Assignment No.3

Q1.Print numbers from 1 to 10

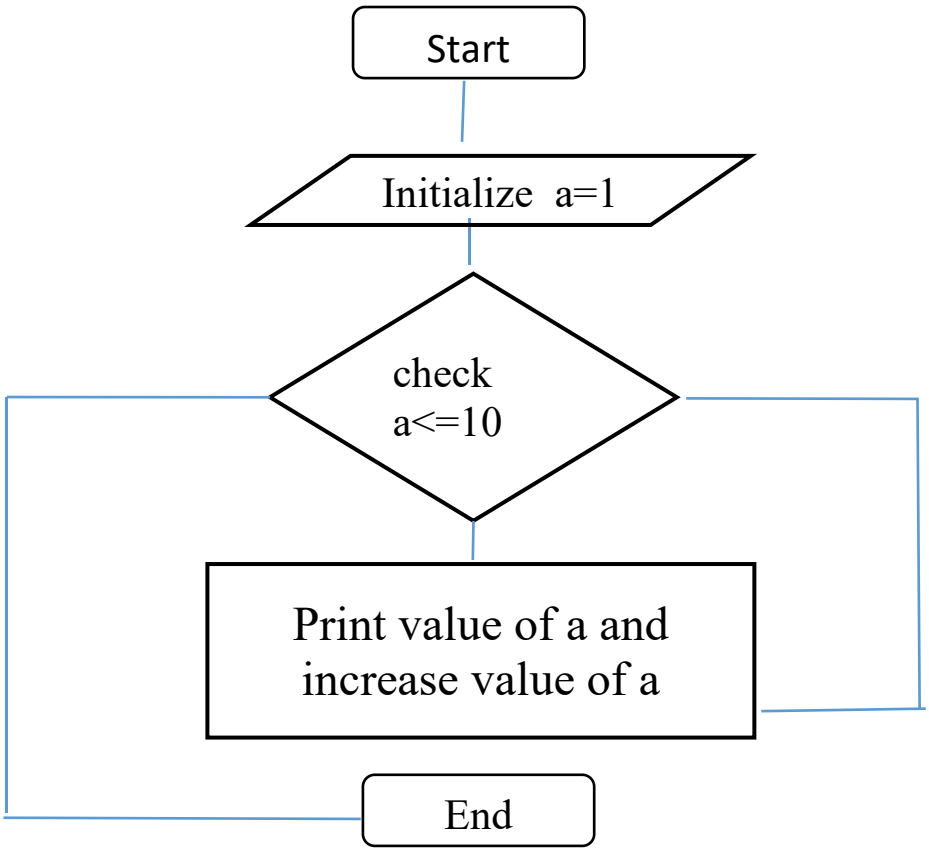
Code:-

```
#include<stdio.h>
void main(){
        int a=1;
        while(a<=10){
                printf("%d \n",a);
                a++;
        }
}
```

Algorithm:-

Step1:- Start
Step2:- Initialize a=1
Step3:- while check a<=10
Step8:- print the a value
Step5:- increase a by 1(a++)
Step7:- End

Flowchart :-



Q2.Print table for the given number.

