

Exp No: 1- B

SINE SERIES

Date: 29/ 11/22

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AIM:

To draw a flow chart and write an algorithm for sine series.

ALGORITHM:

Step 1: Start

Step 2: Get the value of x, n

Where x must be in degree.

Step 3: Initialize $i=1$, $s = -1^{**I}$, $\text{sine}=0$ and import math.

Step 4: Check for condition $i \leq n$

4.1: If condition is true, convert x to radian using the formula

4.2: Then calculate sine series using the formula:

$$\text{Sine} = \text{sine} + y^{**}(2*i=1).\text{factorial}(2*i+1)*s$$

4.3: Increment of i by 1

Step 5: If condition is false, display sine and goto stop

PSEUDO CODE

START

GET value of x, n

x must be in degree

INITIALIZE $i=1, s=-1, \text{ sine}=0$

Import math

IF $i \leq n$ THEN

Convert x to radian using formula

CALCULATE

$\text{Sine} = \text{sine} + x^{(2*i-1)} \cdot \text{factorial}(2*i-1) * s$

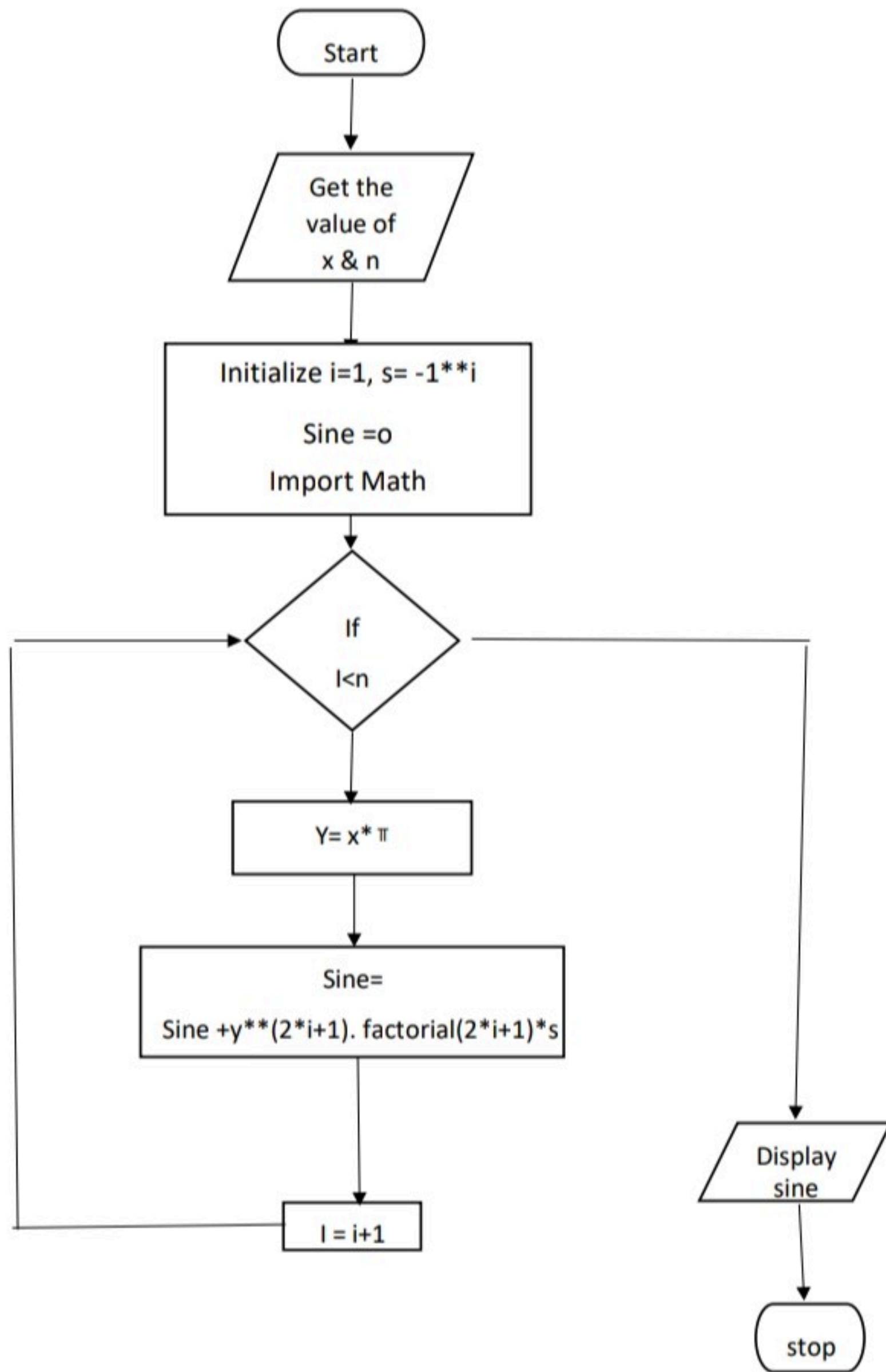
$i=i+1$

ELSE

Display sine

STOP

FLOW CHART:



RESULT:

Thus, the flowchart and the algorithm is written for the problem