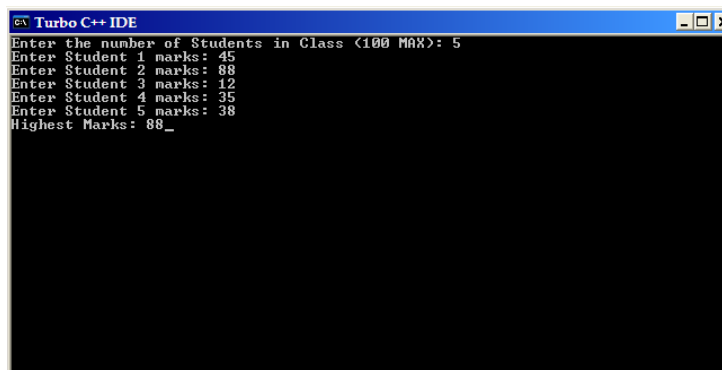


## Program to Input Marks of Students in Array and Print largest Number.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int n, marks[99], l=0, i ;
    printf("Enter the number of Students in Class (100 MAX): ");
    scanf("%d",&n);
    for(i=0;i<n;i++){
        printf("Enter Student %d marks: ",i+1);
        scanf("%d",&marks[i]);
        if(l<marks[i]) l=marks[i];
    }
    printf("Highest Marks: %d",l);
    getch();
}
```

### Output:

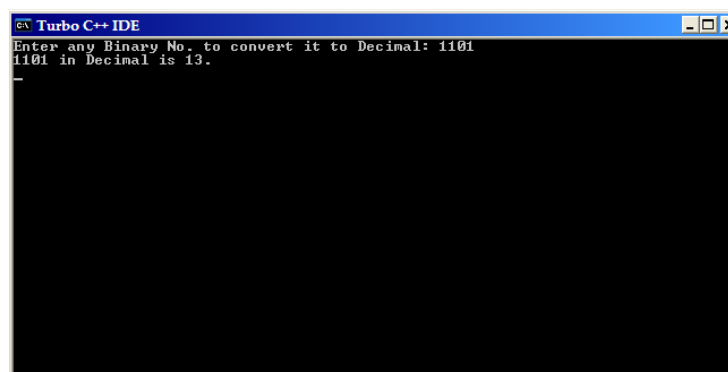
A screenshot of the Turbo C++ IDE window. The title bar reads "Turbo C++ IDE". The main window area shows the following text: "Enter the number of Students in Class (100 MAX): 5", "Enter Student 1 marks: 45", "Enter Student 2 marks: 88", "Enter Student 3 marks: 12", "Enter Student 4 marks: 35", "Enter Student 5 marks: 38", and "Highest Marks: 88\_". The text is displayed in a monospaced font on a black background.

```
Turbo C++ IDE
Enter the number of Students in Class (100 MAX): 5
Enter Student 1 marks: 45
Enter Student 2 marks: 88
Enter Student 3 marks: 12
Enter Student 4 marks: 35
Enter Student 5 marks: 38
Highest Marks: 88_
```

## Program to convert Binary number to Decimal Number.

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
void main()
{
    int i=0, bin, swap, dec=0, temp;
    printf("Enter any Binary No. to convert it to Decimal: ");
    scanf("%d",&bin);
    temp=bin;
    while( bin!=0 ){
        swap = bin%10;
        bin /= 10;
        dec += swap*pow(2,i);
        i++;
    }
    printf("%d in Decimal is %d.",temp,dec);
    getch();
}
```

## Output:



## Program to find all Possible Factors of a given positive integer.


```
#include <stdio.h>
#include <conio.h>
void main()
{
    int number, i;
    clrscr();

    printf("Enter a positive integer: ");
    scanf("%d",&number);

    printf("Factors of %d are: ", number);

    for(i=1; i <= number; ++i)
    {
        if (number%i == 0)
        {
            printf(" %d ",i);
        }
    }
    getch();
}
```

### Output:

A screenshot of a terminal window showing the output of the program. The first line is "Enter a positive integer: 118" and the second line is "Factors of 118 are: 1 2 59 118". The rest of the terminal window is black.

```
Enter a positive integer: 118
Factors of 118 are: 1 2 59 118
```


