



## ASSIGNMENT-03

**Title : Lab Assignment – 3**

**Course Code : CSE-122**

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## Array

**1. Write a program that will take n (n = any positive integer less than 100) from the user and find the biggest number among them.**

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

```
int main()
```

```
{
```

```
    int a[100],i,n;
```

```
    printf("enter the number of turn: ");
```

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

```
    for(i=0;i<n;i++)
```

```
    {
```

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

```
        scanf("%d",&a[i]);
```

```
    }
```

```
    for(i=1;i<n;i++)
```

```
    {
```

```
        if(a[0]<a[i])
```

```
        {
```

```
            a[0]=a[i];
```

```
        }
```

```
    }
```

```
    printf("The biggest number is: %d",a[0]);
```

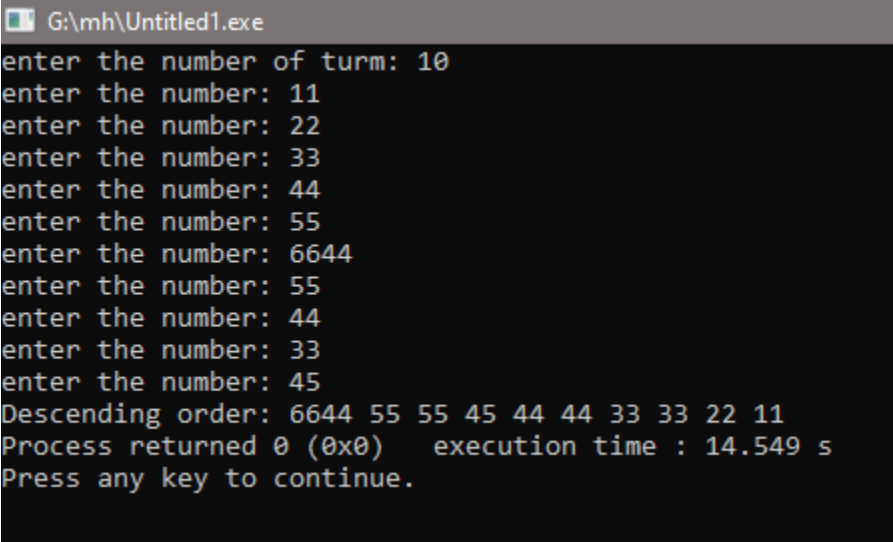
```
    return 0;
```

```
}
```

```
G:\mh\Untitled1.exe
enter the number of turn: 5
enter the number: 33
enter the number: 44
enter the number: 55
enter the number: 66
enter the number: 77
The biggest number is: 77
Process returned 0 (0x0)   execution time : 12.826 s
Press any key to continue.
```

**2. Write a program that will take n (n = any positive integer less than 100) from the user and print them in descending order.**

```
#include<stdio.h>
int main()
{
    int a[100];
    int i,j,b,n;
    printf("enter the number of turn: ");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("enter the number: ");
        scanf("%d",&a[i]);
    }
    for(i=0;i<n;i++)
    {
        for(j=i+1;j<n;j++)
        {
            if(a[i]<a[j])
            {
                b=a[i];
                a[i]=a[j];
                a[j]=b;
            }
        }
    }
    printf("Descending order: ");
    for(i=0;i<n;i++){
        printf("%d ",a[i]);
    }
    return 0;
}
```

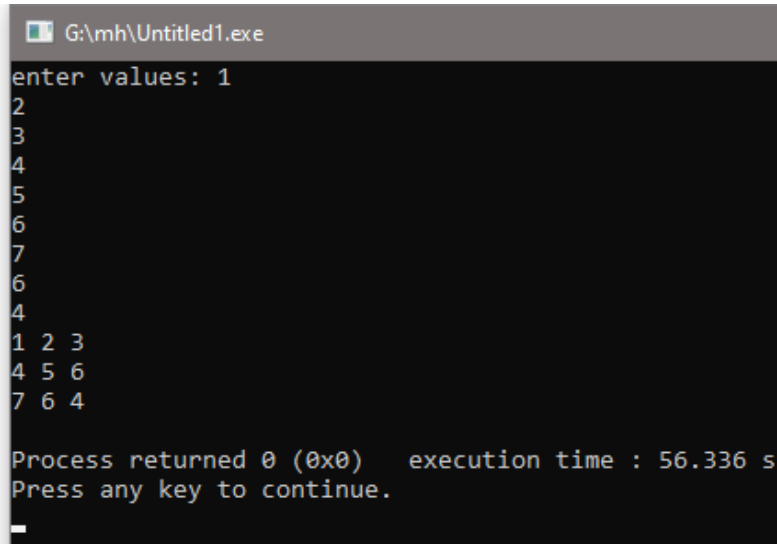


```
G:\mh\Untitled1.exe
enter the number of turn: 10
enter the number: 11
enter the number: 22
enter the number: 33
enter the number: 44
enter the number: 55
enter the number: 6644
enter the number: 55
enter the number: 44
enter the number: 33
enter the number: 45
Descending order: 6644 55 55 45 44 44 33 33 22 11
Process returned 0 (0x0)   execution time : 14.549 s
Press any key to continue.
```

### 3. WAP to input the values in a two dimensional array of integers and display the values.

```
#include<stdio.h>

int main()
{
    int a[3][3];
    int i,j;
    printf("enter values: ");
    for(i=0;i<3;i++)
    {
        for(j=0;j<3;j++)
            scanf("%d",&a[i][j]);
    }
    for(i=0;i<3;i++)
    {
        for(j=0;j<3;j++)
            {printf("%d ",a[i][j]);}
        printf("\n");}
}
```



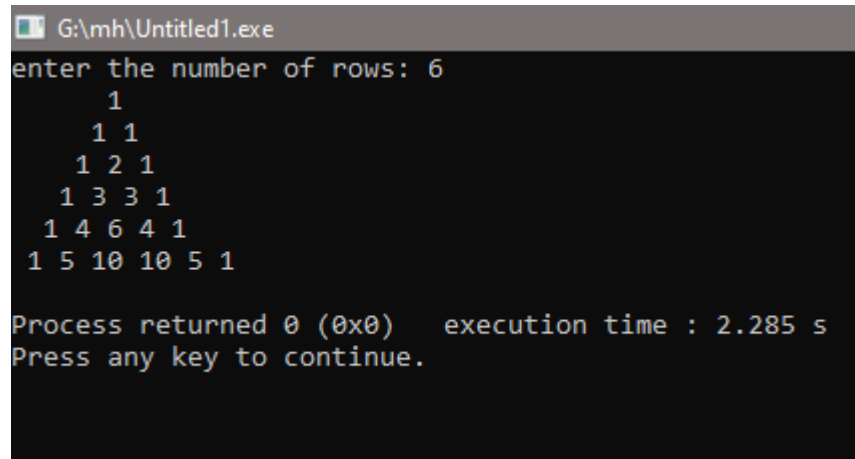
```
G:\mh\Untitled1.exe
enter values: 1
2
3
4
5
6
4
1 2 3
4 5 6
7 6 4

Process returned 0 (0x0)   execution time : 56.336 s
Press any key to continue.
```

