

Practical No : 1

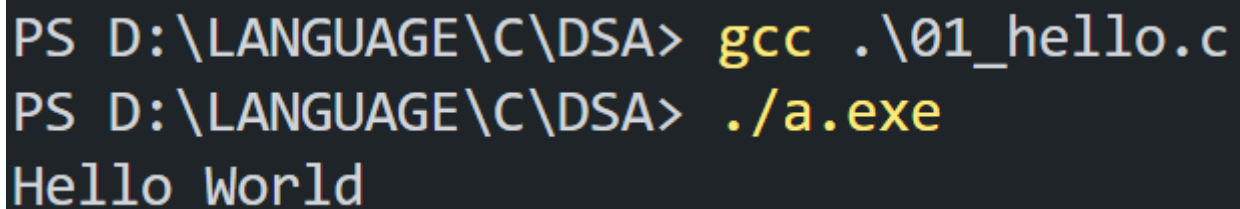
Problem Statement : Write a program to print "hello world"

Code :

```
#include<stdio.h>

void main(){
    printf("Hello World");
}
```

Output :



```
PS D:\LANGUAGE\C\DSA> gcc .\01_hello.c
PS D:\LANGUAGE\C\DSA> ./a.exe
Hello World
```

Practical No : 2

Problem Statement : Write a program to take two input variable from user and swap that values.

Code :

```
#include<stdio.h>

void main(){
    int a,b,c;

    printf("Enter Your Value A:");
    scanf("%d",&a);

    printf("Enter Your Value B :");
    scanf("%d",&b);

    c=a;
    a=b;
    b=c;

    printf("Your Value of A:%d",a);
    printf("\n Your Value of B:%d",b);
}
```

Input :

```
PS D:\LANGUAGE\C\DSA> gcc .\02_swap.c
PS D:\LANGUAGE\C\DSA> ./a.exe
Enter Your Value A:12
Enter Your Value B :24
```

Output :

```
Your Value of A:24
Your Value of B:12
```

Practical No : 3

Problem Statement : Write a program that computes x raised to the power y.

Code :

```
#include<stdio.h>

void main(){

    int x,y,i,ans=1;

    printf("Enter Your Value x:");
    scanf("%d",&x);

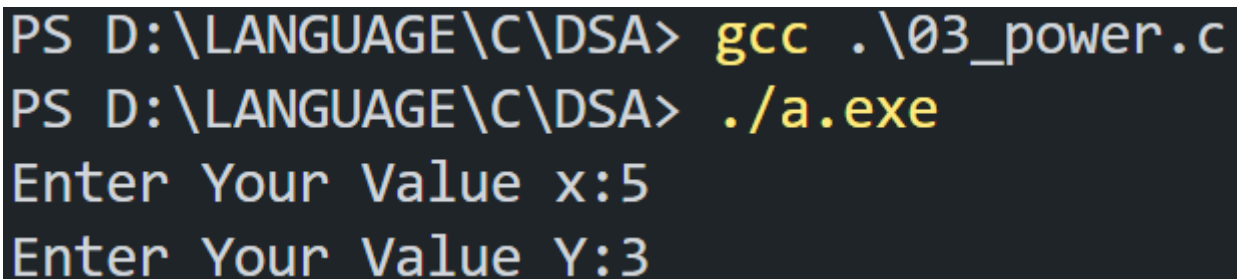
    printf("Enter Your Value Y:");
    scanf("%d",&y);

    for ( i = 1; i < y; i++)
    {
        ans *= x*ans;
    }

    printf("Your Value X raised Y:%d",ans);

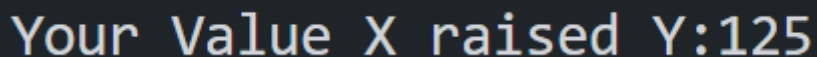
}
```

Input :



```
PS D:\LANGUAGE\C\DSA> gcc .\03_power.c
PS D:\LANGUAGE\C\DSA> ./a.exe
Enter Your Value x:5
Enter Your Value Y:3
```

Output :



```
Your Value X raised Y:125
```

Practical No : 4

Problem Statement : Perform program no. 2 and 3 using function.

