IDLE (Integrated Development and Learning Environment)

IDLE (Integrated Development and Learning Environment) is the default IDE (Integrated Development Environment) that comes with Python. It provides a convenient way to write, test, and debug Python code. Here are step-by-step instructions for using IDLE:

For Windows:

1. **Open IDLE:**
   - Click on the Windows Start button.
   - Search for "IDLE" or "IDLE (Python GUI)" in the search bar.
   - Click on the IDLE icon to open the IDLE environment.

2. **IDLE Shell:**
   - Once IDLE is open, you will see the Python shell window, which allows you to execute Python code interactively.

3. **Create a New Script:**
   - To create a new Python script, click on "File" in the menu and choose "New File" or press `Ctrl + N`.

4. **Write Python Code:**
   - Write your Python code in the new editor window.

5. **Save the Script:**
   - Save the script by clicking on "File" and then "Save" or pressing `Ctrl + S`.
   - Choose a location and provide a name for your Python script with a `.py` extension.

6. **Run the Script:**
   - Run the script by clicking on "Run" in the menu and choosing "Run Module" or by pressing `F5`.

7. **IDLE Debugging:**
   - IDLE also supports basic debugging features. You can set breakpoints, step through code, and inspect variables.

8. **Exit IDLE:**
   - To exit IDLE, click on "File" and choose "Exit" or simply close the IDLE window.

For macOS and Linux:

1. **Open Terminal:**
   - Open the terminal.

2. **Launch IDLE:**
   - Type `idle` in the terminal and press Enter to launch IDLE.

3. **IDLE Shell:**
   - Once IDLE is open, you will see the Python shell window, allowing you to execute Python code interactively.

4. **Create a New Script:**
   - To create a new Python script, click on "File" in the menu and choose "New File" or press `Ctrl + N`.

5. **Write Python Code:**
   - Write your Python code in the new editor window.

6. **Save the Script:**
   - Save the script by clicking on "File" and then "Save" or pressing `Ctrl + S`.
   - Choose a location and provide a name for your Python script with a `.py` extension.

7. **Run the Script:**
   - Run the script by clicking on "Run" in the menu and choosing "Run Module" or by pressing `F5`.

8. **IDLE Debugging:**
   - IDLE also supports basic debugging features. You can set breakpoints, step through code, and inspect variables.

9. **Exit IDLE:**
   - To exit IDLE, click on "File" and choose "Exit" or simply close the IDLE window.

IDLE is a straightforward IDE suitable for beginners and small to medium-sized Python projects. For larger projects, some developers prefer using more feature-rich IDEs like PyCharm or Visual Studio Code.