



SECPH
UNIVERSITI TEKNOLOGI MALAYSIA

Programming Technique I **(SECJ1013)**

LAB EXERCISE 1

Pseudo Code and Flow Chart

STUDENT NAME : ANGELA NGU XIN YI

LECTURER NAME : MR ALIF RIDZUAN KHAIRUDDIN

MATRICS NO. : A24CS0226

SECTION : 3

DATE : 17/10/2024

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.

Pseudo Code

1. Start
2. Set digit = 0 and sum = 0
3. Read num
4. While (num > 0)
 - 4.1. digit = num%10
 - 4.2. sum = sum + digit
 - 4.3. num = num/10
5. End While
6. Print sum
7. If (sum%2 == 0)
 - 7.1. If ((sum%4 == 0) && (sum%5 == 0))
 - 7.1.1. Print “ is even number & multiples of 4 and 5”
 - 7.2. Else If (sum%4 == 0)
 - 7.2.1. Print “ is even number & multiples of 4”
 - 7.3. Else If (sum%5 == 0)
 - 7.3.1. Print “ is even number & multiples of 5”
 - 7.4. Else
 - 7.4.1. Print “ is even number”
 - 7.4.2. Go to step 10
 - 7.5. End If
8. Else
 - 8.1. If (sum% 5 == 0)
 - 8.1.1. Print “ is odd number & multiples of 5”
 - 8.2. Else
 - 8.2.1. Print “ is odd number”
 - 8.2.2. Go to step 10
 - 8.3. End If
9. End If
10. End

Flow Chart