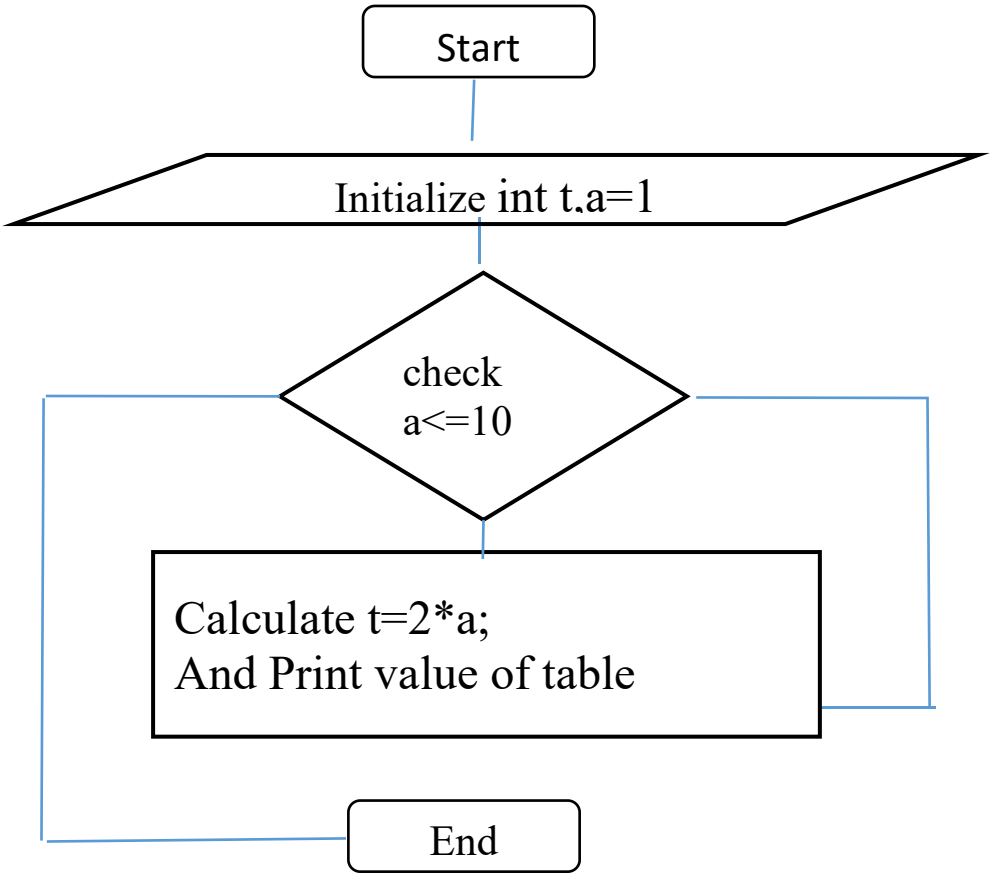
Code:-

```
#include<stdio.h>
void main(){
	int t,a=1;
	while(a<=10){
		t=2*a;
		printf("2*%d=%d \n",a,t);
		a++;
	}
}
```

Algorithm:-

Step1:- Start
Step2:- Initialize int t,a=1;
Step3:- While Check a<=10 then Calculate Table and print it .
Step4:- Print value of a.
Step5:- End

Flowchart :-