Code :

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

void swap(int a,int b){

    int c;

    c=a;
    a=b;
    b=c;

    printf("Your Value of A:%d",a);
    printf("\n Your Value of B:%d",b);
}

void power(int a,int b){

    int i,ans=1;

    for ( i = 0; i < b; i++)
    {
        ans = a*ans;
    }

    printf("\nYour Value A raised B:%d",ans);
}

void main(){

    int a,b;

    printf("Enter Your Value A:");
    scanf("%d",&a);

    printf("Enter Your Value B:");
    scanf("%d",&b);
```

```
    swap(a,b);  
    power(a,b);  
}
```

Input :

```
PS D:\LANGUAGE\C\DSA> gcc .\04_function.c  
PS D:\LANGUAGE\C\DSA> ./a.exe  
Enter Your Value A:12  
Enter Your Value B:2
```

Output :

```
Your Value of A:2  
Your Value of B:12  
Your Value A raised B:144
```

Practical No : 5

Problem Statement : Write a calculator program(add,subtract,multiply,divide). Prepare user defined function for each functionality.

Code :

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

void add(int a,int b){

    int c;

    c=a+b;

    printf("\nYour Addition :%d",c);
}

void sub(int a,int b){

    int c;

    c=a-b;

    printf("\nYour Substraction :%d",c);
}

void mul(int a,int b){

    int c;

    c=a*b;

    printf("\nYour Multiflication :%d",c);
}

void div(int a,int b){

    int c;
```

```
        c=a/b;

        printf("\nYour Divide :%d",c);
    }
    void main(){

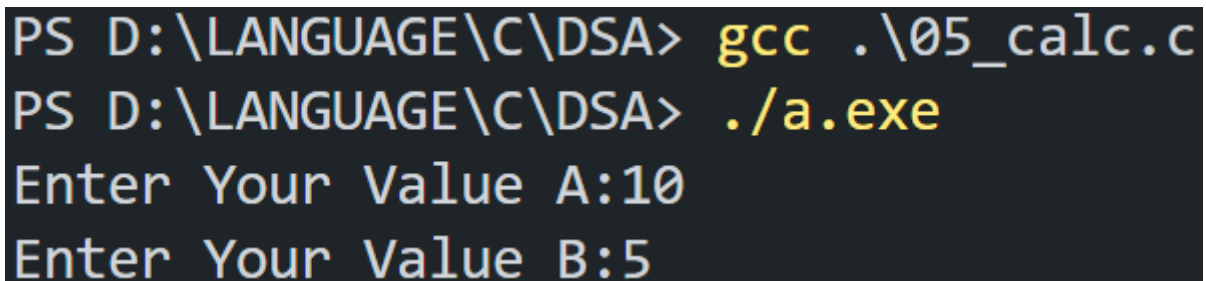
        int a,b;

        printf("Enter Your Value A:");
        scanf("%d",&a);

        printf("Enter Your Value B:");
        scanf("%d",&b);

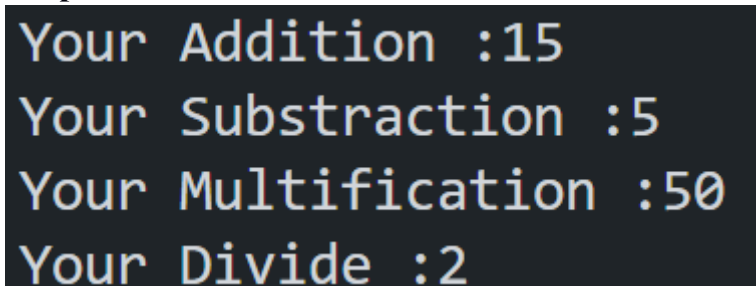
        add(a,b);
        sub(a,b);
        mul(a,b);
        div(a,b);
    }
```

Input :



```
PS D:\LANGUAGE\C\DSA> gcc .\05_calc.c
PS D:\LANGUAGE\C\DSA> ./a.exe
Enter Your Value A:10
Enter Your Value B:5
```

Output :



```
Your Addition :15
Your Subtraction :5
Your Multification :50
Your Divide :2
```

Practical No : 6

Problem Statement : Write a program to find the maximum value from given array.

