Day 1: Introducing Python

Day 2: Data Structures in Python

Day 3: Conditional Execution in Python

Day 4: Functions and Pandas

Day 1: Introducing Python

- **Variables and Data Types**
  - Understanding variables and assigning values
  - Introduction to basic data types: integers, floats, strings, booleans
- **Basic Operators**
  - Arithmetic operators: +, -, *, /, %, **
  - Comparison operators: ==, !=, >, <, >=, <=
  - Logical operators: and, or, not
  - Assignment operators: =, +=, -=, etc.
- **String Basics**
  - Creating and using strings
  - String concatenation and repetition
- **String Methods**
  - Common string methods: len(), lower(), upper(), replace(), split(), etc.
  - String indexing and slicing
  - String formatting with f-strings and format()

Day 2: Data Structures in Python

- **Lists**
  - Creating and using lists
  - List indexing, slicing, and methods (append(), remove(), sort(), etc.)
  - Deep and shallow copies of lists
- **Tuples**
  - Understanding tuples and immutability
  - Tuple indexing and slicing
- **Dictionaries**

    - Creating dictionaries and accessing elements
    - Dictionary methods: keys(), values(), items()
    - Adding, modifying, and deleting key-value pairs
- **Sets**
    - Understanding sets and their properties
    - Common set operations: union, intersection, difference

Day 3: Conditional Execution in Python

- **Conditional Statements**
    - if, elif, and else statements
    - Nested conditions and indentation
- **Loops**
    - for loops: iterating over sequences
    - while loops: repeating code based on conditions
    - break and continue statements

Day 4: Functions and Pandas

- **Defining Functions**
    - Writing simple functions using `def`
    - Function arguments and return values
- **Calling Functions**
    - How to call functions with different arguments
- **Basic Operations Using Pandas**