#### 4. Draw the Pascal's Triangle using two-dimensional array.

```
#include<stdio.h>

int main()
{
    int n,i,j;
    printf("enter the number of rows: ");
    scanf("%d",&n);
    int a[n][n];
    for(i=0;i<n;i++)
    {
        for(int s=1; s<=n-i; s++)
        printf(" ");
        for(j=0;j<=i;j++)
        {
            if(j==0 || j==i)
                a[i][j]=1;
            else
                a[i][j]=a[i-1][j-1]+a[i-1][j];
            printf("%d ",a[i][j]);
        }printf("\n");
    }
}
```



The screenshot shows a Windows command prompt window titled "G:\mh\Untitled1.exe". The user has entered "6" for the number of rows. The program has printed the first 6 rows of Pascal's Triangle. The values are: Row 0: 1; Row 1: 1 1; Row 2: 1 2 1; Row 3: 1 3 3 1; Row 4: 1 4 6 4 1; Row 5: 1 5 10 10 5 1. Below the triangle, the program output shows "Process returned 0 (0x0) execution time : 2.285 s" and "Press any key to continue."

**5. WAP that takes a 5x5 matrix of integer values as input and then find out the biggest number from upper-left to lower bottom diagonal elements of that matrix.**

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

```
int main()
```

```
{
```

```
    int a[5][5];
```

```
    int i,j;
```

```
    printf("enter values: ");
```

```
    for(i=0;i<5;i++)
```

```
    {
```

```
        for(j=0;j<5;j++)
```

```
            scanf("%d",&a[i][j]);
```

```
    }
```

```
    for(i=0;i<5;i++)
```

```
    {
```

```
        for(j=0;j<5;j++)
```

```
            {printf("%d ",a[i][j]);}
```

```
    printf("\n");}
```

```
    for(i=1;i<5;i++)
```

```
    {
```

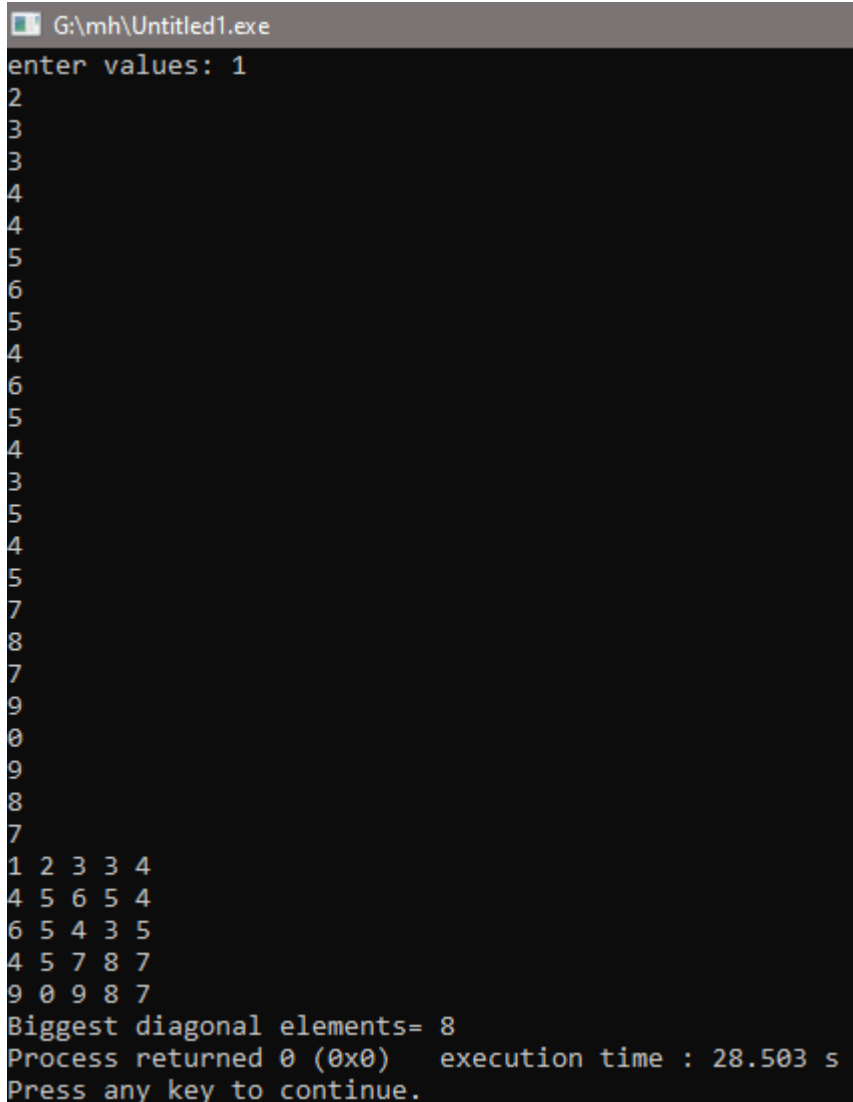
```
        j=i;
```

```
        if (a[0][0]<a[i][j])
```

```
            {a[0][0]=a[i][j];}
```

```
    } printf("Biggest diagonal elements= %d",a[0][0]);
```

```
}
```



```
G:\mh\Untitled1.exe
enter values: 1
2
3
3
4
4
5
6
5
4
6
5
4
3
5
4
5
7
8
7
9
0
9
8
7
Biggest diagonal elements= 8
Process returned 0 (0x0) execution time : 28.503 s
Press any key to continue.
```

# String

**1. WAP to count the number of words and number of characters in a given line of text**

**except the spaces.**

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

```
int main()
```

```
{
```

```
    char a[100];
```

```
    int i,j=0,len,count=1,s;
```

```
    gets(a);
```

```
    len=strlen(a);
```

```
    for(i=0;i<len;i++)
```

```
    {
```

```
        if(a[i]==' ')
```

```
        {count++; }
```

```
    }
```

```
    printf("The number of words= %d\n",count);
```

```
    for(i=0;i<len;i++)
```

```
    {
```

```
        if(a[i]==' ')
```

```
        {j++; }
```

