FLOWGORITHM PRACTICE QUESTIONS

SELECTION & REPEATATION

ECE C,CCE

1. Drivers are concerned with the mileage obtained by their automobiles. One driver has kept track of several tankfuls of gasoline by recording miles driven and gallons used for each tankful. Develop a **flowgorithm script** that will input the miles driven and gallons used for each tankful. The flowgorithm script hould calculate and display the miles per gallon obtained for each tankful. After processing **all input information**, the flowgorithm script should calculate and print the combined miles per gallon obtained for all tankfuls.
   Here is a sample input/output dialog:

   Enter the gallons used (-1 to end): **12.8**
   Enter the miles driven: **287**
   The miles / gallon for this tank was 22.421875
   Enter the gallons used (-1 to end): **10.3**
   Enter the miles driven: **200**
   The miles / gallon for this tank was 19.417475
   Enter the gallons used (-1 to end): **5**
   Enter the miles driven: **120**
   The miles / gallon for this tank was 24.000000
   Enter the gallons used (-1 to end): **-1**
   The overall average miles/gallon was 21.601423

2. Write a Flowgorithm script that calculates the squares and cubes of the numbers from 0 to 10

3. Write a Flowgorithm script to implement digital calculator. Display a menu which lists out the basic arithmetic operations (addition, subtraction, multiplication, division). Ask the user to select the appropriate option and proceed.

4. Write a Flowgorithm script to do the following, when an integer is given as input:-

   a. Sum of natural numbers till the input number.

   b. Factorial of the number, if it is a positive number or zero.

   c. Number of digits in the input.

   d. Sum of digits of the number.

   e. Reversing the number.

   f. Checking whether the number is a palindrome number.

       g. Printing the factors of the number.

5. Checking whether it is
   i. Prime number
   ii. Perfect Number (Sum of factors other than the number is equal to the number itself)
   iii. Abundant Number (Sum of factors other than the number is greater than the number itself).
   iv. Armstrong Number (Sum of dth power of digits is equal to the number with d digits).
   v. Strong number (Number = sum of factorials of digits)
   vi. Harshad's number (Number is exactly divisible by sum of its digits)