A Day with Python

Session 1: Introduction to Python (1 hour)

Introduction (15 minutes)

- Welcome and overview of the training.
- Brief introduction to Python and its popularity.

Setting Up Python (15 minutes)

- Installing Python (if not already installed).
- Introduction to Python environments (IDLE, Jupyter, VSCode).

Basic Python Syntax (30 minutes)

- Variables and data types.
- Basic operations (arithmetic, strings, etc.).
- Print statements and comments.

Control Flow (30 minutes)

- If statements.
- Loops (for and while).
- Example exercises for practice.

Session 2: Data Structures and Functions (1 hour)

Lists and Tuples (30 minutes)

- Creating and manipulating lists.
- Working with tuples.

Dictionaries (30 minutes)

- Understanding dictionaries.
- Common operations on dictionaries.

Functions (30 minutes)

- Defining and calling functions.
- Function parameters and return values.
- Scope of variables.

Session 3: File Handling and Error Handling (1 hour)

File Input/Output (30 minutes)

- Reading from and writing to files.
- Common file handling operations.

Exception Handling (30 minutes)

- Introduction to exceptions.
- Using try-except blocks.
- Handling different types of exceptions.

Session 4: Introduction to Libraries and Real-world Examples (1 hour)

Introduction to Libraries (60 minutes)

- Overview of popular libraries (e.g., NumPy, Pandas).
- Installing and importing libraries.