## Program to Check whether a Year is Leap Year or Not.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int year;
    clrscr();

    printf("Enter the year: ");
    scanf("%d" ,&year);

    if ( year%4==0 )
    {
        printf("\n%d is a Leap year." ,year);
    }
    else
    {
        printf("\n%d is not a Leap year." ,year);
    }
    getch();
}
```

### Output:



```
Enter the year: 2017
2017 is not a Leap year.
```

## Program to find sum of first N Numbers.

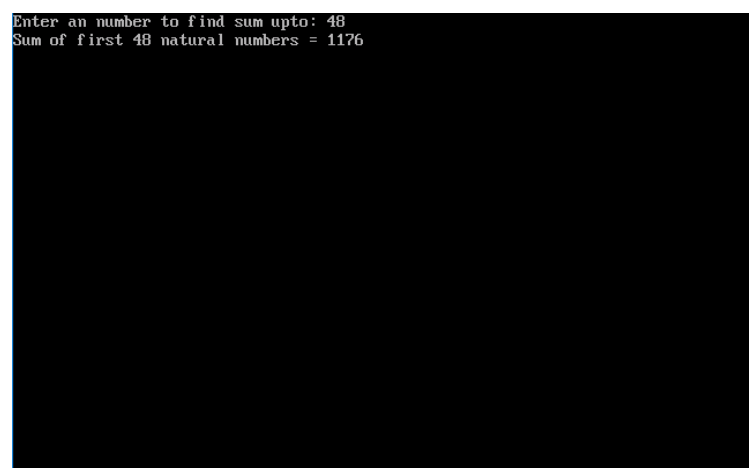
```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, num, sum = 0;
    clrscr();

    printf("Enter a number to find sum upto: ");
    scanf ("%d", &num);

    for (i = 1; i <= num; i++)
    {
        sum += i;
    }

    printf ("Sum of first %d natural numbers = %d\n", num, sum);
    getch();
}
```

## Output:

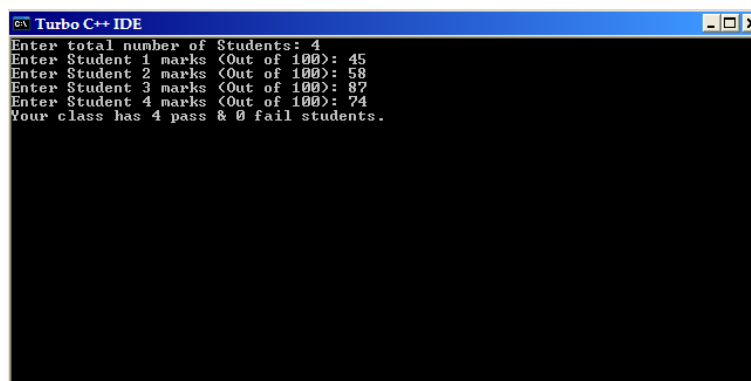
A screenshot of a terminal window showing the output of the program. The first line is the prompt 'Enter an number to find sum upto: 48' followed by the user input '48'. The second line is the output 'Sum of first 48 natural numbers = 1176'.

```
Enter an number to find sum upto: 48
Sum of first 48 natural numbers = 1176
```

## Program to Find out Pass & Failed number of Students by inputting their Marks.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int st, pass=0, fail=0, num;
    printf("Enter total number of Students: ");
    scanf("%d",&st);
    for(int i = 1; i <= st; i++)
    {
        again:
        printf("Enter Student %d marks (Out of 100): ",i);
        scanf("%d",&num);
        if(num<=100){
            if(num>=40) pass++;
            else if(num<40) fail++;
        }else {
            printf("Total Marks Can't be greater than 100 !!!\n");
            goto again; }
    }
    printf("Your class has %d pass & %d fail students.\n",pass,fail);
    getch();
}
```

## Output:



The screenshot shows a Turbo C++ IDE window with the following text in the console:

```
Enter total number of Students: 4
Enter Student 1 marks <Out of 100>: 45
Enter Student 2 marks <Out of 100>: 58
Enter Student 3 marks <Out of 100>: 87
Enter Student 4 marks <Out of 100>: 74
Your class has 4 pass & 0 fail students.
```