Start
Initialize int t,a=1
check
a<=10
Calculate t=2*a;
And Print value of table
End

Q3.Calculate sum of numbers in the given range.

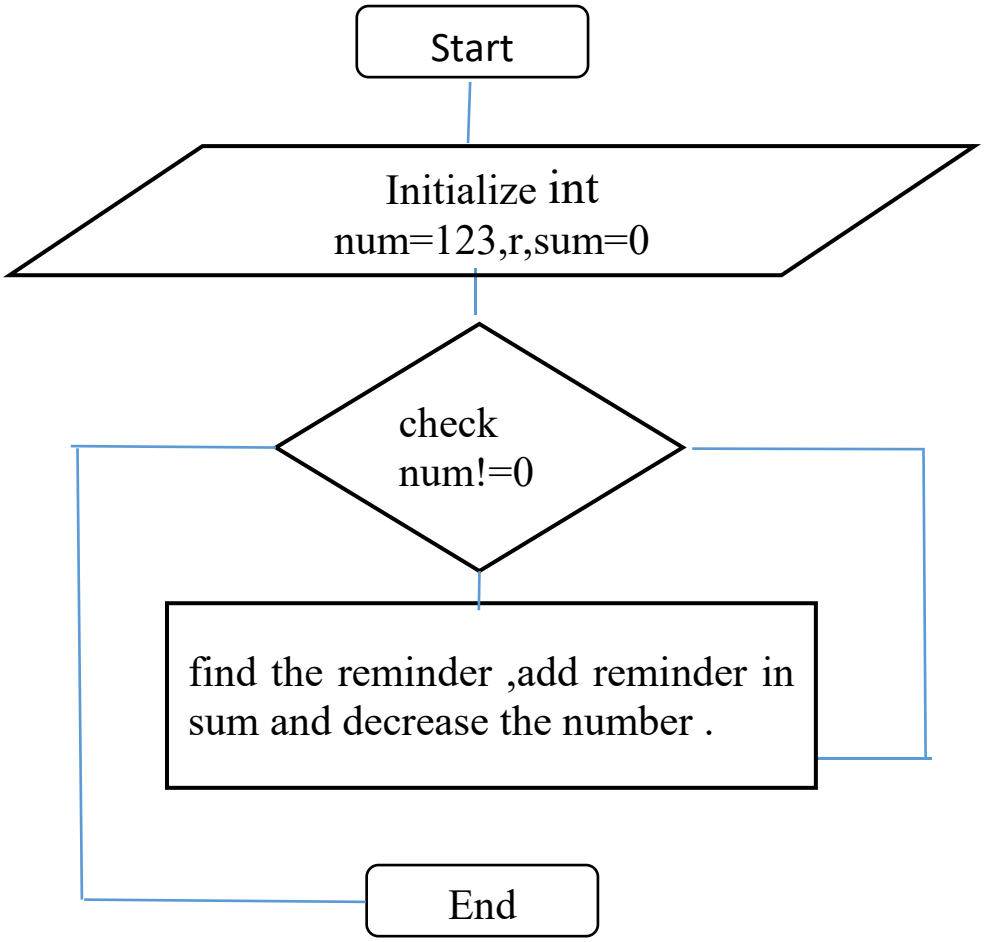
Code:-

```
#include<stdio.h>
void main(){
	int num=123,r,sum=0;
	while(num!=0){
		r=num%10;
		sum=sum+r;
		num=num/10;

	}
	printf("Sum of digit is :%d",sum);
```

