “Python” extension from Microsoft.

1. Create a simple Python file in Visual Studio Code and write one line of code in it (for example a print statement) and then run that code within Visual Studio Code using Code Runner or from the terminal. Post a screenshot of the print statement being displayed when you run the code to confirm you can successfully run Python Code within the IDE.

1. Go to this repository <https://github.com/kingomes/ide-project> and then clone it inside Visual Studio Code. Go inside the submissions folder and then create your own folder to put your PDF document in. The folder should be named like this “[Your Name] Submission” and the PDF file should also be called “[Your Name] Submission.” Then, commit and push the folder to the repository.