

ASSIGNMENT – 1 (Module 1, 2, Part of 3)

LAST DATE TO SUBMIT: 25-05-2026

CO1 Questions (Remembering & Understanding)

1. Explain different types of errors in Python with suitable examples:
 - Syntax Error
 - Runtime Error
 - Semantic Error
2. Describe Python variables, data types, operators, and order of operations with examples.
3. Explain string operations in Python including slicing, traversal, string comparison, and built-in string methods with examples.
4. Describe lists, tuples, and dictionaries in Python. Explain their characteristics and differences with suitable examples.

CO2 Questions (Applying & Executing)

1. Write a Python program to generate the Collatz $3n + 1$ sequence for a given positive integer.
2. Develop a Python program using nested loops to display a two-dimensional multiplication table.
3. Write a Python program to count the number of vowels, digits, and spaces in a given string using loops and string methods.
4. Develop a Python program to create a matrix using nested lists and perform matrix addition.

CO3 Questions (Analyzing & Problem Solving)

1. Develop a Python program to accept paired data (student name and marks), process the data using loops, and display the highest scorer and average marks.
 2. Develop a Python function that accepts a sentence, splits it into words, stores word frequencies in a dictionary, and displays the most frequently occurring word.
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