}**Algorithm:-**

Step1:- Start
Step2:- int num=123,r,sum=0;
Step3:- While Check num!=0 then find the reminder ,add reminder in sum and decrease the number .
Step4:- Print value of sum.
Step5:- End

Flowchart :-


Start
Initialize int
num=123,r,sum=0
check
num!=0
find the reminder ,add reminder in sum and decrease the number .
End

Q4.Check number is prime or not

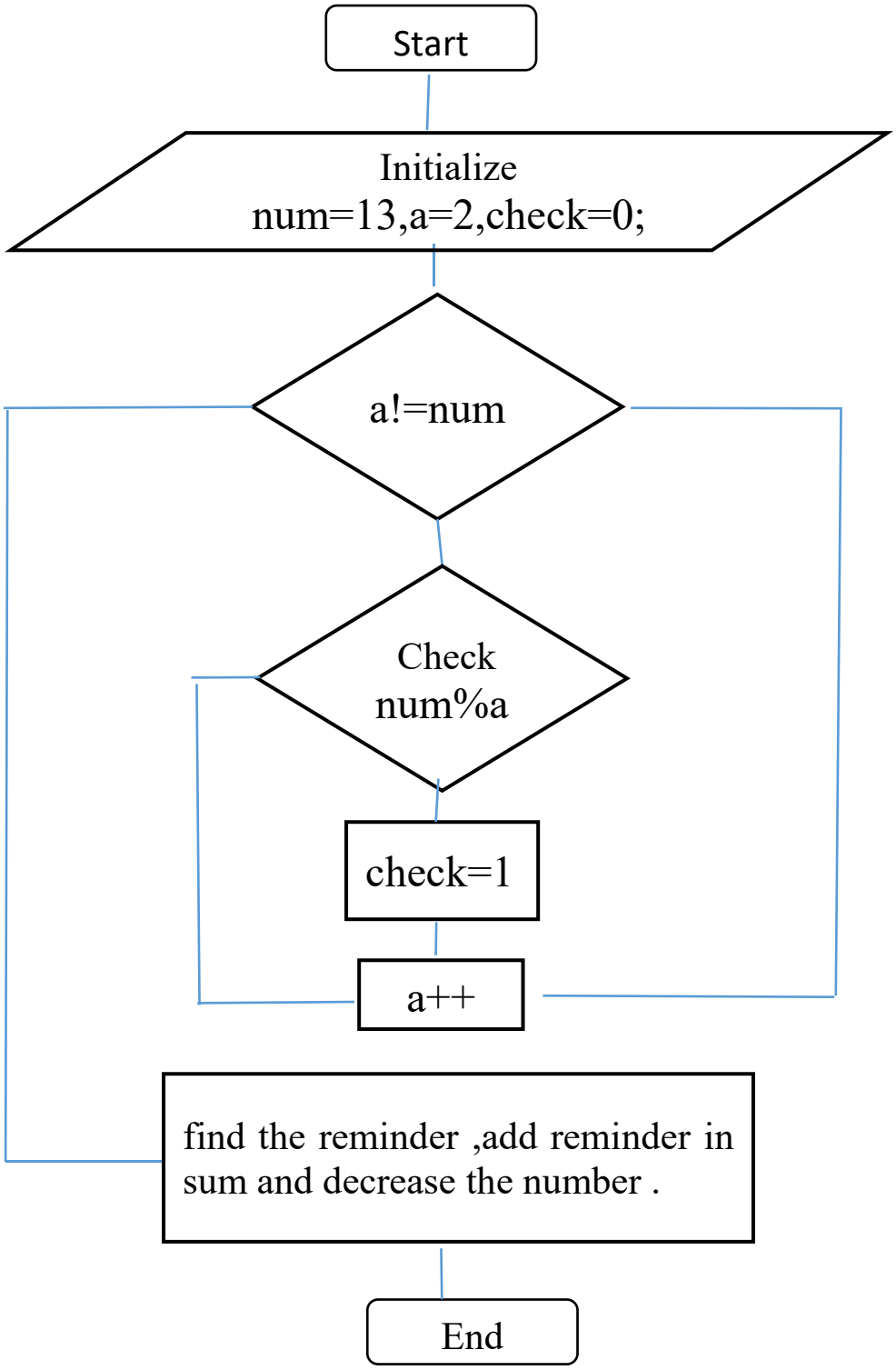
Code:-

```
#include<stdio.h>
void main(){
	int num=13,a=2,check=0;
	while(a!=num){
		if(num%a==0){
			check=1;
		}
		a++;
	}
	if(check!=1){
		printf("Number is prime");
	}
	else{
		printf("Number is Non-prime");
	}
}
```