## Program to get Fibonacci series up to Nth term.


```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, n, t1 = 0, t2 = 1, nextTerm;
    clrscr();

    printf("Enter the number of terms: ");
    scanf("%d", &n);

    printf("Fibonacci Series: ");

    for (i = 1; i <= n; ++i)
    {
        printf("\n%d", t1);
        nextTerm = t1 + t2;
        t1 = t2;
        t2 = nextTerm;
    }
    getch();
}
```

## Output:

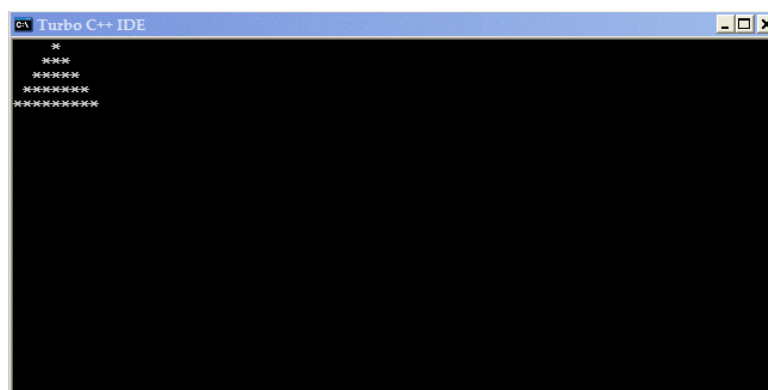


```
Enter the number of terms: 13
Fibonacci Series:
0
1
1
2
3
5
8
13
21
34
55
89
144_
```

## Program to print Triangle Star pattern.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    for(int i=1;i<=5;i++){
        for(int j=i;j<=5;j++){
            printf(" ");
        }
        for(int k=1;k<=(2*i-1);k++){
            printf("*");
        }printf("\n");
    }
    getch();
}
```

## Output:

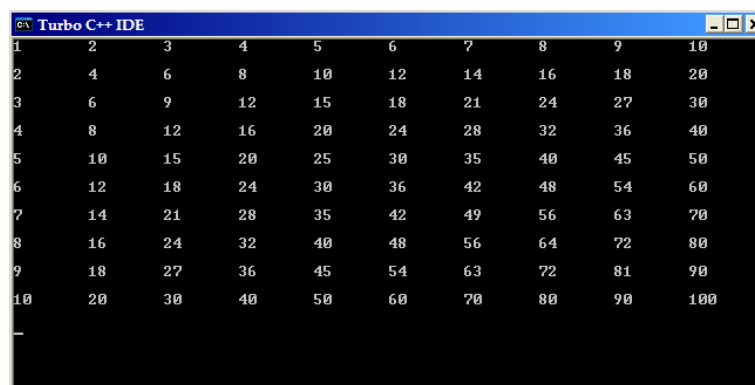




## Program to print Multiplication Table from 1 to 10.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    for(int i=1 ; i<=10 ; i++){
        for(int j=1 ; j<=10 ; j++){
            printf("%d\t",i*j);
        }
        printf("\n");
    }
    getch();
}
```

