

LAB EXERCISE 1 (SECJ1013)
PROGRAMMING TECHNIQUE 1
SEM 1, 2024/2025

INSTRUCTIONS TO THE STUDENTS

- This exercise must be done individually.
- Your solution must follow the input and output as required in the text and shown in the examples.
- Any form of plagiarisms is **NOT ALLOWED**. Students who copied other students' assignments will get **ZERO** marks (both parties, students who copied, and students that share their work).
- Please insert your name, matrix number, and date as a comment in your solution.

SUBMISSION PROCEDURE

- Only one file is required for the submission, which is the flow chart and pseudo code (merge the file into one pdf).
- Submit the assignment via the UTM's e-learning system.

QUESTION

Construct a flow chart and pseudo code that reads an integer number and then calculates the sum of its digits. After that, identify whether the sum of digits for the integer is an even or odd number, and a multiple of 4, and/ or 5.

Hint: You should use operator divide (/) and modulus (%) and **pre-test loop** to answer this question.

Example 1

Enter an integer number: **1235**
 $5 + 3 + 2 + 1 = 11$
11 is odd number

Example 2

Enter an integer number: **6545**
 $5 + 4 + 5 + 6 = 20$
20 is even number & multiples of 4
and 5

Example 3

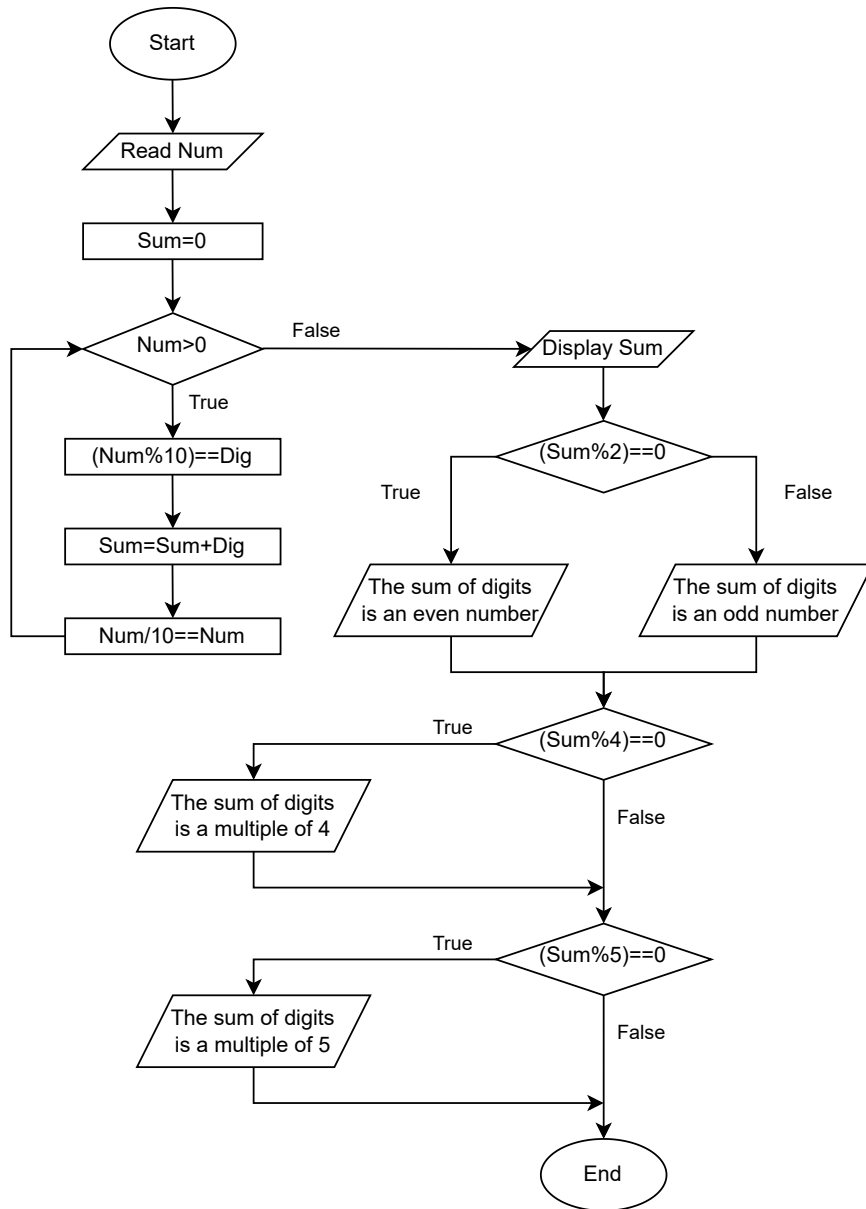
Enter an integer number: **89251**
 $1 + 5 + 2 + 9 + 8 = 25$
25 is odd number & multiples of 5

Example 4

Enter an integer number: **98762**
 $2 + 6 + 7 + 8 + 9 = 32$
32 is even number & multiples of 4

Note: The number in **bold** indicates input entered by the user.

Draw your flow chart using any appropriate drawing tools such as Figma, Microsoft Visio, Lucid chart or draw.io.



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Matrics no.: A24CS0110

Date: 18.10.2024

1. Start
2. Read Num
3. Set Sum=0
4. While Num>0
 - 4.1. (Num%10)==Dig
 - 4.2. Sum=Sum+Dig
 - 4.3. Num/10==Num
5. End While
6. Display Sum
7. If (Sum%2)==0
 - 7.1. Display "The sum of digits is an even number"
8. Else display "The sum of digits is an odd number"
9. End if
10. If (Sum%4)==0
 - 10.1. Display "The sum of digits is a multiple of 4"
11. End if
12. If (Sum%5)==0
 - 12.1. Display "The sum of digits is a multiple of 5"
13. End if
14. End