Newroz Internship Python Batch'24

Week 1: Python Basics and Control Flow

Days 1-2: Introduction and Setup

- Course Introduction
- Python Setup and Installation
- Introduction to Python and the Python Interactive Shell
- Writing Your First Program

Days 3-4: Python Basics

- Variables and Data Types
- Basic Operators
- Working with Strings
- Basic Input and Output

Days 5-7: Control Flow

- Conditional Statements (if, elif, else)
- Loops (for and while)
- Break, Continue, and Pass Statements

Week 2: Functions and Data Structures

Days 1-2: Functions

- Defining and Calling Functions
- Function Arguments and Return Values
- Scope and Lifetime of Variables
- Lambda Functions

Days 3-5: Data Structures

- Lists and Tuples
- Working with Dictionaries
- Sets and Frozensets
- List Comprehensions
- Dictionary Comprehensions
- Advanced String Formatting

Days 6-7: File Handling

- Reading and Writing Files
- Working with CSV Files
- Using Context Managers

Week 3 and 4: Error Handling, OOP, and Databases

Days 1-2: Error Handling

- Understanding Errors and Exceptions
- Handling Exceptions with try, except, else, finally
- Raising Exceptions

Days 3-7: Object-Oriented Programming (OOP)

- Classes and Objects

- Methods and Constructors
- Inheritance and Polymorphism

Days 7-11: Working with Databases

- Introduction to SQLite
- Connecting to Databases
- Performing CRUD Operations

Days 12-14: Final Project

- Integrate what you have learned into a complete Python application
- Work on a final project that combines file handling, OOP, API, and database operations

Additional Tips

- **Daily Review**: Spend the last 15-30 minutes of each day reviewing what you learned.
- **Practice**: Apply concepts to small coding challenges or projects.
- **Engage with the Community**: Ask questions and participate in discussions in course forums or online communities.
- **Stay Consistent**: Consistency is key to retaining and understanding the material.

Feel free to adjust the schedule based on your progress and understanding. Happy learning!