Experiment No. 9

Input Specification: terms in Fibonacci series as int

Output Specification: Message displaying elements in Fibonacci series

Declaration:

terms = Number of terms in Fibonacci series as int
i = variable to control while loop as int
f1 = to store next to previous term value as int
f2 = to store previous term value as int
f3 = to store current term value as int

Algorithm:

Step 1: Declare terms, i, f1, f2, f3 as int.

Step 2: Display message "Enter number of terms in Fibonacci series".

Step 3: Input values in terms variable.

Step 4: Initialize f1 and f2 as 0.

Step 5: Display message "Fibonacci series upto %d terms is:\n".

Step 6: Display f1 and f2 as first two terms in fibonacci Series.

Step 7: Initialize i as 3.

Step 8: While i <=terms repeat steps 9 to Step 13 otherwise goto step 14

Step 9: Evaluate f3=f1+f2

Step 10: Display f3

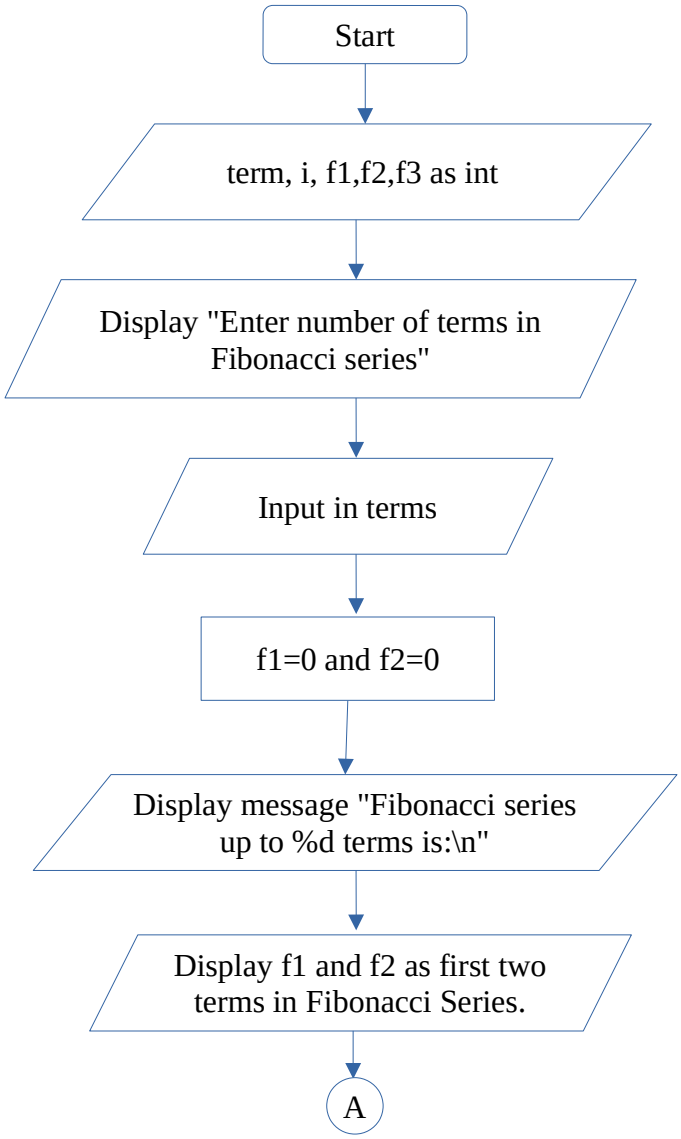
Step 11: Evaluate f1=f2

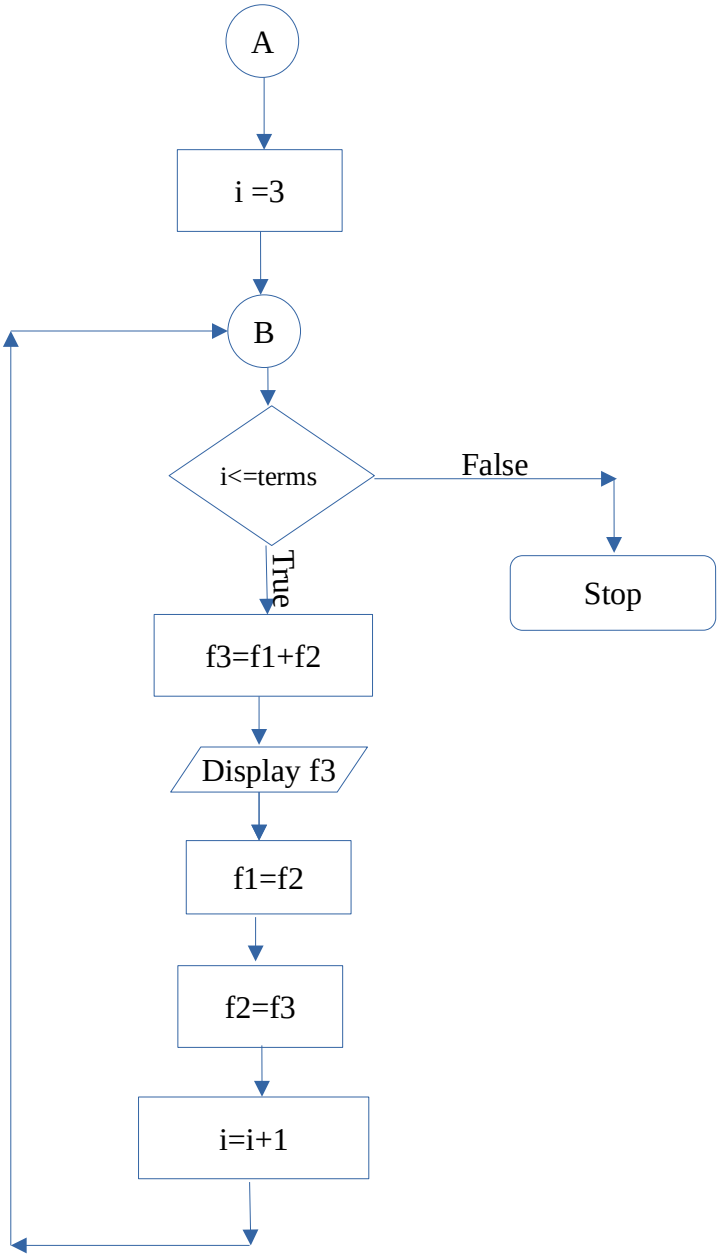
Step 12: Evaluate f2=f3

Step 13: Increment i by 1

Step 14: Stop

Flowchart:


Start
term, i, f1,f2,f3 as int
Display "Enter number of terms in Fibonacci series"
Input in terms
f1=0 and f2=0
Display message "Fibonacci series up to %d terms is:\n"
Display f1 and f2 as first two terms in Fibonacci Series.
A


A
i =3
B
i<=terms
False
Stop
True
f3=f1+f2
Display f3
f1=f2
f2=f3
i=i+1