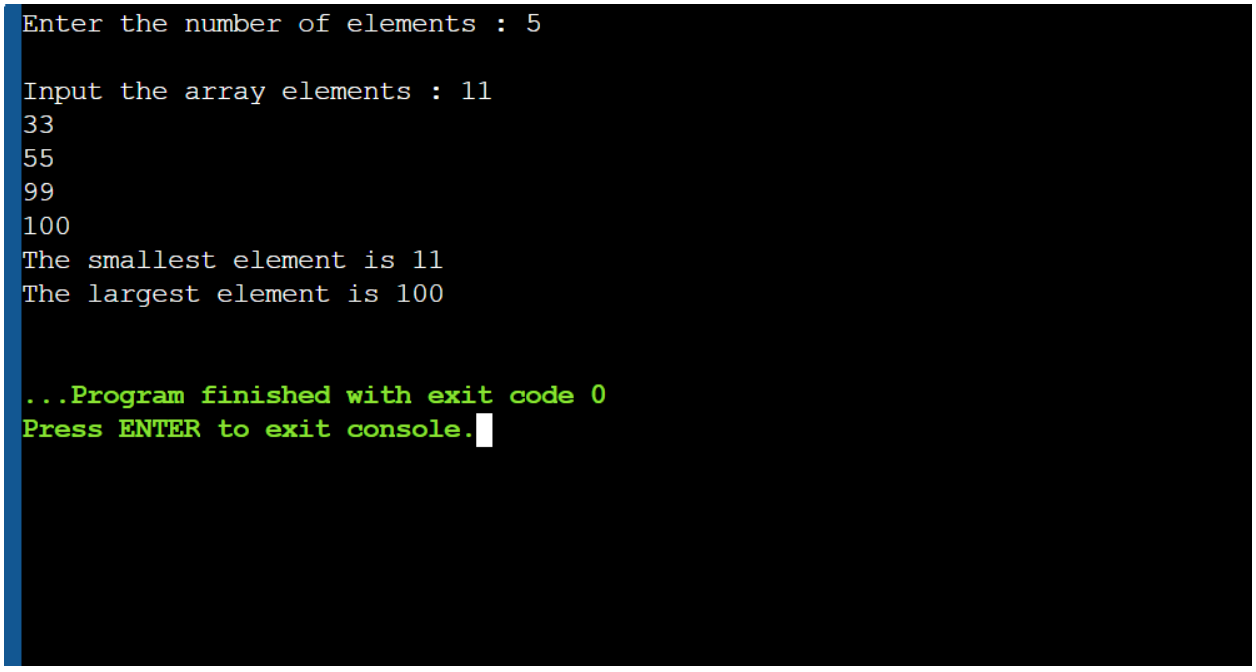
PSPC PRACTICALS - 2

Program to find greatest and smallest number in an array

```
#include<stdio.h>

int main()
{
        int arr[50],i,n,great,small;
        printf("\nEnter the number of elements : ");
        scanf("%d",&n);
        printf("\nInput the array elements : ");
        for(i=0;i<n;++i)
        scanf("%d",&arr[i]);

        great=small=arr[0];

        for(i=1;i<n;++i)
        {
        if(arr[i]>great)
        great=arr[i];

        if(arr[i]<small)
        small=arr[i];
        }

        printf("The smallest element is %d\n",small);
        printf("The largest element is %d\n",great);

        return 0;
}
```

