Practical work _1

Exercise 01:

- Write an algorithm and draw the flowchart to read two numbers and find their sum and subtraction.
- Write an algorithm and draw the flowchart to find the sum and product of two given numbers.

Exercise 02:

- Write an algorithm to determine a student's final grade and indicate whether it is passing or failing.
  - The final grade is calculated as the average of four marks and passing grade = 10.

Exercise 03:

- Write an algorithm and flowchart to convert temperature from Fahrenheit to Celsius
  - The formula to convert a given temperature from Celsius scale to Fahrenheit scale is: F=(9/5)*C+32.

Exercise 04:

- Write an algorithm and flowchart to convert the input dollar to its peso exchange rate equivalent and display the peso equivalent exchange rate.
  - Assume that the present exchange rate is 51.50 pesos against the dollar.

Exercise 05:

- Write an algorithm and draw a flowchart that will read the two sides of a rectangle (length and breadth) and calculate its area and perimeter.

Exercise 06:

- Write an algorithm and draw a flowchart to enter a positive integer (x) and print if it is odd or even?

Exercise 07:

- Write an algorithm and draw a flowchart to enter x (number) and find the value of y=(x-3)/x.
- Write an algorithm and draw a flowchart to enter x (number) and find the value of y= x /(x-2).

Exercise 08:

- write an algorithm and draw a flowchart to solve the linear equation: a X + b = 0, discussing all possible cases of a and b.

Exercise 09:

- Write an algorithm and draw a flowchart that will calculate the roots of a quadratic equation: ax^2+b x +c=0.

Exercise 10:

- Write an algorithm and draw a flowchart to find the value of the below function. Input t and print y(t) to each value of t.

$$y(t) = \begin{cases} t & if \quad t \geq 0 \\ -t & if \quad t < 0 \end{cases}$$

Exercise 11:

- Write an algorithm and draw a flowchart to find the value of the below function. Input x and print g(x) to each value of x.

$$g(x) = \begin{cases} \dfrac{2}{x-2} & if \quad x > 2 \\ -\dfrac{4}{5-x} & if \quad x \leq -2 \end{cases}$$

- Create a trace table using the following inputs: -5,-2, 0, 7, 11, 60.