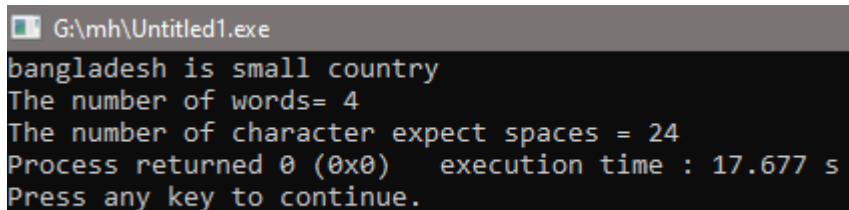
```
    }
```

```
    s=len-j;
```

```
    printf("The number of character expect spaces = %d",s);
```

```
    return 0;
```

```
}
```



```
G:\mh\Untitled1.exe
bangladesh is small country
The number of words= 4
The number of character expect spaces = 24
Process returned 0 (0x0) execution time : 17.677 s
Press any key to continue.
```

## 2. WAP to count the numbers of vowels, consonants, digits and special symbols in a given string.

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

```
int main()
```

```
{
```

```
    char a[100];
```

```
    int i,len,vow,con,dig,sym,sps,s,s1;
```

```
    vow=con=dig=sym=sps=0;
```

```
    gets(a);
```

```
    len=strlen(a);
```

```
    for(i=0;i<len;i++)
```

```
    {
```

```
if(a[i]=='a' || a[i]=='A' || a[i]=='e' || a[i]=='E' || a[i]=='i' || a[i]=='I' || a[i]=='o' || a[i]=='O' || a[i]=='u' || a[i]=='U')
```

```
    {vow++; }
```

```
else if(a[i]>='a'&&a[i]<='z' || a[i]>='A'&&a[i]<='Z')
```

```
    {con++; }
```

```
else if(a[i]>='0'&&a[i]<='9')
```

```
    { dig++; }
```

```
    else if(a[i]==' ')
```

```
    { sps++; }
```

```
    else
```

```
    {sym++;}
```

```
    }
```

```
    s=sps+sym;
```

```
    s1=s-sps;
```

```
    printf("The number of vowels= %d\n",vow);
```

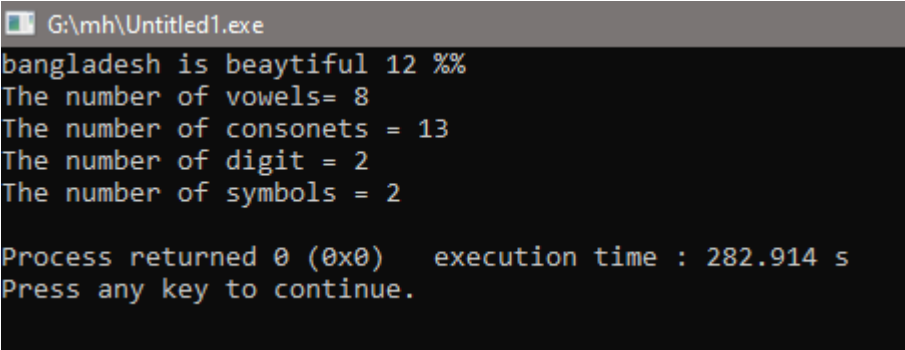
```
    printf("The number of consonets = %d\n",con);
```

```
    printf("The number of digit = %d\n",dig);
```

```
    printf("The number of symbols = %d\n",s1);
```

```
    return 0;
```

```
}
```



```
G:\mh\Untitled1.exe
bangladesh is beaytiful 12 %%
The number of vowels= 8
The number of consonets = 13
The number of digit = 2
The number of symbols = 2

Process returned 0 (0x0)   execution time : 282.914 s
Press any key to continue.
```



### 3. WAP to input a multi word string and produce a string in which first letter of each word is capitalized.

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

```
int main()
```

```
{ char a[100];
```

```
    int i,l;
```

```
    printf("Enter a string: ");
```

```
    gets(a);
```

```
    l=strlen(a);
```

```
    for(i=0;i<l;i++)
```

```
    { if(i==0)
```

```
        { if((a[i]>='a' && a[i]<='z'))
```

```
            a[i]=a[i]-32;
```

```
            continue; }
```

```
        if(a[i]==' ')
```

```
            { ++i;
```

```
            if(a[i]>='a' && a[i]<='z')
```

```
                { a[i]=a[i]-32;
```

```
                continue; }
```

```
            }
```

```
            else
```

```
            { if(a[i]>='A' && a[i]<='Z')
```

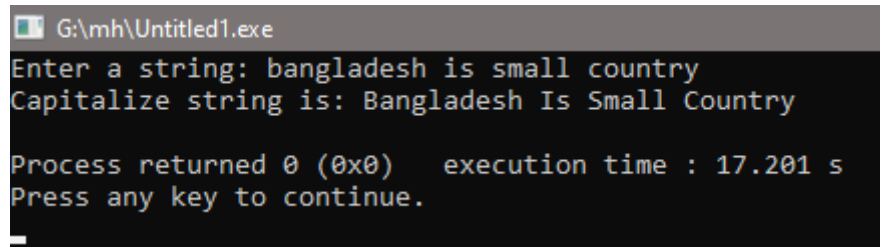
```
                a[i]=a[i]+32; }
```

```
        }
```

```
    printf("Capitalize string is: %s\n",a);
```

```
    return 0;
```

```
}
```



#### 4. WAP to search a character in a given string.

```
#include<stdio.h>
int main()
{
    char a[100],ch;
    int i,j=0,k,len;
    printf("Enter the string: ");
    gets(a);
    printf("Enter the character: ");
    scanf("%c",&ch);
    len=strlen(a);
    for(i=0;i<len;i++)
    {
        if(a[i]==ch)
        {
            j=1; }
    }
    if(j==1)
        printf("%c is found",ch);
    else
        printf("%c is not found",ch);
    return 0;
}
```

```
G:\mh\Untitled1.exe
Enter the string: metropolitan university
Enter the character: m
m is found
Process returned 0 (0x0)   execution time : 248.123 s
Press any key to continue.
```

## 5. WAP to reverse a string.

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

```
int main()
```

```
{
```

```
    char a[100];
```

```
    int i,l,s;
```

```
    printf("Enter a string: \n");
```

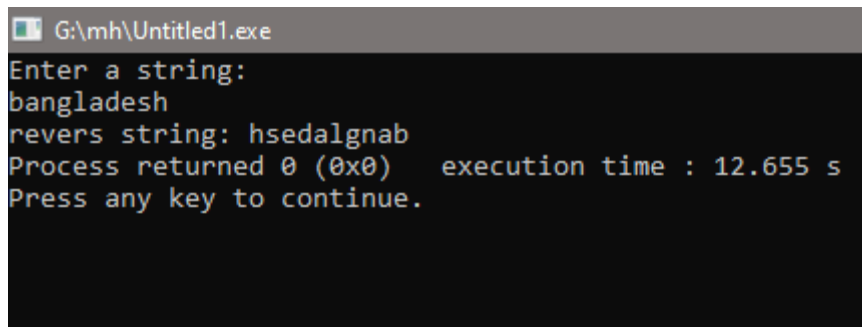
```
    gets(a);
```

```
    s=strrev(a);
```

```
    printf("revers string: %s",s);
```

```
    return 0;
```

```
}
```



The screenshot shows a Windows command prompt window titled "G:\mh\Untitled1.exe". The program prompts the user to "Enter a string:" and the user has entered "bangladesh". The program then outputs "revers string: hsedalgnab". Below this, it shows "Process returned 0 (0x0)" and "execution time : 12.655 s". The prompt "Press any key to continue." is visible at the bottom.

