

120CS0196

# PROGRAMMING LABORATORY-8

CS1000

Assignment-8

Group-'P7' Section:'E'

Name: Prachi Nandi

Roll no: 120CS0196

Codes are uploaded on my GitHub account :  
<https://github.com/prachi237/justC>

## Assignment-8

1) Write a C program to get the largest element of an array using the function.

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

```
int largest_element(int arr[], int num)
```

```
{
```

```
    int i, max_element;
```

```
    max_element = arr[0];
```

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

```
        if (arr[i] > max_element)
```

```
            max_element = arr[i];
```

```
    return max_element;
```

```
}
```

```
int main()
```

```
{
```

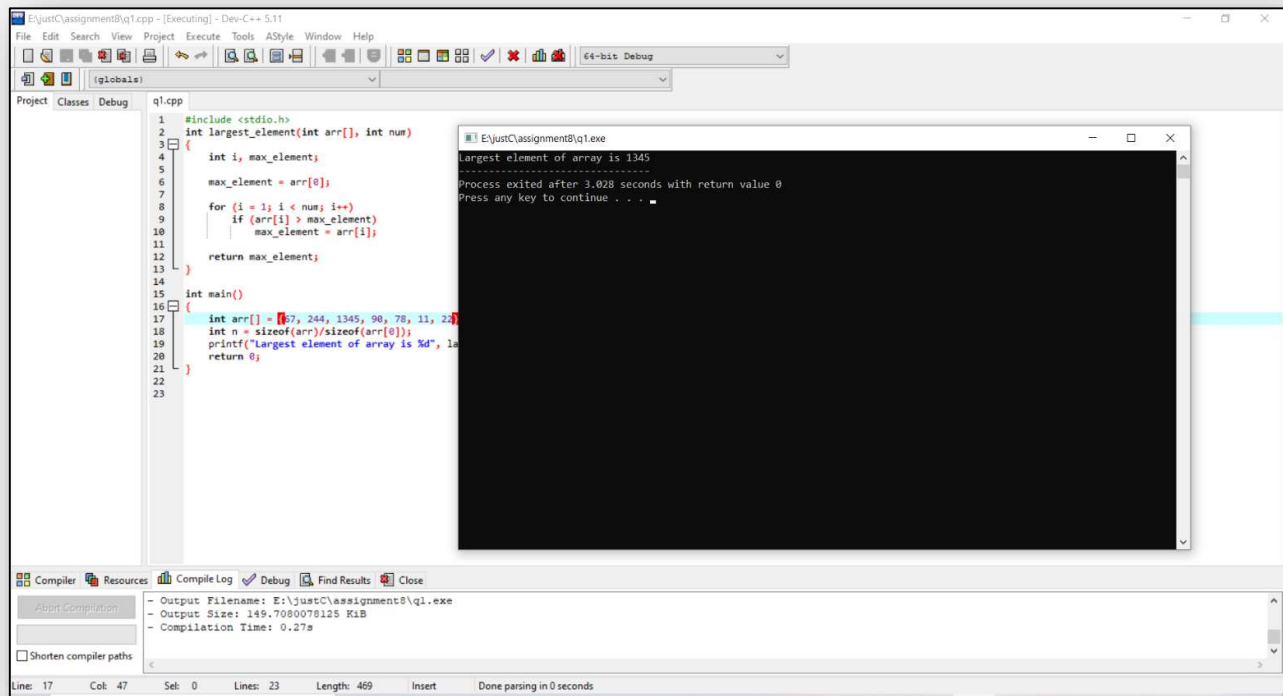
```
    int arr[] = {67, 244, 1345, 90, 78, 11, 22};
```

```
    int n = sizeof(arr)/sizeof(arr[0]);
```

```
    printf("Largest element of array is %d", largest_element(arr, n));
```

```
    return 0;
```

```
}
```



2) Write a C program to find average marks of a student in 5 subjects using the function.

