Introduction to Python

1. Setting Up the Environment:

- Installing Python
- Introduction to Integrated Development Environments (IDEs) like PyCharm

2. Basic Concepts

- What is Python?
- First Python Program

3. Understanding Python's Internal Execution

- Interpreted vs. Compiled Languages
- Introduction to the Python interpreter
- Execution Steps:
  - **Read Source Code**
  - **Convert to Bytecode:**
    - The Python code is compiled into an intermediate form called bytecode.
    - Bytecode is a low-level set of instructions that is platform-independent.
  - **Python Virtual Machine (PVM):**
    - The compiled bytecode is executed by the Python Virtual Machine (PVM).
    - The PVM is a stack-based virtual machine that interprets the bytecode instructions.
    - Loading Modules
    - Memory Management

Hands-On Practice

- PEP8
- Simple exercises to practice variable assignments, basic operations, and string manipulations.
- Writing small programs, like a simple calculator or a program that takes user input and prints a formatted message.