Lab 10 – 13-11-2023

PF CS IT LAB 10

Task 1: Write a program to run a loop for integers 1 to 99. Print integer. Next, you have to print the sum of the digits of the integer only if the integer has two digits. Suppose the sum of the digits of the number has two digits; again, you have to print the sum of the digits. See the sample run and read the explanation for understanding.

Sample Run:

[1][2][3][4][5][6][7][8][9][10 1][11 2][12 3]...[19 10 1][20 2]...[28 10 1][29 11 2]...[99 18 9]

Explanation: You must print the value inside square brackets for each integer, as in the output for integers 1 to 9. Next, integer 10 has two digits, 1 & 0. The sum of the digits of 10 is 1 + 0 = 1. Therefore, you must print the sum of the digits with a space like [10 1]. The integer 19 has digits 1 & 9, having sum 1 + 9 = 10.
The sum is again a two-digit number; therefore, sum the digits, and the answer is 1. Therefore output will be [19 10 1]

Task 2: Write a program to print counting in English: one to hundred using a single loop. You may use 20-30 if conditions are inside the loop.
You are not allowed to use multiple loops or nested loops o print statements outside the loop.

Task 3: Write a program to test students in basic arithmetic operations, i.e., addition, subtraction & multiplication. Ask ten questions by randomly generating and printing two integers from 1 to 9. Say the user to provide (input) their addition, difference, and product.
If the user gives the wrong answer, give two more chances to enter a correct answer; otherwise, mark the wrong answer and ask the next question. In the end, show obtained marks out of 30. Each question has three marks. One mark each for sum, difference & product. See the sample run for understanding:

Sample Run:

N1: 4 N2: 2

Sum:6

Difference: 2
Product: 8
N1: 6 N2: 1
Sum: 7
Difference: 5
Product: 5
Wrong, Enter Product Again: 7
Again Wrong, Last Chance to Enter Product: 9
...

Obtained Marks: 22