**6. WAP to input a string and replace every lower case letter with upper case letter, upper case letter with a lower case letter, digit with a '#' and a special symbol with a '%'. Display the new string.**

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

```
int main()
```

```
{
```

```
    char str[100];
```

```
    int i;
```

```
    printf("Enter a string: ");
```

```
    gets(str);
```

```
    for(i=0; str[i]!='\0'; i++)
```

```
    {
```

```
        if((str[i]>='a' && str[i]<='z'))
```

```
            {str[i]=str[i]-32;
```

```
              continue; }
```

```
        else if(str[i]>='A' && str[i]<='Z')
```

```
        {
```

```
            str[i]=str[i]+32;
```

```
            continue;
```

```
        }
```

```
        else if(str[i]>='0' && str[i]<='9')
```

```
            {str[i]='#';}
```

```
        else if(str[i]==' ')
```

```
            str[i]=' ';
```

```
        else
```

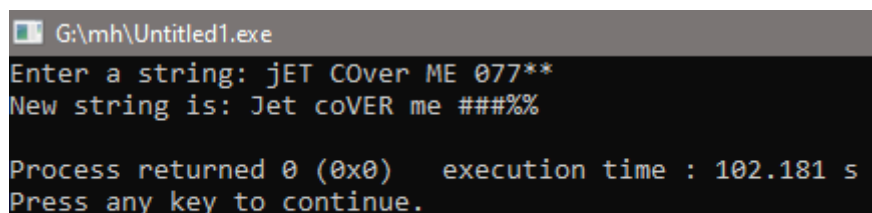
```
            str[i]='%';
```

```
    }
```

```
    printf("New string is: %s\n",str);
```

```
    return 0;
```

```
}
```



```
G:\mh\Untitled1.exe
Enter a string: jET COVer ME 077**
New string is: Jet coVER me ####%

Process returned 0 (0x0)   execution time : 102.181 s
Press any key to continue.
```

# Pointer

1. Write a function to compare two strings using pointers. Function has two string arguments and returns 0 if strings are equal else returns 1

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

```
int main()
```

```
{
```

```
    char a[100],a1[100],*b,*b1;
```

```
    int i=0;
```

```
    printf("Enter 1st string: ");
```

```
    gets(a);
```

```
    printf("Enter 2nd string: ");
```

```
    gets(a1);
```

```
    b=&a;
```

```
    b1=&a1;
```

```
    while (*b!='\0' || *b1!='\0')
```

```
{
```

```
    if(*b != *b1)
```

```
    { i=1;
```

```
      break;
```

```
    }
```

```
    *b++;
```

```
    *b1++;
```

```
}
```

```
    if(i==0)
```

```
    printf("0");
```

```
else
```

```
    printf("1");
```

```
    return 0;
```

```
}
```

```
G:\mh\Untitled1.exe
Enter 1st string: BANGLADESH
Enter 2nd string: BANGLADESH
0
Process returned 0 (0x0)   execution time : 29.971 s
Press any key to continue.
```

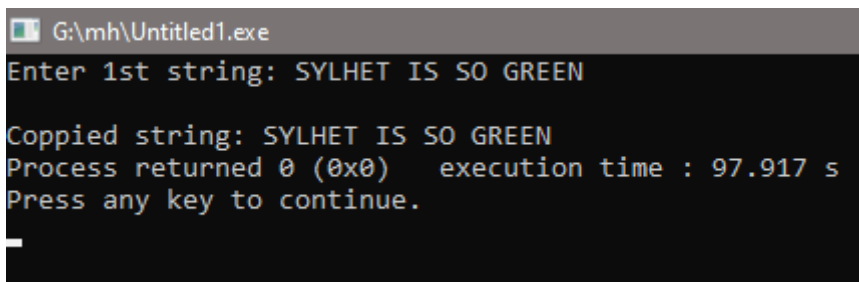
```
G:\mh\Untitled1.exe
Enter 1st string: BANGLADESH
Enter 2nd string: SYLHET
1
Process returned 0 (0x0)   execution time : 10.401 s
Press any key to continue.
```

## 2. Write a program that will copy one string to another. You can't use strcpy() function.

```
#include <stdio.h>
int main()
{
    char a[100],a1[100],*b,*b1;
    int i=0;
    printf("Enter 1st string: ");
    gets(a);
    b=&a;
    b1=&a1;
    while (*b!='\0')
    {
        *b1 = *b;

        *b++;
        *b1++;
    }

    *b1='\0';
    printf("\nCoppied string: %s",a1);
    return 0;
}
```



```
G:\mh\Untitled1.exe
Enter 1st string: SYLHET IS SO GREEN

Coppied string: SYLHET IS SO GREEN
Process returned 0 (0x0)   execution time : 97.917 s
Press any key to continue.
```

### 3. Write a function having one argument of string type and print the string in the following pattern using pointers.

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

```
int main()
```

```
{ char a[]="RAJAT";
    int i,j,len;
    len=strlen(a);
    printf("RAJAT\n\n");
    for(i=0;i<len;i++)
    {
        for(j=0;j<=i;j++)
        {
            printf("%c",a[j]);
        }
        printf("\n");
    }

    return 0;
}
```

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

```
int main()
```

```
{
    char a[]="RAJAT";
    int i,j,len;
    len=strlen(a);
    printf("RAJAT\n\n");
    for(i=len-1;i>=0;i--)
    {
        for(j=0;j<=i;j++)
        {
            printf("%c",a[j]);
        }
        printf("\n");
    }

    return 0;
}
```

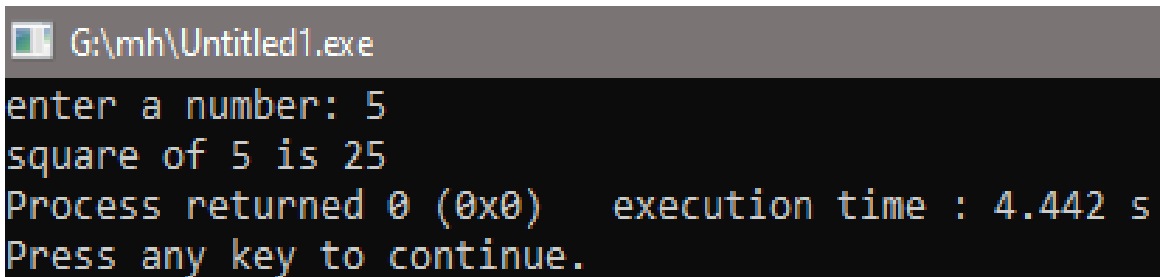
```
G:\mh\Untitled1.exe
RAJAT
R
RA
RAJ
RAJA
RAJAT
Process returned 0 (0x0)   execution time : 0.019 s
Press any key to continue.
```

```
G:\mh\Untitled1.exe
RAJAT
RAJAT
RAJA
RAJ
RA
R
Process returned 0 (0x0)   execution time : 0.019 s
Press any key to continue.
```

