Assignment Number – 04

Aim: Write C program to compute factorial of given positive integer using recursive function

Algorithm:

Step 1. START

Step 2: Read number

Step 3: set fact=1,i=1
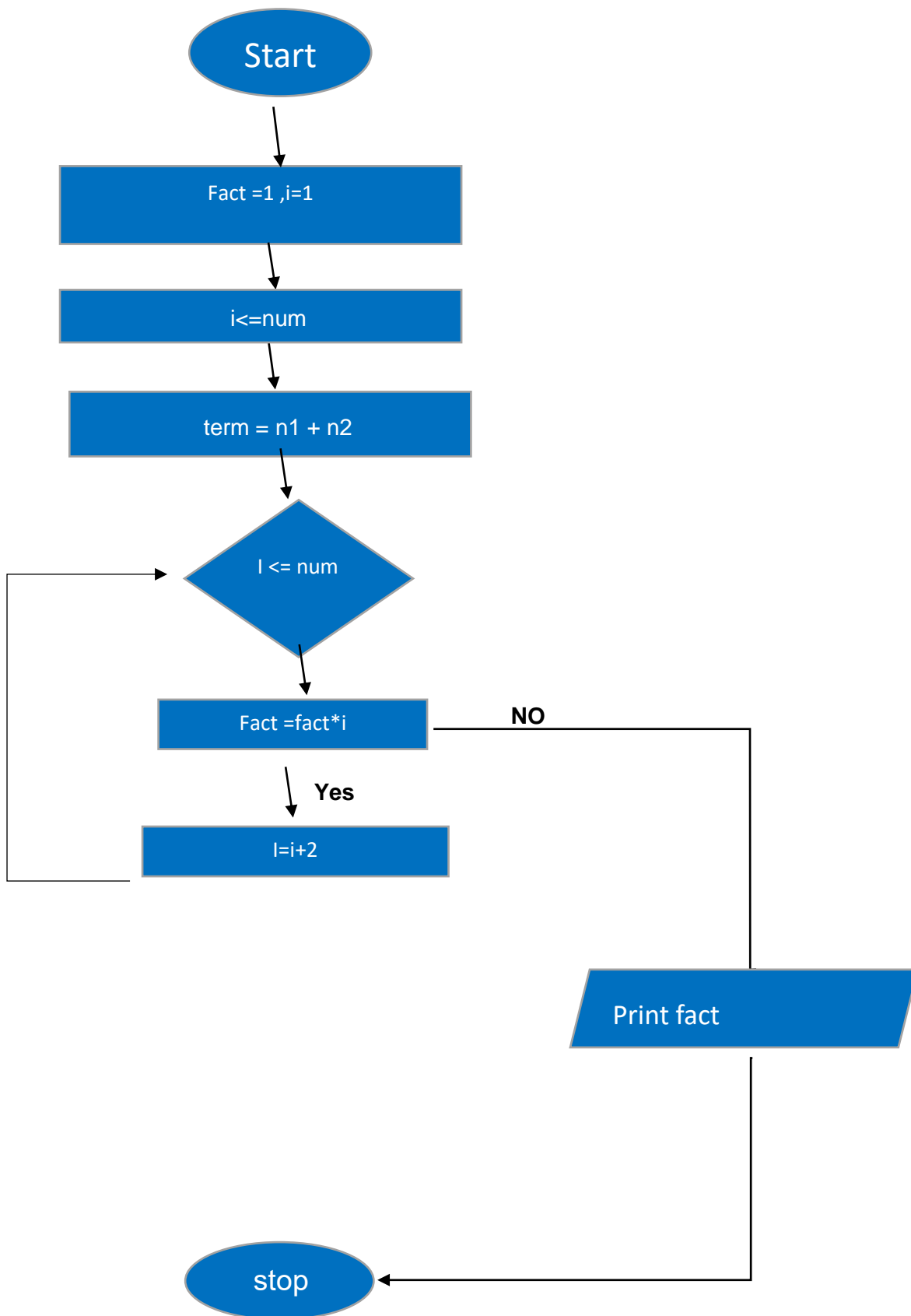
Step 4: check condition i<=number if false go to step 7

Step 5: fact =fact*i

Step 6: update i=i+1 go to step 4

Step 7: display fact

Step 8: Stop

Flowchart:

Start

Fact =1 ,i=1

i<=num

term = n1 + n2

I <= num

Fact =fact*i   **NO**

Yes

I=i+2

Print fact

stop

Program:

```c
#include<stdio.h>
int main(){
int num,i,fact=1;
printf("enter a number\n");
scanf("%d",&num);
for( i=1;i<=num;i++){
fact=fact*i;
}
printf("\n factorial of %d is %d",num,fact);
return 0;
}
```

output:
enter a number: 5

Factorial of 5 is 120

Conclusion:

Thus, we have successfully written the C program to print factorial of number. In this program we have used the int variable 'num', 'i', 'fact'. In this program we for loop and condition to loop and print n terms. Also, used 'scanf' and 'printf' built-in function to get the input from user and to display the result on screen/ monitor respectively.