



# KIET Group of Institutions, Ghaziabad

## Department of Computer Applications

(An ISO – 9001: 2015 Certified & 'A' Grade accredited Institution by NAAC)

### Problem Solving Using C Lab

#### KCA 151: Session 2020-21

#### Experiment – No-3

<b>Objective: Program to implement condition statement in C language</b>		
<b>Scheduled Date</b>	<b>Compiled Date</b>	<b>Submission Date</b>
<b>21-Dec-2020</b>	<b>21-Dec-2020</b>	<b>21-Dec-2020</b>

### 1. A program to calculate the factorial number.

#### Algorithm:

Step 1: Start

Step 2: Read the Number num

Step 3: [Initialize] i=1, fact=1.

Step 4: Repeat step 4 through 6 until i=n.

Step 5: fact=fact\*i.

Step 6: i=i+1.

Step 7: Print fact.

Step 8: Stop

#### PROGRAM:

```
#include <stdio.h>
```

```
void main()
```

```
{
```

```
    int i,num,fact=1;
```

```
    printf("enter the number");
```

```
    scanf("%d",&num);
```

```
    while(i<=num)
```

```
{
```

```
    fact=fact*i;
```

```
    i++;
```

```
}
```

```
printf("factorial of number %d is %d",num,fact);
```

```
getch();
```

```
}
```



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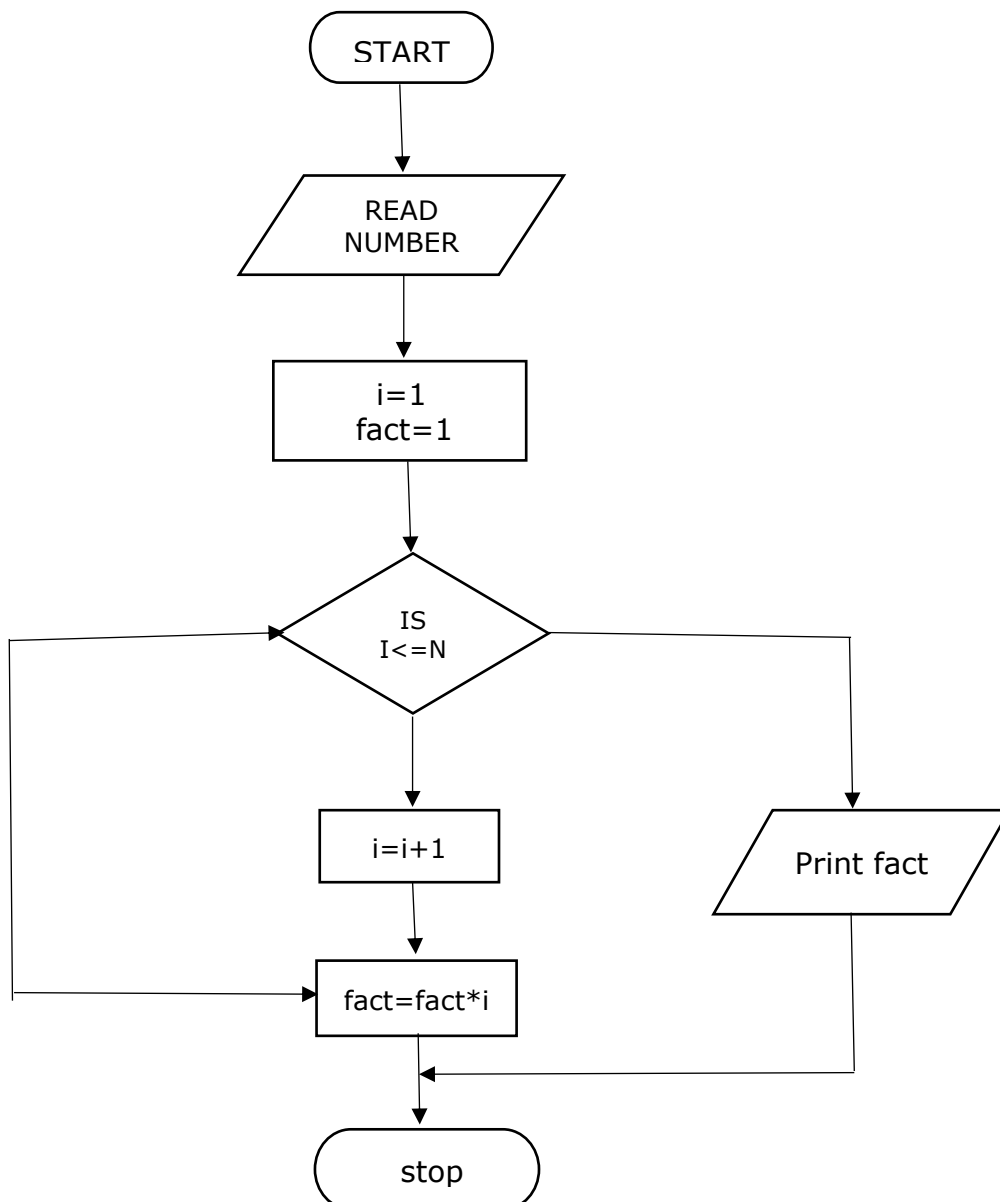
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#### OUTPUT:

```
main.c:22:1: warning: implicit declaration of function 'getch'
enter the number5
factorial of number 5 is 0
...Program finished with exit code 255
Press ENTER to exit console.
```