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

```
int marks[5];
```

```
int Average(int);
```

```
int main()
```

```
{
```

```
    int i;
```

```
    int average;
```

```
    printf("\n Enter the marks of 5 subjects");
```

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

```
    {
```

```
        printf("\n subject[%d]:",i+1);
```

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

```
    }
```

```
    average=Average(5);
```

```
printf("\n The Average Of Marks is: %d ",average);
```

```
}
```

```
int Average(int n)
```

```
{int avg;
```

```
int sum=0;
```

```
int i;
```

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

```
{
```

```
sum = sum + marks[i];
```

```
}
```

```
avg=sum/n;
```

```
return avg;
```

```
}
```

The screenshot displays a C++ IDE with a source code editor on the left and a console window on the right. The source code, named `q1.cpp`, defines an `Average` function and a `main` function. The `main` function prompts the user to enter marks for 5 subjects, reads the input, and calls the `Average` function to calculate the average. The console window shows the program's execution, including the prompts, the input values (90, 99, 100, 98, 97), the calculated average (96), and a message indicating the process exited after 14.9 seconds.

```
1 #include<stdio.h>
2
3 int marks[5];
4 int Average(int);
5 int main()
6 {
7     int i;
8     int average;
9
10    printf("\n Enter the marks of 5 subjects");
11    for(i=0;i<5;i++)
12    {
13        printf("\n subject[%d]:",i+1);
14        scanf("%d",&marks[i]);
15    }
16    average=Average(5);
17    printf("\n The Average Of Marks is: %d ",average);
18
19
20 }
21
22 int Average(int n)
23 {int avg;
24 int sum=0;
25 int i;
26 for(i=0;i<n;i++)
27 {
28     sum = sum + marks[i];
29 }
30 avg=sum/n;
31 return avg;
32 }
```

Enter the marks of 5 subjects  
subject[1]:90  
subject[2]:99  
subject[3]:100  
subject[4]:98  
subject[5]:97  
The Average Of Marks is: 96  
-----  
Process exited after 14.9 seconds with return value 0  
Press any key to continue . . .

Compiler Resources Compile Log Debug Find Results Close  
Abort Compilation  
Shorten compiler paths  
Line: 29 Col: 11 Sel: 0 Lines: 32 Length: 452 Insert Done parsing in 0 seconds

3) Write a C program to swap two numbers using the function(both ways i.e. call by value and call by reference).

#### USING CALL BY VALUE

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

```
void swap(int,int);
```

```
int main( )
```

```
{
```

```
    int n1,n2;
```

```
    printf("Enter the two numbers to be swapped\n");
```

```
    scanf("%d%d",&n1,&n2);
```

```
    printf("\nThe values of n1 and n2 in the main function before calling the swap function are  
n1=%d n2=%d",n1,n2);
```

```
    swap(n1,n2);
```

```
    printf("\nThe values of n1 and n2 in the main function after calling the swap function are  
n1=%d n2=%d",n1,n2);}
```

```
void swap(int n1,int n2)
```

```
{
```

```
    int temp;
```

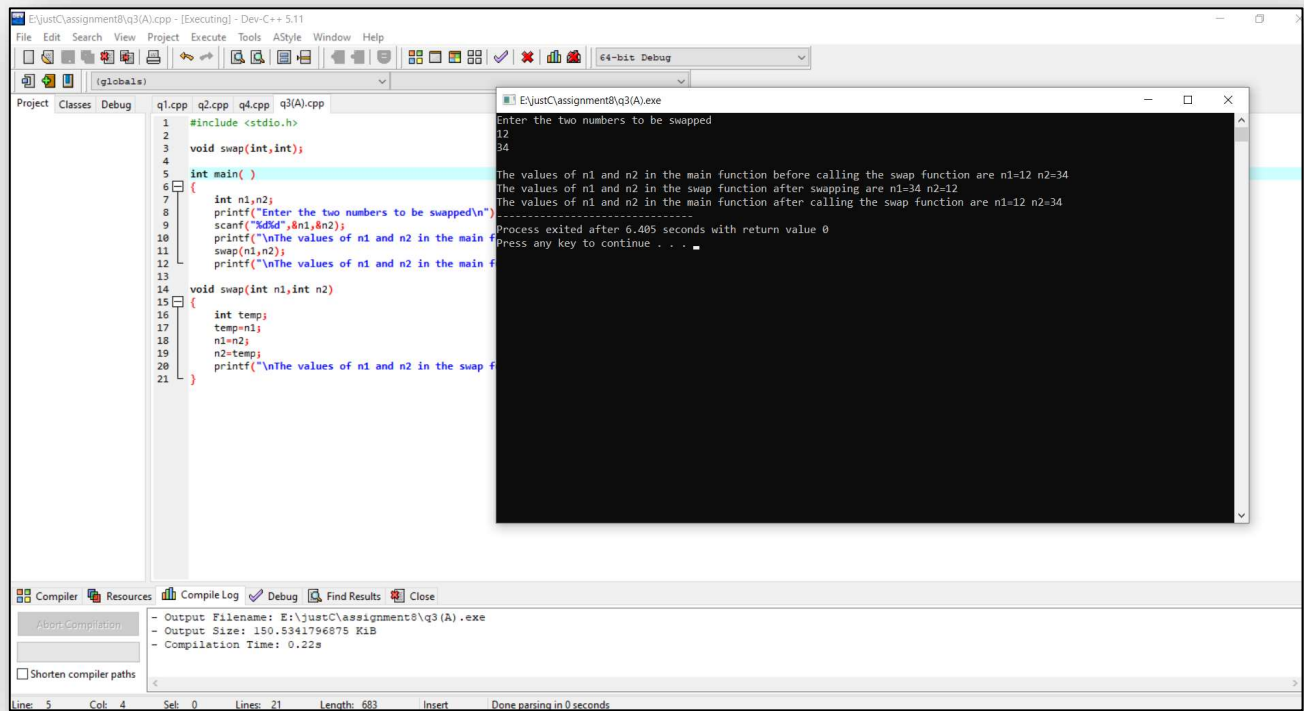
```
    temp=n1;
```

```
    n1=n2;
```

```
    n2=temp;
```

```
    printf("\nThe values of n1 and n2 in the swap function after swapping are n1=%d  
n2=%d",n1,n2);
```

```
}
```