## Output:

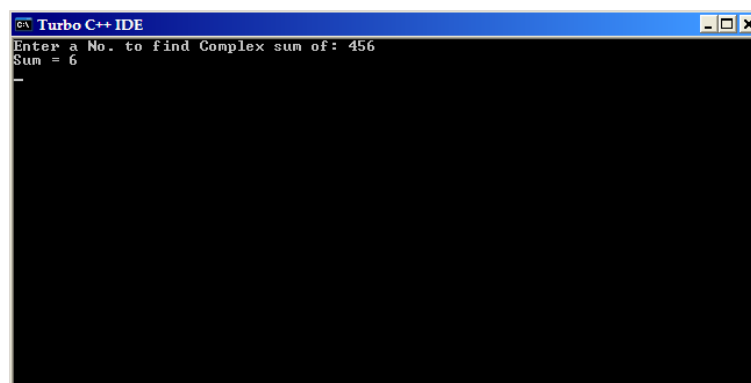


1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

## Program to Find Repetitive or Complex Sum of Number.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int swap=0, num, sum=0;
    printf("Enter a No. to find Complex sum of: ");
    scanf("%d", &num);
    while(num!=0){
        swap=num%10;
        num/=10;
        sum+=swap;
    }
    while(sum>0){
        swap=sum%10;
        sum/=10;
        num+=swap;
    }
    printf("Sum = %d\n",num);
    getch();
}
```

### Output:

A screenshot of the Turbo C++ IDE window. The title bar reads "Turbo C++ IDE". The main text area shows the program's execution: "Enter a No. to find Complex sum of: 456" followed by "Sum = 6" on the next line. The background of the IDE is black.

## Program of Simple Calculator using Switch.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    float small,large,res; char ch;
    do{
        printf("Enter two Numbers: \n");
        scanf("%f%f",&large,&small);
    }
    again:
    printf("Select operator: {+}{-}{*}/{/} ");
    ch=getch();
    printf("%c",ch);
    switch(ch){
        case '+':
        {
            res=large+small;
            break;
        }
        case '-':
        {
            res=large-small;
            break;
        }
        case '*':
        {
            res=small*large;
            break;
        }
        case '/':
        {
            res=large/small;
            break;
        }
        default:
```

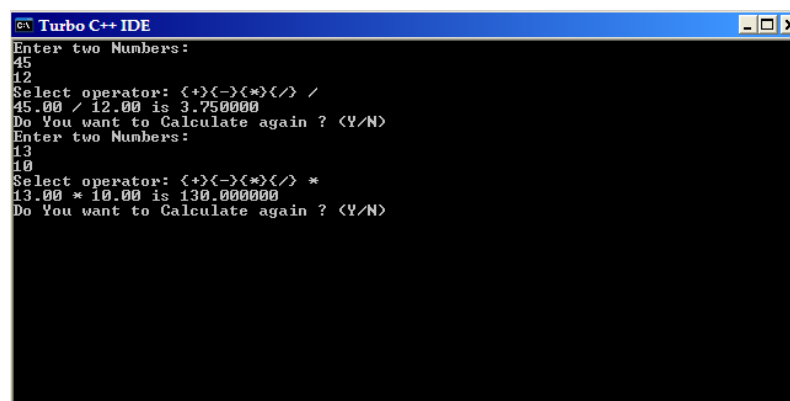
```

        {
            printf("\n!!! Wrong Choice !!!\n");
            goto again;
        }
        break;
    }
}

printf("\n%.2f %c %.2f is %f",large,ch,small,res);
printf("\nDo You want to Calculate again ? (Y/N)\n");
ch=getch();
clrscr();
}while(ch=='Y' || ch=='y');
getch();
}

```

## Output:



```

Turbo C++ IDE
Enter two Numbers:
45
12
Select operator: <+><-><*></> /
45.00 / 12.00 is 3.750000
Do You want to Calculate again ? <Y/N>
Enter two Numbers:
13
10
Select operator: <+><-><*></> *
13.00 * 10.00 is 130.000000
Do You want to Calculate again ? <Y/N>

```

## Program to find total Number of Male & Female Voters By getting their Age and Gender as Input.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int nvot, age, male=0, female=0, voter=0, pop;
    char gen;
    printf("Enter Total Population: ");
    scanf("%d",&pop);

    for(int i = 1; i <= pop; i++)
    {
        printf("Enter age of Person %d: ",i);
        scanf("%d",&age);
        if (age>=18) voter++;

        again:
        printf("Enter Person %d gender (M/F): ",i);
        gen=getch();
        printf("%c\n",gen);
        if (gen=='M' || gen=='m'){
            if(age>=18) male++ ;
            else continue;
        }

        else if (gen=='F' || gen=='f'){
            if(age>=18) female++ ;
            else continue;
        }

        else {
            printf("Are you sure this is an option?\nTry Again!!!\n");
            goto again;
        }

    }
}
```

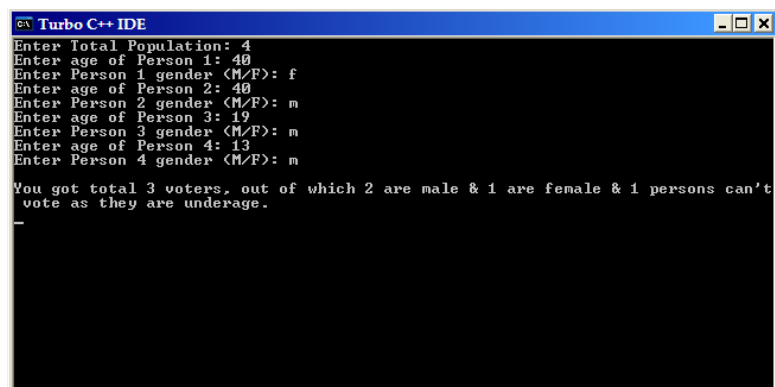
```
nvot=pop-voter;
```

```
printf("\nYou got total %d voters, out of which %d are male & %d are female & %d persons  
can't vote as they are underage.\n",voter, male, female, nvot);
```