Algorithm:-

Step1:- Start
Step2:- Initialize num=13,a=2,check=0;
Step3:- Check a!=num then Check num%a==0 then a is is true then check=1;
Step4:- Increase the number of a by 1(a++)
Step5:- then Execution of loop come out of the loop and check Check==1,if it's true then print number is Prime.
Step6:- else then print number is Non Prime
Step7:- End

Flowchart :-


Start
Initialize
num=13,a=2,check=0;
a!=num
Check
num%a
check=1
a++
find the reminder ,add reminder in sum and decrease the number .
End

Q5.Check number is Armstrong or not

Code:-

```
#include<stdio.h>
void main(){
	int num=1634,r,sum=0,r1;
	int t=0,no=num,a;
	int check=num;
	while(no!=0){
		t++;
		no=no/10;

	}
	while(num!=0){
		r=num%10;
		r1=r;
		a=t;
		while(t>1){
			r=r*r1;
			//printf("%d \n",r);
			t--;
		}
		t=a;
		sum=sum+r;
		num=num/10;
		//printf("sum= %d \n",sum);
	}
	(sum==check)?printf("Number is Armstrong Number"):printf("Number is Not Armstrong Number");


}
```

Q6.Check number is perfect or not.

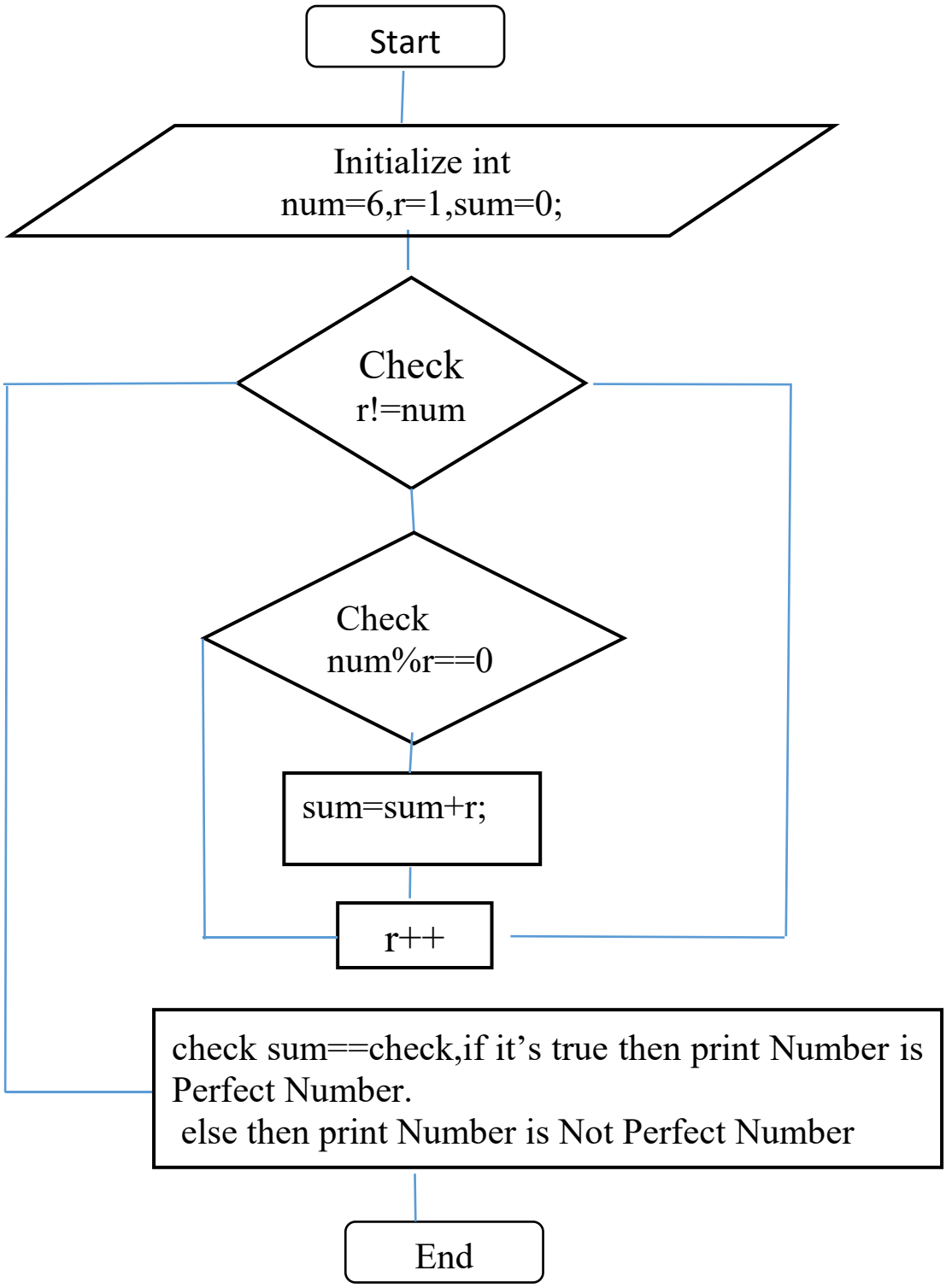
Code:-

```
#include<stdio.h>
void main(){
	int num=6,r=1,sum=0;
	int check=num;

	while(r!=num){
		if(num%r==0){
			sum=sum+r;
		}
		r++;
		}
	(sum==check)?printf("Number is Perfect Number"):printf("Number is Not Perfect Number");

}
```

Algorithm:-

Step1:- Start
Step2:- Initialize int num=6,r=1,sum=0;
int check=num;
Step3:- while Check r!=num then Check num%r==0 then a is is true then
sum=sum+r;
Step4:- Increase the number of r by 1(r++)
Step5:- then Execution of loop come out of the loop and check sum==check,if it's true then print Number is Perfect Number.
Step6:- else then print Number is Not Perfect Number
Step7:- End

Flowchart :-


Start
Initialize int
num=6,r=1,sum=0;
Check
r!=num
Check
num%r==0
sum=sum+r;
r++
check sum==check,if it's true then print Number is Perfect Number.
else then print Number is Not Perfect Number
End

Q7.Find factorial of number.