# Function

1. Write a function that takes one integer argument and returns its square.

```
#include<stdio.h>
int sqr(int n)
{
    return n*n;
}
int main()
{
    int x;
    printf("enter a number: ");
    scanf("%d",&x);
    int sqrt=sqr(x);
    printf("square of %d is %d",x,sqrt);
    return 0;
}
```



```
G:\mh\Untitled1.exe
enter a number: 5
square of 5 is 25
Process returned 0 (0x0)    execution time : 4.442 s
Press any key to continue.
```



## 2. Write a function to calculate the area of a circle where radius is passed to the function as argument

```
#include<stdio.h>
#define pi 3.1416
double area(double radius)

{

    return pi*radius*radius;

}
int main()

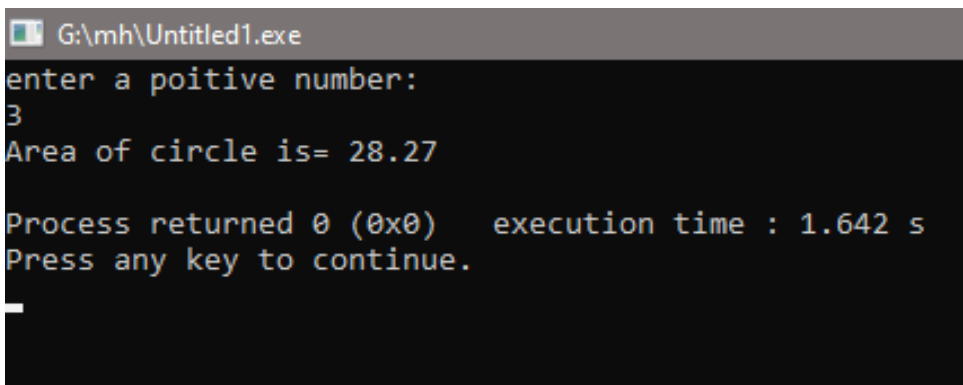
{

    double x;
    printf("enter a poitive number: \n");

    scanf("%lf",&x);
    double rad = area(x);
    printf("Area of circle is= %.2lf\n",rad);

    return 0;

}
```

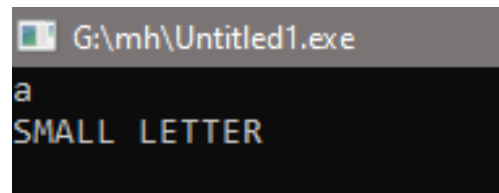


```
G:\mh\Untitled1.exe
enter a poitive number:
3
Area of circle is= 28.27

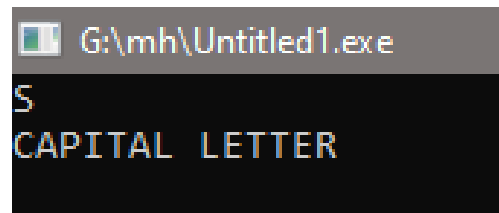
Process returned 0 (0x0)   execution time : 1.642 s
Press any key to continue.
_
```

**3. Write a function that has one character argument and displays that it's a small letter, capital letter, a digit or a special symbol.**

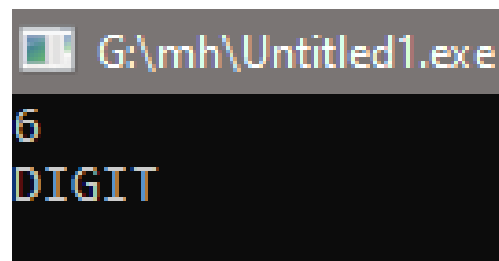
```
#include<stdio.h>
void charec(char si)
{
if(si>=65 && si<=90)
printf("CAPITAL LETTER\n");
else if(si>=97 && si<=122)
printf("SMALL LETTER\n");
else if(si>=48 && si<=57)
printf("DIGIT\n");
else
printf("SPECIAL SYMBOL\n");
}
int main()
{
char s;
scanf("%c",&s);
charec(s);
return 0;
}
```



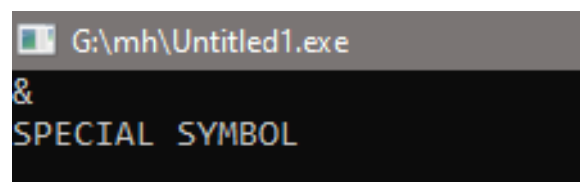
G:\mh\Untitled1.exe  
a  
SMALL LETTER



G:\mh\Untitled1.exe  
S  
CAPITAL LETTER



G:\mh\Untitled1.exe  
6  
DIGIT



G:\mh\Untitled1.exe  
&  
SPECIAL SYMBOL

**4. Write a function to print the sum and average of first n odd numbers where n is passed to the function as argument.**

```
#include<stdio.h>
void sum(int num)
{
    int i,sum=0,k=0;
    for(i=1; i<=num; i++)
    {
        if(i%2!=0)
        {
            sum+=i;
            k++;
        }
    }
    printf("Sum is:- %d\n",sum);
    printf("Avg is:- %.2lf\n",(double)sum/k);
}
int main()
{
    int n;
    printf("enter number: ");
    scanf("%d",&n);
    sum(n);
    return 0;
}
```

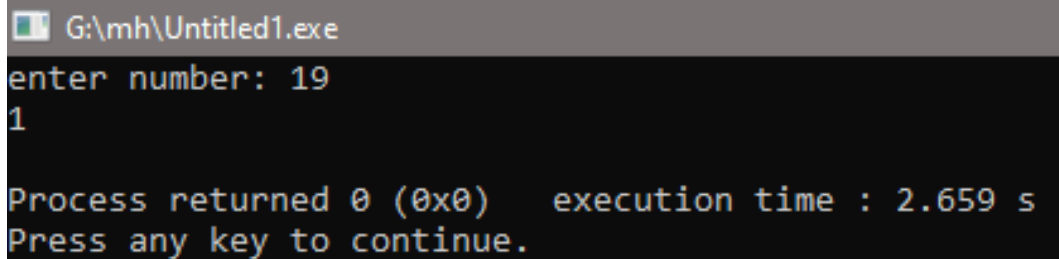
```
G:\mh\Untitled1.exe
enter number: 10
Sum is:- 25
Avg is:- 5.00

Process returned 0 (0x0)   execution time : 4.379 s
Press any key to continue.
```