```
getch();
```

```
}
```

## Output:

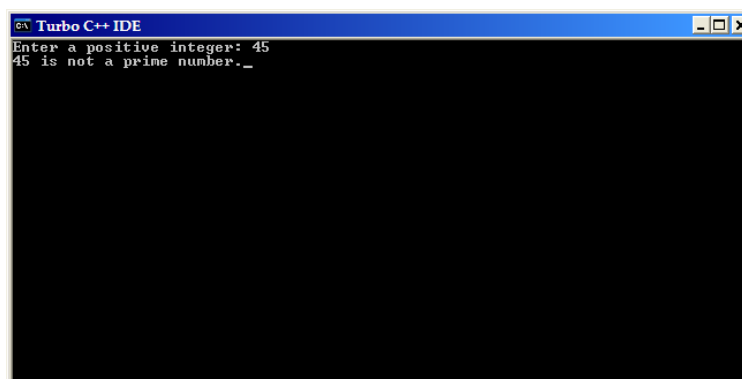
A screenshot of the Turbo C++ IDE window. The title bar reads "Turbo C++ IDE". The main text area shows the following input and output:

```
Enter Total Population: 4  
Enter age of Person 1: 40  
Enter Person 1 gender (M/F): f  
Enter age of Person 2: 40  
Enter Person 2 gender (M/F): m  
Enter age of Person 3: 19  
Enter Person 3 gender (M/F): m  
Enter age of Person 4: 13  
Enter Person 4 gender (M/F): m  
  
You got total 3 voters, out of which 2 are male & 1 are female & 1 persons can't  
vote as they are underage.  
_
```

## Program to Find out whether a Number is Prime or Not.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int n, i, flag = 0;
    printf("Enter a positive integer: ");
    scanf("%d", &n);
    for(i = 2; i <= n/2; i++)
    {
        if(n%i==0) {
            flag = 1;
            break; }
    }
    if (n == 1)
        printf("1 is neither a prime nor a composite number.");
    else {
        if (flag == 0)
            printf("%d is a prime number.", n);
        else
            printf("%d is not a prime number.", n);
    }
    getch();
}
```

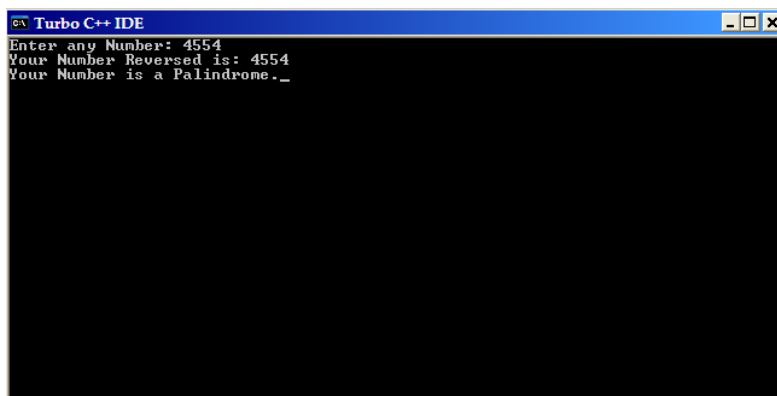
### Output:



## Program to Find Reverse of a Number & check whether it's Palindrome or Not.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int num,rev=0,d,c=0,sum=0,temp;
    printf("Enter any Number: ");
    scanf("%d",&num);
    temp=num;
    while(num>0){
        d=num%10;
        num=num/10;
        rev=(rev*10)+d;
    }
    printf("Your Number Reversed is: %d",rev);
    printf("\nYour Digit Sum is %d containing %d digits.",sum,c);
    if (temp==rev) printf("\nYour Number is a Palindrome.");
    getch();
}
```

### Output:

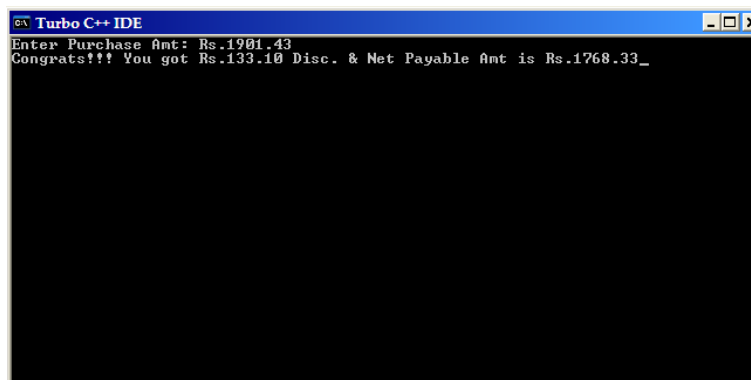
A screenshot of the Turbo C++ IDE window. The title bar reads "Turbo C++ IDE". The main text area shows the following output:  
Enter any Number: 4554  
Your Number Reversed is: 4554  
Your Number is a Palindrome.\_  
The cursor is positioned at the end of the last line.



## Program to Find Discount & Net Amount by Total Purchase Amt.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    float pAmt,disc,net;
    printf("Enter Purchase Amt: ");
    scanf("%f",&pAmt);
    if(pAmt<500){
        disc=0;
        net=pAmt;
    } else if(pAmt>=500 && pAmt<1000){
        disc=0.05*pAmt;
        net=pAmt-disc;
    } else if(pAmt>=1000 && pAmt<2000){
        disc=0.07*pAmt;
        net=pAmt-disc;
    } else {
        disc=0.1*pAmt;
        net=pAmt-disc;
    }
    printf("Congrats!!! You got Rs.%.2f Disc. & Net Payable Amt is %.2f",disc,net);
    getch();
}
```

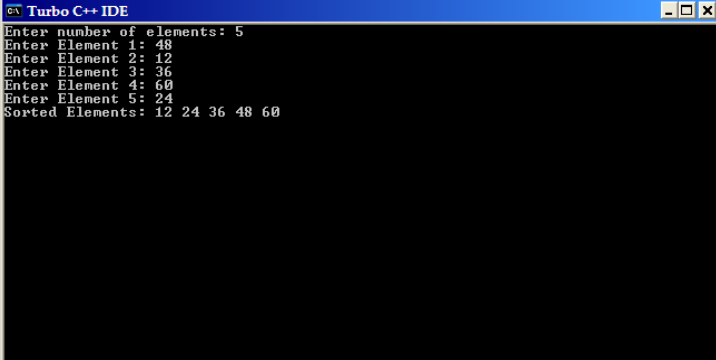
### Output:



## Program to sort Elements of An Array using Selection Sort.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a[100],i,n,t;
    printf("Enter number of elements: ");
    scanf("%d",&n);
    for(i=0;i<n;i++){
        printf("Enter Element %d: ",i+1);
        scanf("%d",&a[i]);
    }
    for(i=0;i<n-1;i++){
        for(int j=i+1;j<n;j++){
            if(a[i]>a[j]){
                t=a[i];
                a[i]=a[j];
                a[j]=t;}
        }
    }
    printf("Sorted Elements: ");
    for(i=0;i<n;i++){
        printf("%d ",a[i]);
    }
    getch();
}
```

### Output:




The screenshot shows the Turbo C++ IDE window with the following output:

```
Enter number of elements: 5
Enter Element 1: 48
Enter Element 2: 12
Enter Element 3: 36
Enter Element 4: 60
Enter Element 5: 24
Sorted Elements: 12 24 36 48 60
```

## Program to find Factorial of a given positive integer.

```
#include <stdio.h>
#include <conio.h>
void main()
{
    int i, n;
    unsigned long long fact=1;
    clrscr();
    printf("Enter an Positive Integer to find Factorial of: ");
    scanf("%d" ,&n);
    if ( n<0 )
        printf("\nError! You Entered a Negative Value");
    else
    {
        for (i = 1; i <= n; ++i)
        {
            fact *= i;
        }
        printf("\nFactorial of %d is %llu" ,n ,fact);
    }
    getch();
}
```

## Output:



```
Enter an Positive Integer to find Factorial of: 11
Factorial of 11 is 39916800
```