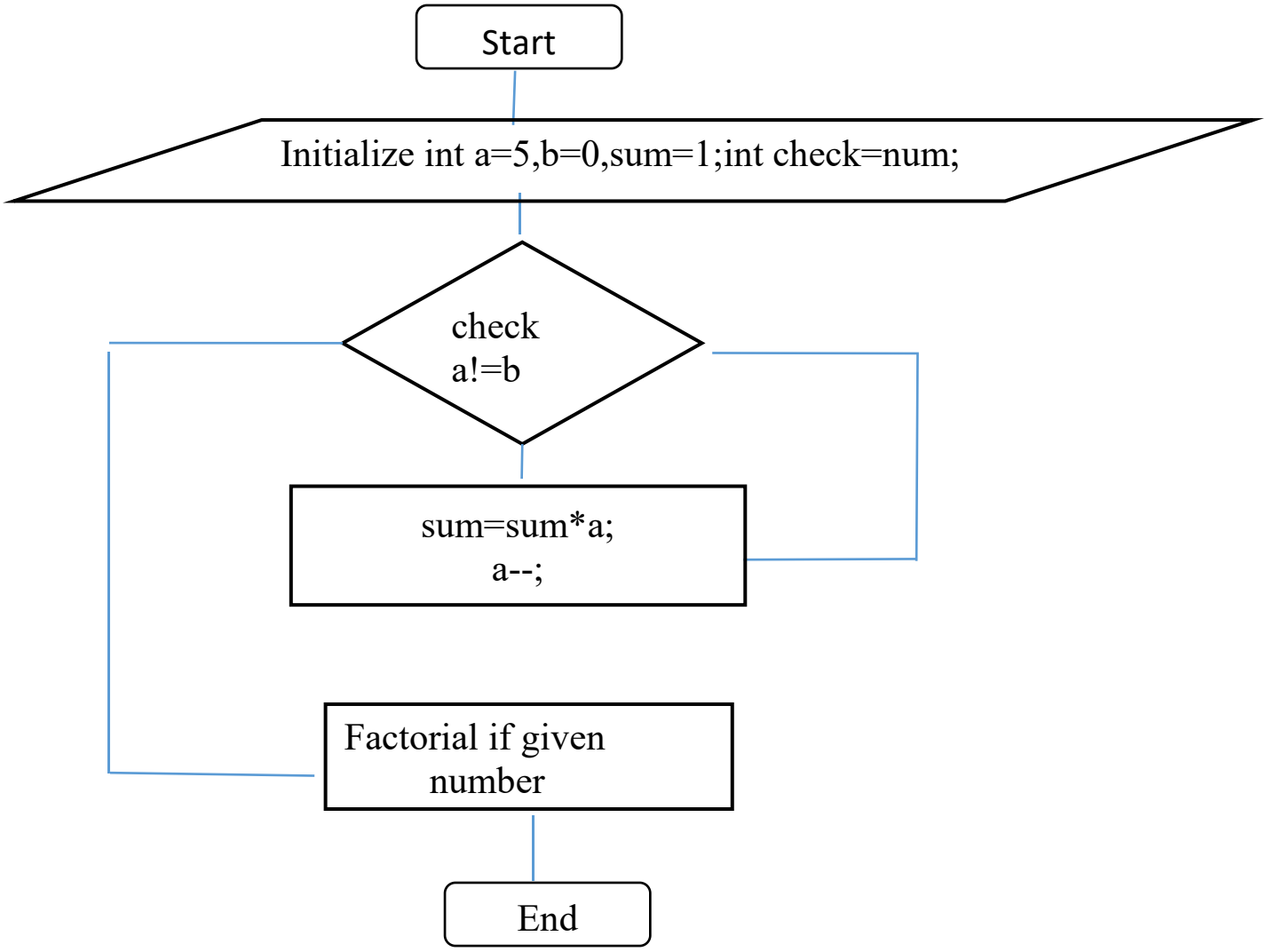
Code:-

```
#include<stdio.h>
void main(){
	int a=5,b=0,sum=1;
	while(a!=b){
		//printf("%d \n",a);
		sum=sum*a;
		a--;
	}
	printf("Factorial if given numbr is : %d \n",sum);
}
```

Algorithm:-

Step1:- Start
Step2:- Initialize int a=5,b=0,sum=1;
		int check=num;
Step3:- while Check a!=b then it is true then sum=sum*a;
Step4:- Decrease the number of a by 1(r--)
Step5:- then Execution of loop come out of the loop and print Factorial if given
		number
Step6:- End

Flowchart :-


Start
Initialize int a=5,b=0,sum=1;int check=num;
check
a!=b
sum=sum*a;
a--;
Factorial if given
number
End