## USING CALL BY REFERENCE

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

```
void swap(int*, int*);
```

```
int main()
```

```
{
```

```
    int n1, n2;
```

```
    printf("Enter the value of n1 and n2\n");
```

```
    scanf("%d%d",&n1,&n2);
```

```
    printf("Before Swapping\nn1 = %d\nn2 = %d\n", n1, n2);
```

```
    swap(&n1, &n2);
```

```
    printf("After Swapping\nn1 = %d\nn2 = %d\n", n1, n2);
```

```
    return 0;
```

```
}
```

```
void swap(int *a, int *b)
```

```
{
```

```
    int t;
```

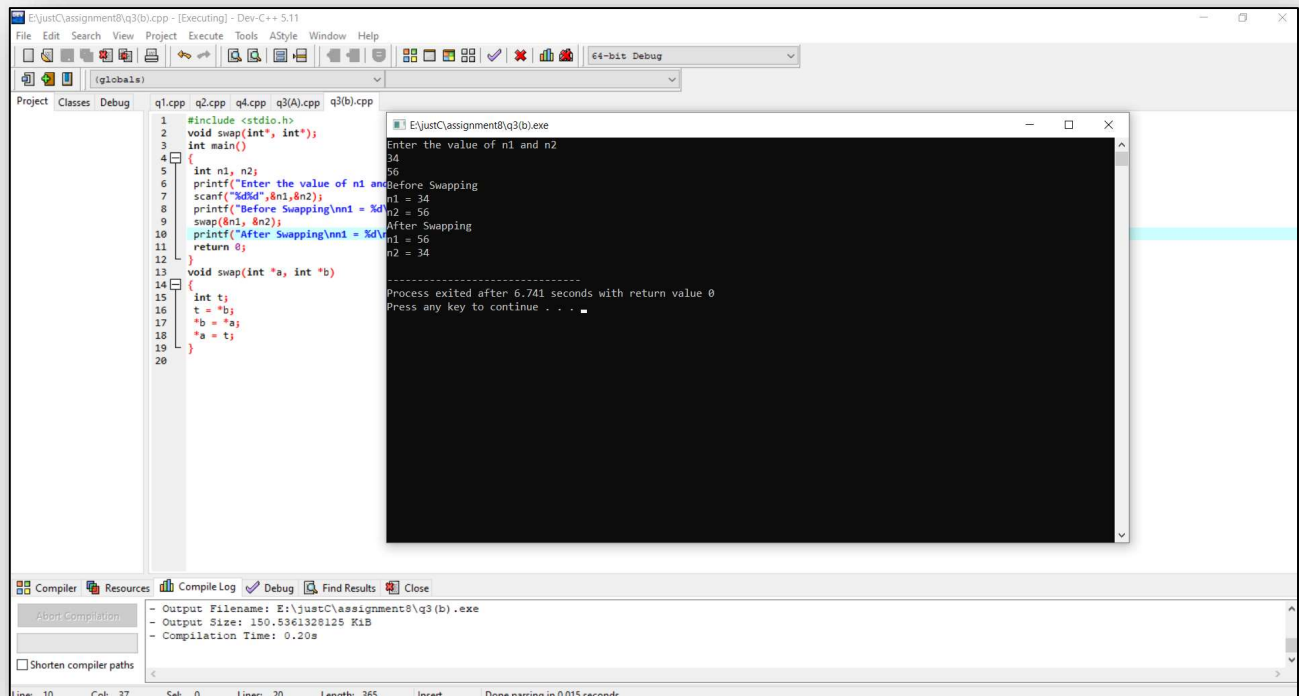
```

t = *b;

*b = *a;

*a = t;
}

```