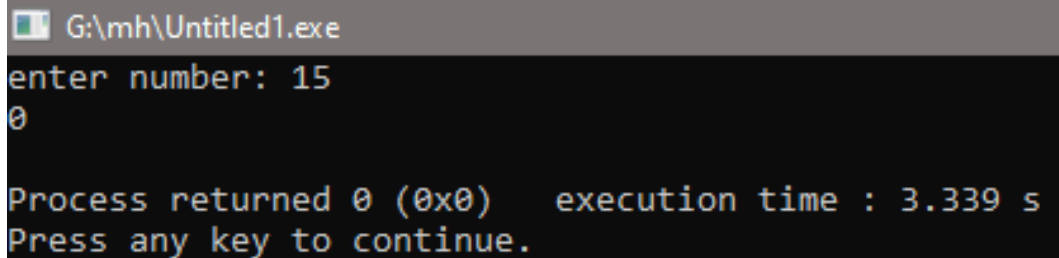
**5. Write a function that returns 1 if the number is prime and 0 if not prime. Number is passed to the function as argument.**

```
#include<stdio.h>
void prime(int num)
{
    int i,k=0;
    for(i=2; i<num; i++)
    {
        if(num%i==0)
        {
            k++;
        }
    }
    if(k==0)
        printf("1\n");
    else
        printf("0\n");
}

int main()
{
    int n;
    printf("enter number: ");
    scanf("%d",&n);
    prime(n);
    return 0;
}
```



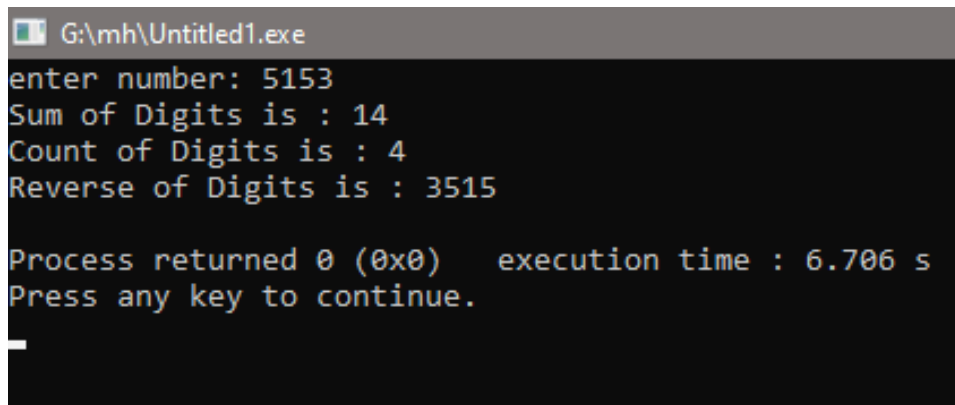
```
G:\mh\Untitled1.exe
enter number: 19
1
Process returned 0 (0x0)   execution time : 2.659 s
Press any key to continue.
```



```
G:\mh\Untitled1.exe
enter number: 15
0
Process returned 0 (0x0)   execution time : 3.339 s
Press any key to continue.
```

**6. Write a function that prints the sum of the digits, count of the digits and reverse of a number. Number is passed to the function as argument.**

```
#include<stdio.h>
void ss(int num)
{
    int i,c=0,rem,sum=0,sum1=0;
    while(num!=0)
    {
        rem = num%10;
        sum = sum + rem;
        sum1 = sum1*10 + rem;
        num = num/10;
        c++;
    }
    printf("Sum of Digits is : %d\n",sum);
    printf("Count of Digits is : %d\n",c);
    printf("Reverse of Digits is : %d\n",sum1);
}
int main()
{
    int n;
    printf("enter number: ");
    scanf("%d",&n);
    ss(n);
    return 0;
}
```

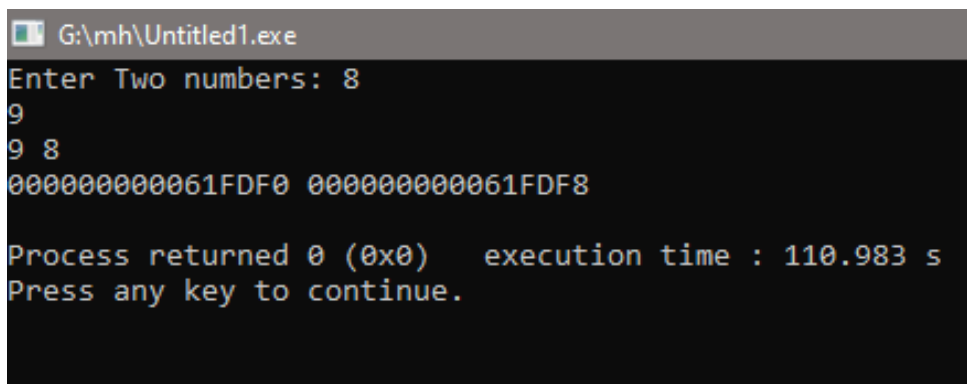


```
G:\mh\Untitled1.exe
enter number: 5153
Sum of Digits is : 14
Count of Digits is : 4
Reverse of Digits is : 3515

Process returned 0 (0x0)   execution time : 6.706 s
Press any key to continue.
_
```

**7. Write a program to take two numbers as input and function to swap them by passing parameters as values and also as addresses.**

```
#include<stdio.h>
int swap(int i,int j)
{
    int x;
    x=i;
    i=j;
    j=x;
    printf("%d %d\n", i,j);
    x=&i;
    i=&j;
    printf("%p %p\n", x,i);
}
int main()
{
    int k,l;
    printf("Enter Two numbers: ");
    scanf("%d%d", &k,&l);
    swap(k,l);
    return 0;
}
```



```
G:\mh\Untitled1.exe
Enter Two numbers: 8
9
9 8
000000000061FDF0 000000000061FDF8

Process returned 0 (0x0)   execution time : 110.983 s
Press any key to continue.
```

## 8. Write a recursive function that will find the average of an integer

```
#include<stdio.h>
float avg(int x)
{
    if(x!=0)
    {
        return x/2;
    }
    else
    {
        return x;
    }
}
int main()
{
    int a;
    float z;
    printf("Enter number: ");
    scanf("%d", &a);
    z=avg((float) a);
    printf("%.2f ",z);
    return 0;
}
```