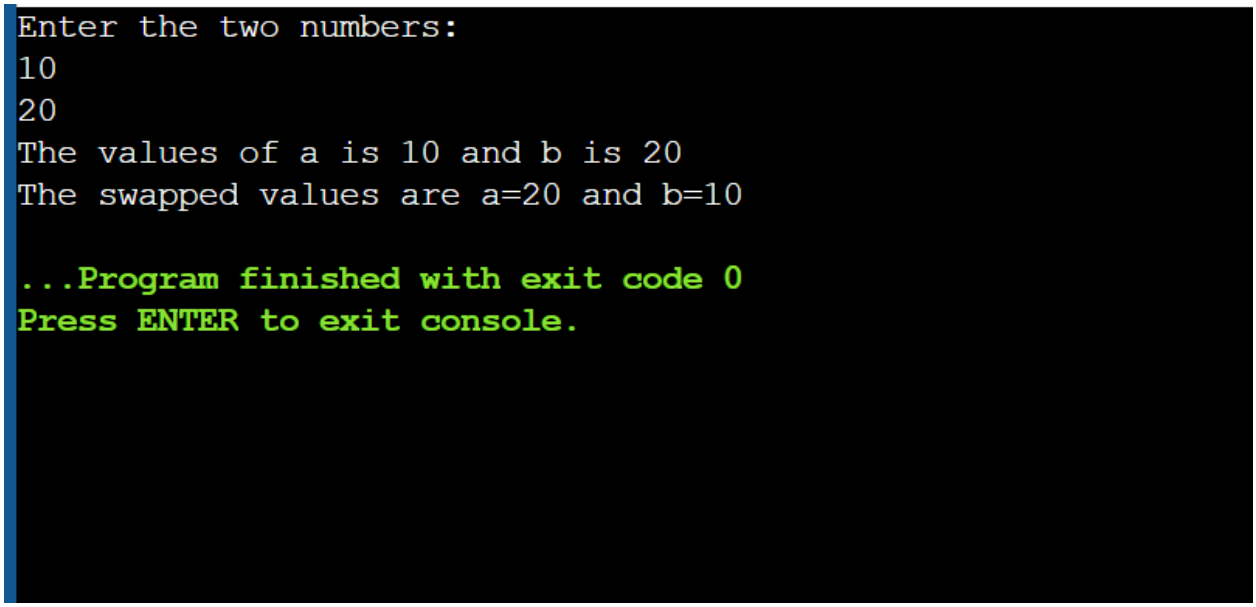


Program to swap two numbers using call by value and call by reference

Call by value:

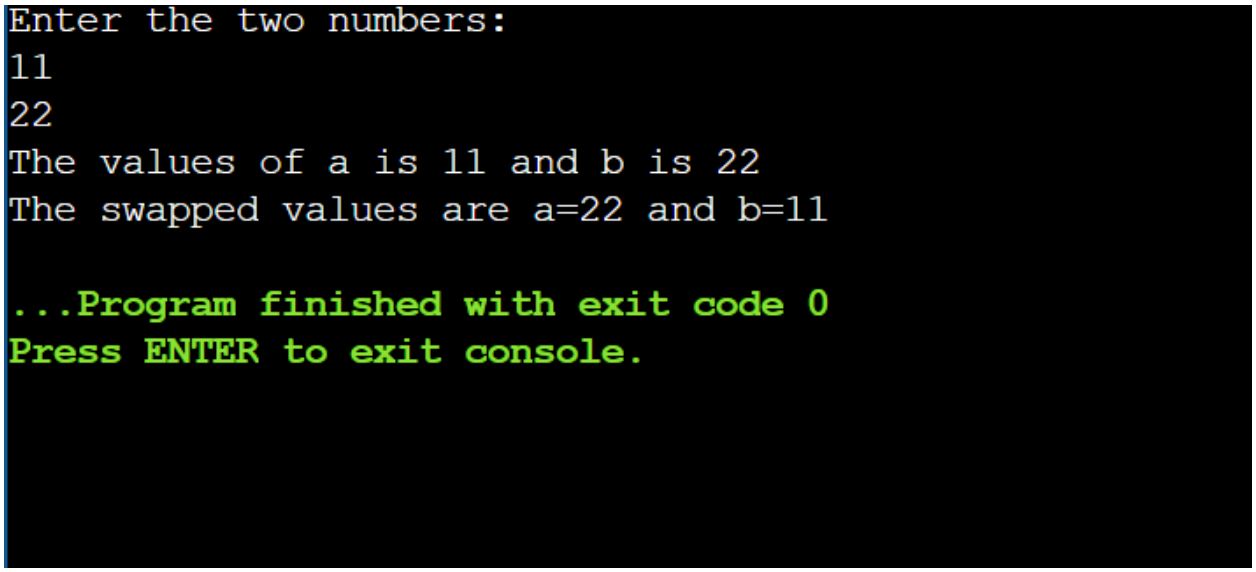
```
#include <stdio.h>
void call(int a,int b);
int main()
{
   int a,b;
   printf("Enter the two numbers:\n");
   scanf("%d%d",&a,&b);
   printf("The values of a is %d and b is %d \n",a,b);
```

```
    call(a,b);

    return 0;
}
void call(int a ,int b)
{
    int num;
    num=a;
    a=b;
    b=num;
    printf("The swapped values are a=%d and b=%d",a,b);
}
```



Call by reference:

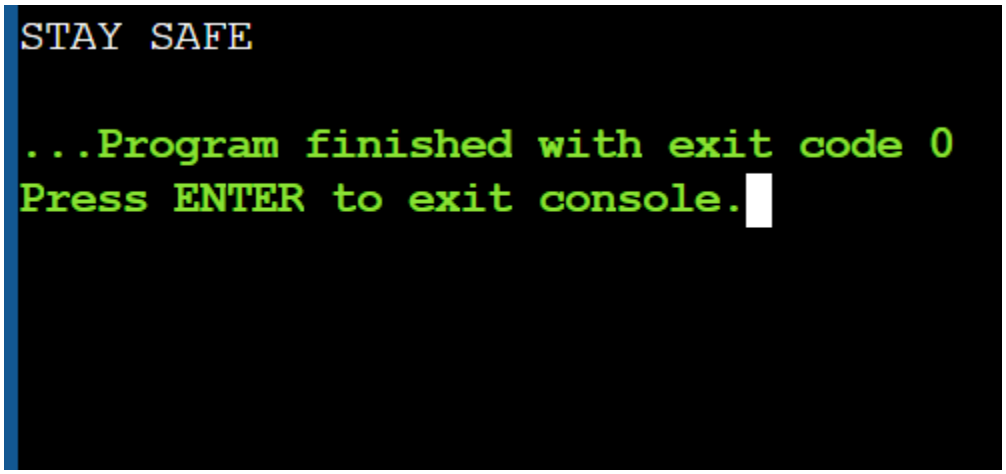
```c
#include <stdio.h>
void call(int *a,int *b);
int main()
{
   int a,b;
   printf("Enter the two numbers:\n");
   scanf("%d%d",&a,&b);
   printf("The values of a is %d and b is %d \n",a,b);
   call(&a,&b);

   return 0;
}
void call(int *a ,int *b)
{
   int *num;
   num=a;
   a=b;
   b=num;
   printf("The swapped values are a=%d and b=%d",*a,*b);
}
```



FUNCTIONS

Function without arguments and no return type

```
#include<stdio.h>

void main()
{
   void display();
   display();
   getch();

}
void display()
{
   printf("STAY SAFE");

}
```



Function with arguments and without return value

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

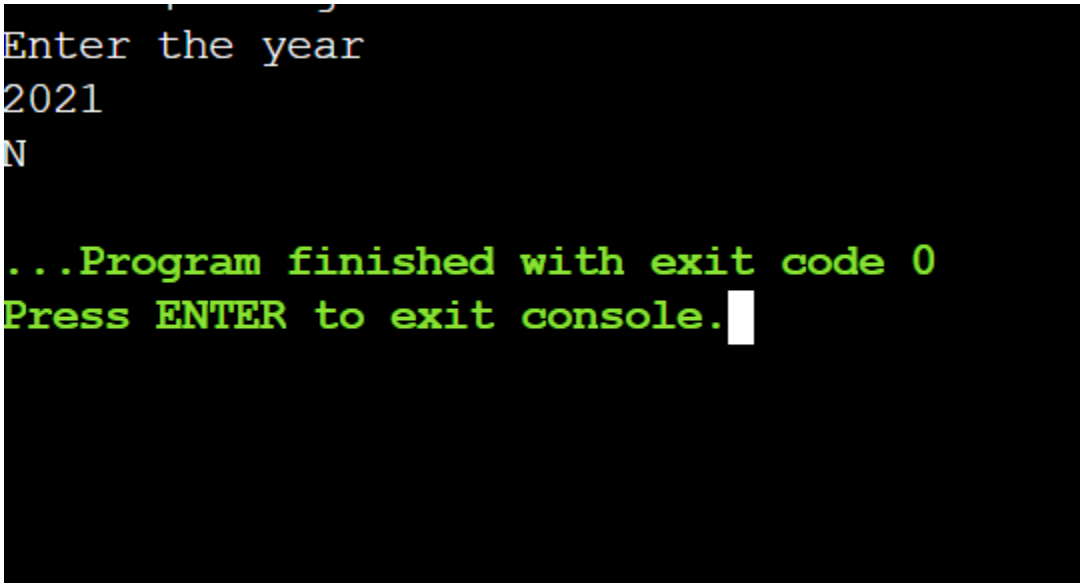
```
    int dob(int,int,int);
    int d,m,y;
   printf("Enter your date of birth dd/mm/yyyy: \n");
    scanf("%d%d%d",&d,&m,&y);
    dob(d,m,y);
    getch();
}
dob(int a,int b,int c)
{
    printf("YOUR DATE OF BIRTH IS %d/%d/%d",a,b,c);
}
```

```
Enter your date of birth dd/mm/yyyy:
10
11
2000
YOUR DATE OF BIRTH IS 10/11/2000

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

Functions with arguments and with return values

```
#include<stdio.h>
char leapyear(int);
int main()
{
    int year;
    char check;
    printf("Enter the year\n");
    scanf("%d",&year);
    check=leapyear(year);
```

```
   printf("%c",check);
   getch();
}
 char leapyear(int givenyear)
 {
    if(givenyear%4==0)
    return('S');
    else
    return('N');
 }
```



Function without arguments but with return values

```
#include<stdio.h>
int cal(int);

int main()
{
  int s,area;
  printf("Enter the side of a square:\n");
  scanf("%d",&s);
```

```
 area=cal(s);
 printf("The area of the square is %d",area);
 return 0;
}
 int cal(int s)
 {
    int area;
    area=(s*s);
    return area;
 }
```