4) Write a c program to find whether a string is palindrome or not

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

```
#include <string.h>
```

```
int main()
```

```
{ char s[100];
```

```
int i,n,j=0;
```

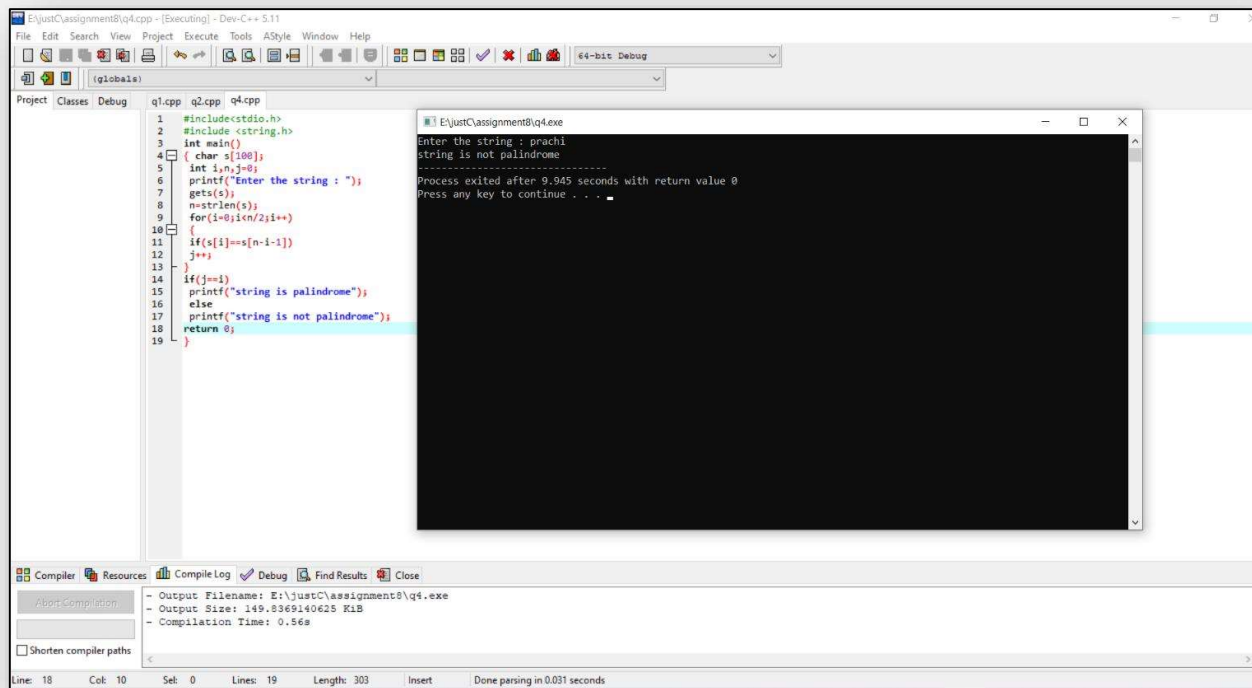
```
printf("Enter the string : ");
```

```
gets(s);
```

```

n=strlen(s);
for(i=0;i<n/2;i++)
{
if(s[i]==s[n-i-1])
j++;
}
if(j==i)
printf("string is palindrome");
else
printf("string is not palindrome");
return 0;
}

```





Codes are uploaded on my GitHub account :

<https://github.com/prachi237/justC>

Submitted by: Prachi Nandi 120CS0196

# THANK YOU