G:\mh\Untitled1.exe

Enter number: 6

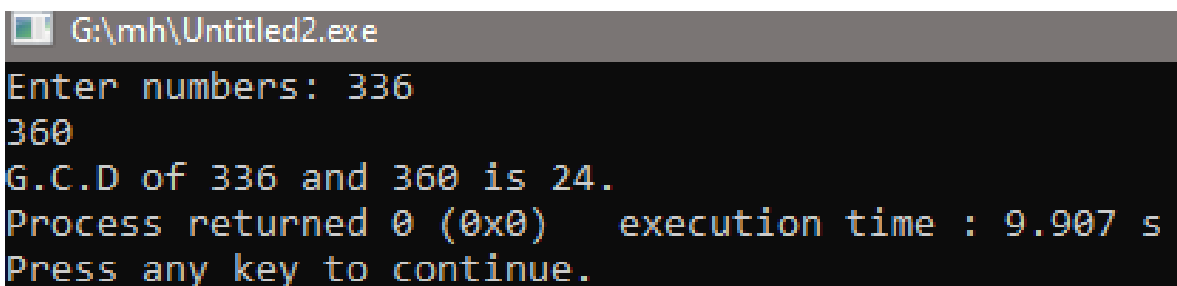
3.00

Process returned 0 (0x0) execution time : 2.549 s

Press any key to continue.

## 9. Write a recursive function that will find the GCD of two numbers.

```
#include<stdio.h>
int gcd(int x, int y)
{
    if(x>y)
    {
        return gcd(x-y, y);
    }else if (x<y)
    {
        return gcd(y-x, x);
    }else
    {
        return x;
    }
}
int main()
{
    int a,b,result;
    printf("Enter numbers: ");
    scanf("%d%d", &a,&b);
    result=gcd(a,b);
    printf("G.C.D of %d and %d is %d.", a,b,result);
    return 0;
}
```

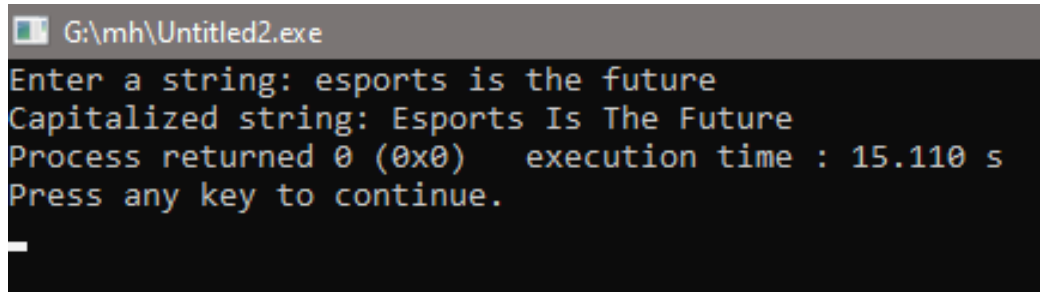


The screenshot shows a Windows command prompt window titled "G:\mh\Untitled2.exe". The user has entered "336" and "360" in response to the prompt "Enter numbers: ". The program has calculated the GCD and displayed "G.C.D of 336 and 360 is 24.". Below this, it shows "Process returned 0 (0x0) execution time : 9.907 s" and "Press any key to continue.". A cursor is visible at the bottom left of the window.



**10. Write a function that receives a string (character array) as argument and produce a string in which first letter of each word is capitalized.**

```
#include<stdio.h>
int pass(char a[])
{
    int i,n;
    n=strlen(a);
    a[0]=toupper(a[0]);
    for (i=1; i<n; i++)
    {
        if ( a[i]==' ')
        {
            a[i+1]=toupper(a[i+1]);
        }
    }
    for (i=0; i<n; i++)
    {
        printf("%c", a[i]);
    }
}
int main()
{
    int string[100];
    printf("Enter a string: ");
    gets(string);
    printf("Capitalized string: ");
    pass(string);
    return 0;
}
```

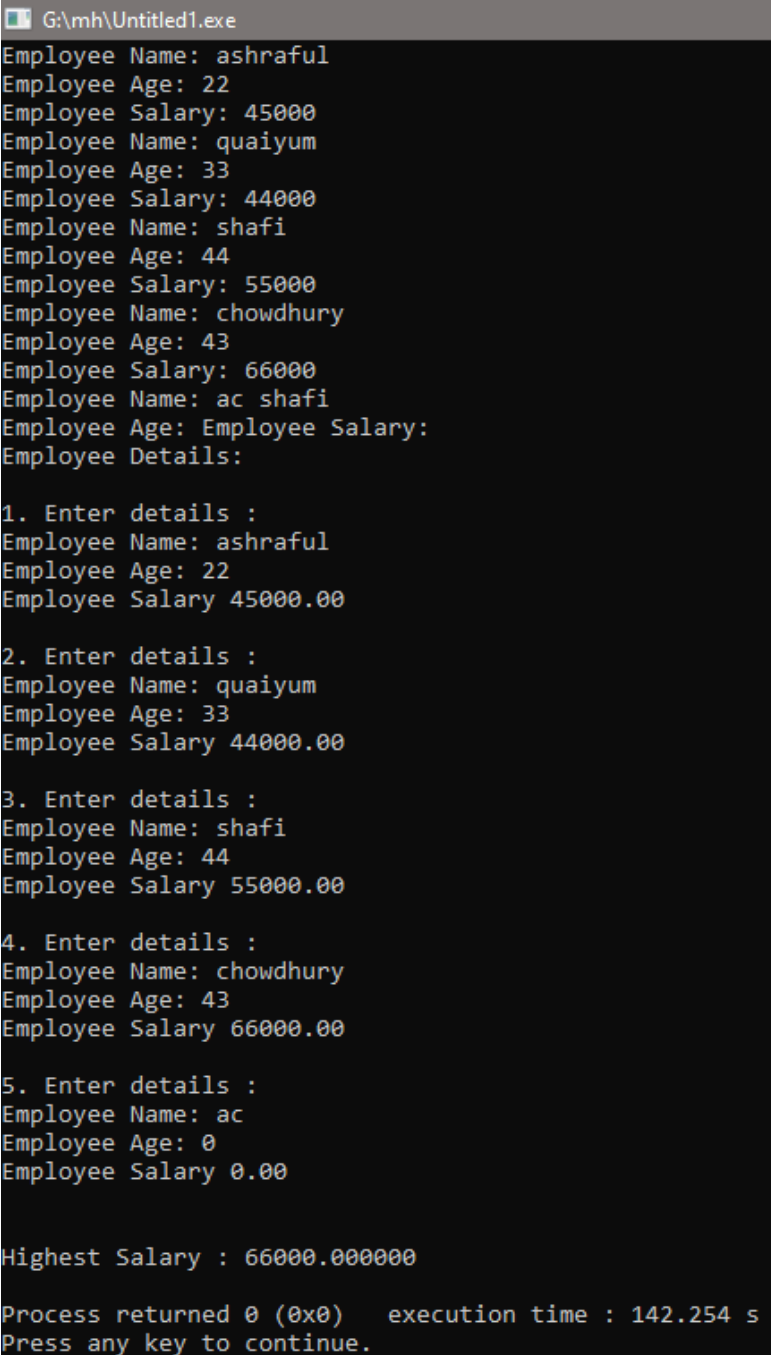


```
G:\mh\Untitled2.exe
Enter a string: esports is the future
Capitalized string: Esports Is The Future
Process returned 0 (0x0)   execution time : 15.110 s
Press any key to continue.
```

