AICTE EY-GDS Internship December'23
Self-Paced Study Material for Internship:
Topic: Python

Introduction to Python:

- Python, created by Guido van Rossum, is a versatile programming language widely used for web development, data analysis, artificial intelligence, and more.

Setting up your Python environment:

- Choose an Integrated Development Environment (IDE) like Jupyter or VSCode and install libraries using package managers like pip to set up your Python environment efficiently.

Data types and variables:

- Python supports various data types such as numbers, strings, lists, and dictionaries, providing flexibility for diverse programming needs.

Operators and expressions:

- Python offers a range of operators, including arithmetic, comparison, and logical operators, allowing concise expression of complex operations.

Conditional statements:

- Employ conditional statements like if, elif, and else to execute specific code blocks based on different conditions in your Python programs.

Looping constructs:

- Utilize looping constructs, such as for and while loops, to iterate through data structures or execute a set of instructions repeatedly.

Functions:

- Define functions to encapsulate reusable code, pass arguments, and return values, promoting code modularity and readability in Python.

Basic data structures:

- Python's fundamental data structures, including lists, tuples, and dictionaries, empower efficient storage and manipulation of data in various formats.

Data manipulation:

- Master data manipulation techniques like indexing, slicing, and iterating to extract and transform data effectively in Python.

Working with files:

- Learn file handling in Python for tasks like reading, writing, and processing data from external files.

Introduction to modules and libraries:

- Leverage powerful Python libraries like NumPy for numerical computing and Pandas for data manipulation and analysis to enhance your coding capabilities.

Resources:

1. Interactive Python Tutorial: https://www.learnpython.org/
2. Official Python Documentation: https://docs.python.org/
3. Crash Course Python for Data Science: https://www.dataquest.io/course/introduction-to-python/
4. Python for Beginners Tutorial: https://www.w3schools.com/python/
5. Python Programming Projects: https://codedamn.com/news/python/100-python-projects-for-practice