#### Flowchart Segment:





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## 2. A program to print a star pattern.

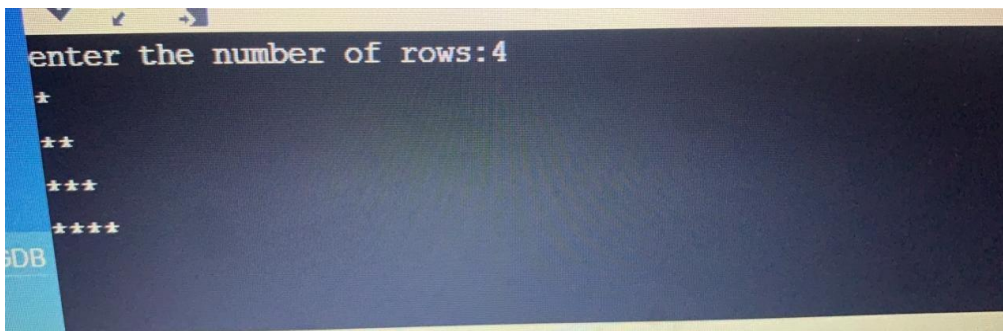
### PROGRAM:

```
#include<stdio.h>

int main()
{
    int i,j,rows;
    printf("enter the number of rows:");
    scanf("%d",&rows);
    for(i=1;i<=rows;i++){
        for(j=1;j<=i;j++){
            printf("*");
        }
        printf("\n");
    }

    return 0;
}
```

### OUTPUT:





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### 3. A program to addition of digits of a number.

#### ALGORITHM:

Step 1: Start

Step 2: Read the number.

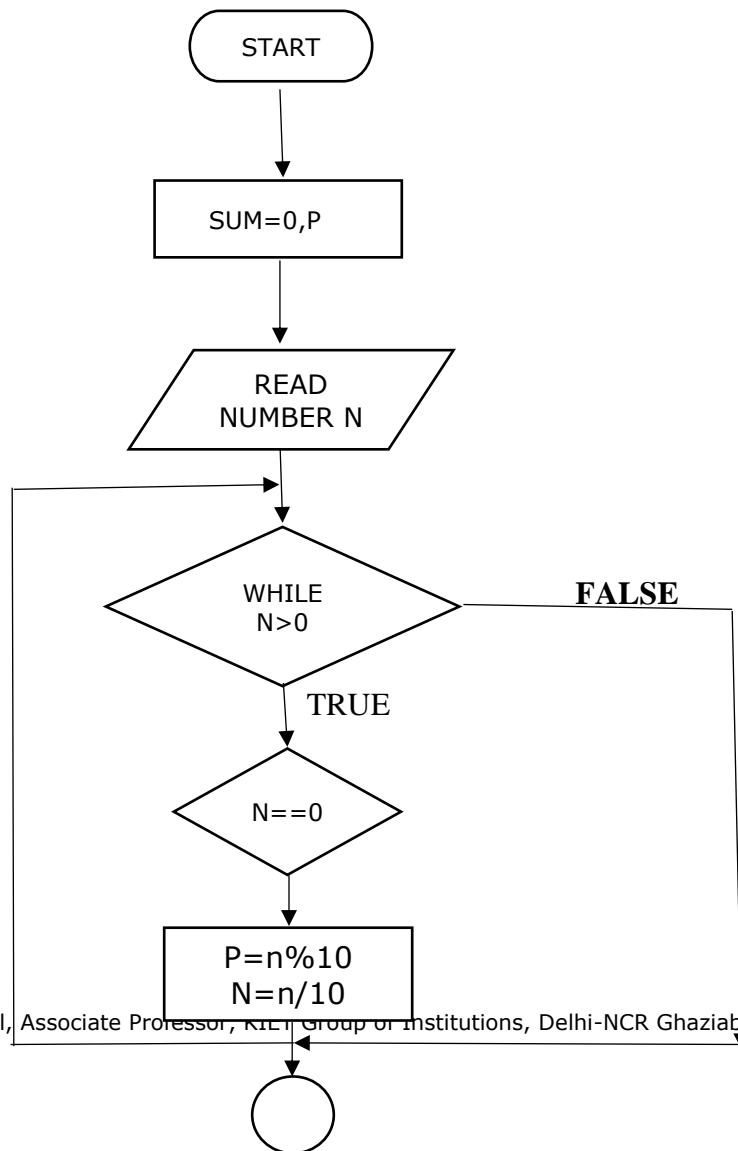
Step 3: Get the modulus of the number.