# Structure

1. WAP that takes name, age and salary of 5 employees as input and stores it in structure employee and displays all the employee details through emp\_disp function and displays employee details of employee who gets highest salary using emp\_sal function.

```
#include<stdio.h>
#define m 5
void emp_disp();
void emp_sal();
struct details
{
    char name[100];
    int age;
    float salary;
} emp[100];
int main()
{
    int i;
    for (i=0; i<m; i++)
    {
        printf("Employee Name: ");
        scanf("%s", &emp[i].name);
        printf("Employee Age: ");
        scanf("%d", &emp[i].age);
        printf("Employee Salary: ");
        scanf("%f", &emp[i].salary);
    }
    emp_disp();
    emp_sal();
    return 0;
}
```



```
G:\mh\Untitled1.exe
Employee Name: ashraful
Employee Age: 22
Employee Salary: 45000
Employee Name: quaiyum
Employee Age: 33
Employee Salary: 44000
Employee Name: shafi
Employee Age: 44
Employee Salary: 55000
Employee Name: chowdhury
Employee Age: 43
Employee Salary: 66000
Employee Name: ac shafi
Employee Age: Employee Salary:
Employee Details:

1. Enter details :
Employee Name: ashraful
Employee Age: 22
Employee Salary 45000.00

2. Enter details :
Employee Name: quaiyum
Employee Age: 33
Employee Salary 44000.00

3. Enter details :
Employee Name: shafi
Employee Age: 44
Employee Salary 55000.00

4. Enter details :
Employee Name: chowdhury
Employee Age: 43
Employee Salary 66000.00

5. Enter details :
Employee Name: ac
Employee Age: 0
Employee Salary 0.00

Highest Salary : 66000.000000

Process returned 0 (0x0)   execution time : 142.254 s
Press any key to continue.
```

```

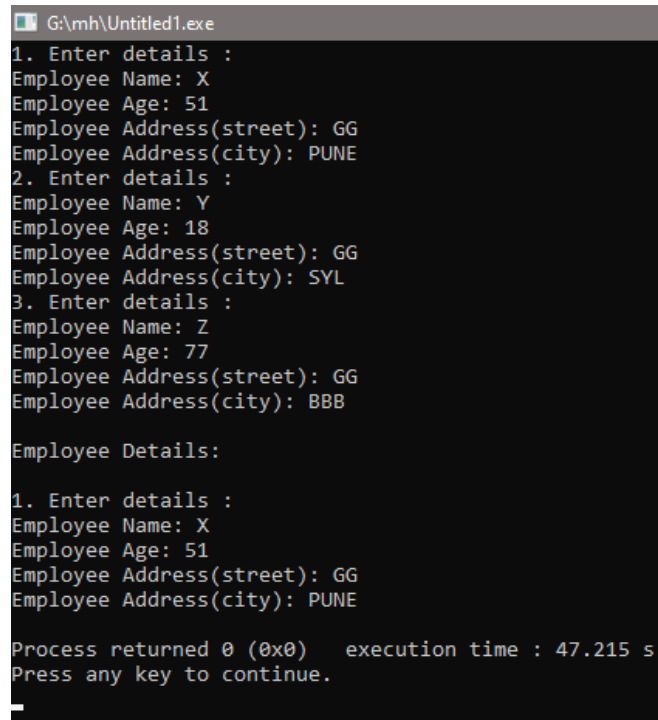
void emp_disp()
{
    int i;
    printf("\nEmployee Details:\n");
    for (i=0; i<m; i++)
    {
        printf("\n%d. Enter details : \n", i+1);
        printf("Employee Name: %s\n", emp[i].name);
        printf("Employee Age: %d\n", emp[i].age);
        printf("Employee Salary %.2f\n", emp[i].salary);
    }
}

void emp_sal()
{
    int i;
    float max;
    max=emp[0].salary;
    for (i=0; i<m; i++)
    {
        if(max<emp[i].salary)
        {
            max=emp[i].salary;
        }
    }
    printf("\n\nHighest Salary : %f\n", max);
}

```

## 2. WAP to take name, age, address (street, city) input for 'n' employees in array of structures and display only the employees who belong to Pune city.

```
#include<stdio.h>
#include<string.h>
#include<stdlib.h>
#define M 3
void emp_disp();
struct details
{
    char name[100],add_street[100],add_city[100];
    int age;
} emp[100];
int main()
{
    int i;
    for (i=0; i<M; i++)
    {
        printf("%d. Enter details : \n", i+1);
        printf("Employee Name: ");
        scanf("%s", &emp[i].name);
        printf("Employee Age: ");
        scanf("%d", &emp[i].age);
        printf("Employee Address(street): ");
        scanf("%s", &emp[i].add_street);
        printf("Employee Address(city): ");
        scanf("%s", &emp[i].add_city);
    }
    emp_disp();
    return 0;
}
```



```
G:\mh\Untitled1.exe
1. Enter details :
Employee Name: X
Employee Age: 51
Employee Address(street): GG
Employee Address(city): PUNE
2. Enter details :
Employee Name: Y
Employee Age: 18
Employee Address(street): GG
Employee Address(city): SYL
3. Enter details :
Employee Name: Z
Employee Age: 77
Employee Address(street): GG
Employee Address(city): BBB

Employee Details:
1. Enter details :
Employee Name: X
Employee Age: 51
Employee Address(street): GG
Employee Address(city): PUNE

Process returned 0 (0x0)   execution time : 47.215 s
Press any key to continue.
```

```

void emp_disp()
{
    int i,j,l,f[100],m,h;
    char citys='pune';
    printf("\nEmployee Details:\n");
    for (i=0; i<M; i++)
    {
        l=strlen(emp[i].add_city);
        for(j=0; j<l; j++)
        {
            if(tolower(emp[i].add_city[j])==citys)
            {
                f[i]=i;
                m++;
            }
        }
    }
    for (i=0; i<m; i++)
    {
        h=f[i];
        printf("\n%d. Enter details : \n", i+1);
        printf("Employee Name: %s\n", emp[h].name);
        printf("Employee Age: %d\n", emp[h].age);
        printf("Employee Address(street): %s\n", emp[h].add_street);
        printf("Employee Address(city): %s\n", emp[h].add_city);
    }
}

```