Code :

```
#include<stdio.h>
void main(){

    int n,rk[100],x,i,max=1;

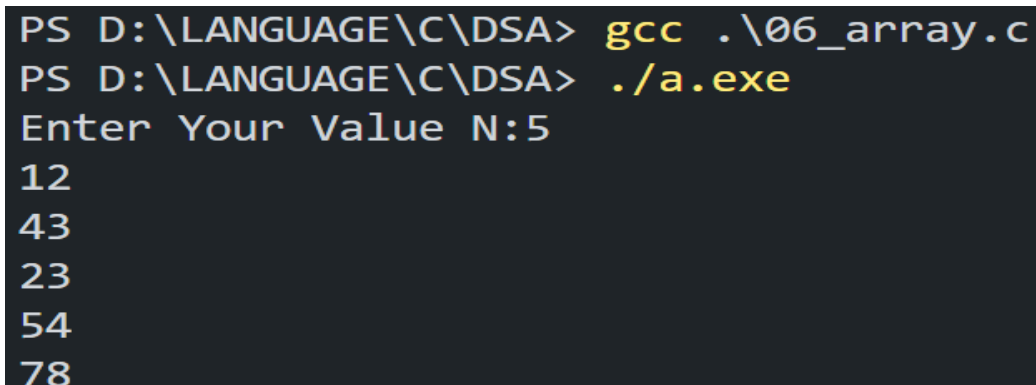
    printf("Enter Your Value N:");
    scanf("%d",&n);

    for (i = 0; i < n; i++)
    {
        scanf("%d",&x);
        rk[i] = x;
    }

    for (i = 0; i < n; i++){
        if(max < rk[i]){
            max=rk[i];
        }
    }

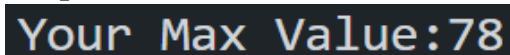
    printf("Your Max Value:%d",max);
}
```

Input :



```
PS D:\LANGUAGE\C\DSA> gcc .\06_array.c
PS D:\LANGUAGE\C\DSA> ./a.exe
Enter Your Value N:5
12
43
23
54
78
```

Output :



```
Your Max Value:78
```


Practical No : 7

Problem Statement : Perform program no.6 using function.

Code :

```
#include<stdio.h>
void maxi(int rk[100], int n){
    int max=1,i;

    for (i = 0; i < n; i++){
        if(max < rk[i]){
            max=rk[i];
        }
    }

    printf("Your Max Value:%d",max);
}

void main(){

    int i,rk[100],x,n;

    printf("Enter Your Value N:");
    scanf("%d",&n);

    for (i = 0; i < n; i++)
    {
        scanf("%d",&x);
        rk[i] = x;
    }

    maxi(rk, n);
}
```

Input :

```
PS D:\LANGUAGE\C\DSA> gcc .\07_array-function.c
PS D:\LANGUAGE\C\DSA> ./a.exe
Enter Your Value N:5
12
54
23
45
24
```

Output :

```
Your Max Value:54
```

Practical No : 8

Problem Statement : Implement a program for ARRAY that performs following operations using function.

(a) INSERT (b) DELETE (c) DISPLAY (d) SEARCH (e) MAX

Code :

```
#include<stdio.h>
int n;

void ispop(int a[], int n){
    int i,index,x;

    printf("Enter the value of index:");
    scanf("%d",&index);

    for ( i = 0; i > n; i++)
    {
        if(i>=index){
            a[i]=a[i+1];
        }
    }
    n=n-1;
    isdis(a,n);
}

void ispush(int a[], int n){
    int i,index,x;

    printf("Enter the value of index:");
    scanf("%d",&index);

    for ( i = n+1; i > index; i--)
    {
        a[i]=a[i-1];
    }
    printf("Enter the value of element:");
    scanf("%d",&x);
    a[index]=x;
```

```
n=n+1;
isdis(a,n);
}

int ischange(int a[], int n){
    int i,index,x;

    printf("Enter the value of index:");
    scanf("%d",&index);

    for ( i = 0; i < n; i++)
    {
        if(i==index){
            printf("Enter the value of element:");
            scanf("%d",&x);
            a[i]=x;
        }
    }
    isdis(a,n);
}

void isdis(int a[],int n){

    int j;

    printf("Each value of array:");

    for ( j = 0; j < n; j++)
    {
        printf("%d ",a[j]);
    }
}

void main(){
    int a[50],i,x,j,b;

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

    printf("Enter the value of element:");

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

```
{
    scanf("%d",&x);
    a[i]= x;
}

isdis(a,n);
printf("\n*****");
printf("\n1.Change");
printf("\n2.Display");
printf("\n3.Insert");
printf("\n4.Delete");
printf("\n*****");

printf("\nEnter the value:");
scanf("%d",&b);

switch(b)
{
case 1:
    ischange(a,n);
    break;

case 2:
    isdis(a,n);
    break;

case 3:
    ispush(a,n);
    break;

case 4:
    ispop(a,n);
    break;

default:
    printf("Your Value is Not Match");
    break;
}
}
```

Input :

```
Enter the value of number of element:5
Enter the value of element:12
23
34
44
56
Each value of array:12 23 34 44 56
*****
1.Change
2.Display
3.Insert
4.Delete
*****
Enter the value:1
Enter the value of index:2
Enter the value of element:20
```

Output :

```
Each value of array:12 23 20 44 56
```