Step 4: Divide the number by 10.

Step 5: Sum the remainder of the number.

Step 6: Repeat the step 3 while the number is greater than 0.

#### FLOWCHART:





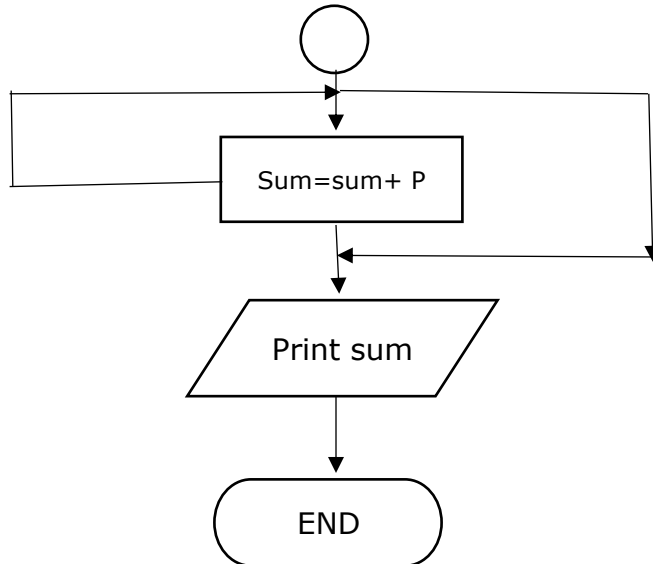
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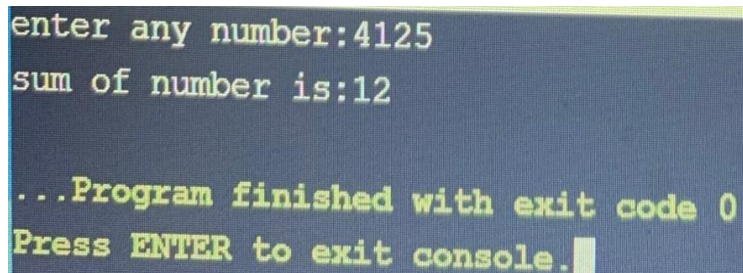
#### PROGRAM:

```
#include<stdio.h>

int main()
{
    int n,sum=0,P;
    printf("enter any number:");
    scanf("%d",&n);
    while(n>0)
    {
        P=n%10;
        n=n/10;
        sum=sum+P;
    }
    printf("sum of number is:%d",sum);

    return 0;
}
```

#### OUTPUT:



```
enter any number:4125
sum of number is:12

...Program finished with exit code 0
Press ENTER to exit console.
```



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## 4. A PROGRAM TO CALCULATE THE FIBONACCI SERIES.

### ALGORITHM:

Step 1: Start

Step 2: Read the value of i

Step 3: [Initialize] a=1, b=1, c

Step 4: do

c= a+b, a=b, b=c

print c.

while(i<=10)

Step 5: Goto step 4

Step 6: Stop

### PROGRAM:

```
#include<stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
int a=1,b=1,c,i=1;
```

```
printf("%d %d ",a, b);
```

```
do{
```



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```
c=a+b;
printf("%d ",c);
a=b;
b=c;
i++;
}
while(i<=10);
getch();
}
```

#### OUTPUT:

```
1 1 2 3 5 8 13 21 34 55
...Program finished with exit code 255
Press ENTER to exit console.
```





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#### FLOWCHART:

