Topics covered in the first week (17-3-2024 to 22-3-2024) for ( Beyond Universe )

1. Overview of Python and its applications
2. Installation and setup (Python interpreter, IDEs)
3. Basic syntax, data types, and variables
4. Basic input/output operations
5. Conditional statements (if, elif, else)
6. Loops (for, while)
7. Functions: defining, calling, parameters, and return values
8. Scope and namespaces
9. Lists, tuples, dictionaries
10. List comprehensions
11. String manipulation and formatting
12. Sets and their operations
13. Reading from and writing to files
14. Working with different file formats (CSV, JSON, etc.)
15. Understanding modules and importing them
16. Creating and using custom modules
17. Exception handling (try, except, finally)
18. Debugging techniques and best practices
19. Logging in Python

Tasks given on the topics of

Data types, data structures, creating custom modules and using them, asked to write three programs on modules like (datetime, math, os, sys and time). String manipulations and string formatting, reading and writing files CSV, JSON, and Excel using pandas. Exception Handling, Functions and its types, loops (while and for), control flow statements(if, elif, ifelse and nested if).