

120CS0196

# PROGRAMMING LABORATORY-6

CS1000

Assignment-6

Group-'P7' Section:'E'

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

# Assignment-6

1) WAP to enter the details of a student (Name, Roll\_number, and Branch) as input through keyboard and print it.

//WAP to enter the details of a student (Name, Roll\_number, and Branch) as input through keyboard and print it.

```
#include<stdio.h>

int main()
{
    char name[20];                //variable declaration
    char roll_no[10];
    char branch[20];

    printf("Enter your name please:");
    scanf("%s",&name);
    printf("\n Enter your Roll number:");
    scanf("%s",&roll_no);
    printf("\n Enter you branch:");
    scanf("%s",&branch);

    printf("\n Your name is %s",name);
    printf("\n your roll number is %s",roll_no);
    printf("\n your branch is %s",branch);

    return 0;
}
```

The screenshot shows a C++ IDE with a file named `q-1.cpp`. The code is a program to take student details (Name, Roll number, and Branch) as input through the keyboard and print them. The code is as follows:

```
1 //WAP to enter the details of a student (Name, Roll number, and Branch) as input through keyboard and print it.
2
3 #include<stdio.h>
4 int main()
5 {
6     char name[20];
7     char roll_no[10];
8     char branch[20];
9
10    printf("Enter your name please:");
11    scanf("%s",&name);
12    printf("\n Enter your Roll number:");
13    scanf("%s",&roll_no);
14    printf("\n Enter your branch:");
15    scanf("%s",&branch);
16
17    printf("\n Your name is %s",name);
18    printf("\n your roll number is %s",roll_no);
19    printf("\n your branch is %s",branch);
20
21    return 0;
22 }
```

The terminal window shows the execution output:

```
E:\JustAssignment6\q-1.exe
Enter your name please:Prachi_Nandi
Enter your Roll number:128CS0196
Enter your branch:computer_Science
Your name is Prachi_Nandi
your roll number is 128CS0196
your branch is computer_Science
.....
Process exited after 32.95 seconds with return value 0
Press any key to continue . . .
```

The IDE also shows the compiler output:

```
Compiler Resources Compile Log Debug Find Results Close
- Output Filename: E:\JustAssignment6\q-1.exe
- Output Size: 149.837890625 KiB
- Compilation Time: 0.20s
Shorten compiler paths
```

The status bar at the bottom shows: Line: 14, Col: 16, Sel: 0, Lines: 22, Length: 533, Insert, Done parsing in 0.016 seconds.

## 2) WAP to check if a string is palindrome or not

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

```
int main()
```

```
{
```

```
char word[20]; //variable declaration
```

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

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

```
gets(word);
```

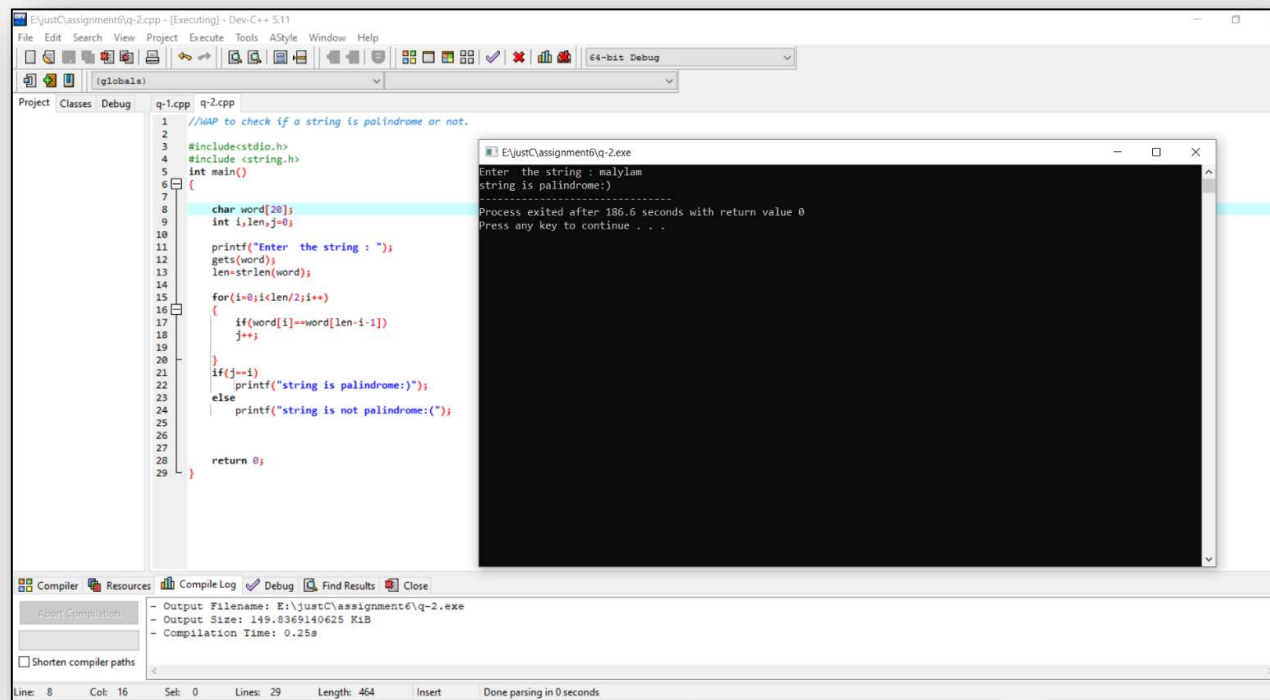
```
len=strlen(word);
```

```
for(i=0;i<len/2;i++) //logic
```

```
{
```

```
    if(word[i]==word[len-i-1])
```

```
j++;  
}  
if(j==i)  
    printf("string is palindrome:");  
else  
    printf("string is not palindrome:");  
  
return 0;  
}
```



### 3) WAP to count number of vowels and consonants in a string

```
#include <stdio.h>
#include <string.h>
int main()
{
    char word[20];

    int i,vowels=0,consonants=0;

    printf("Enter the string : ");
    gets(word);

    for(i=0;word[i];i++)

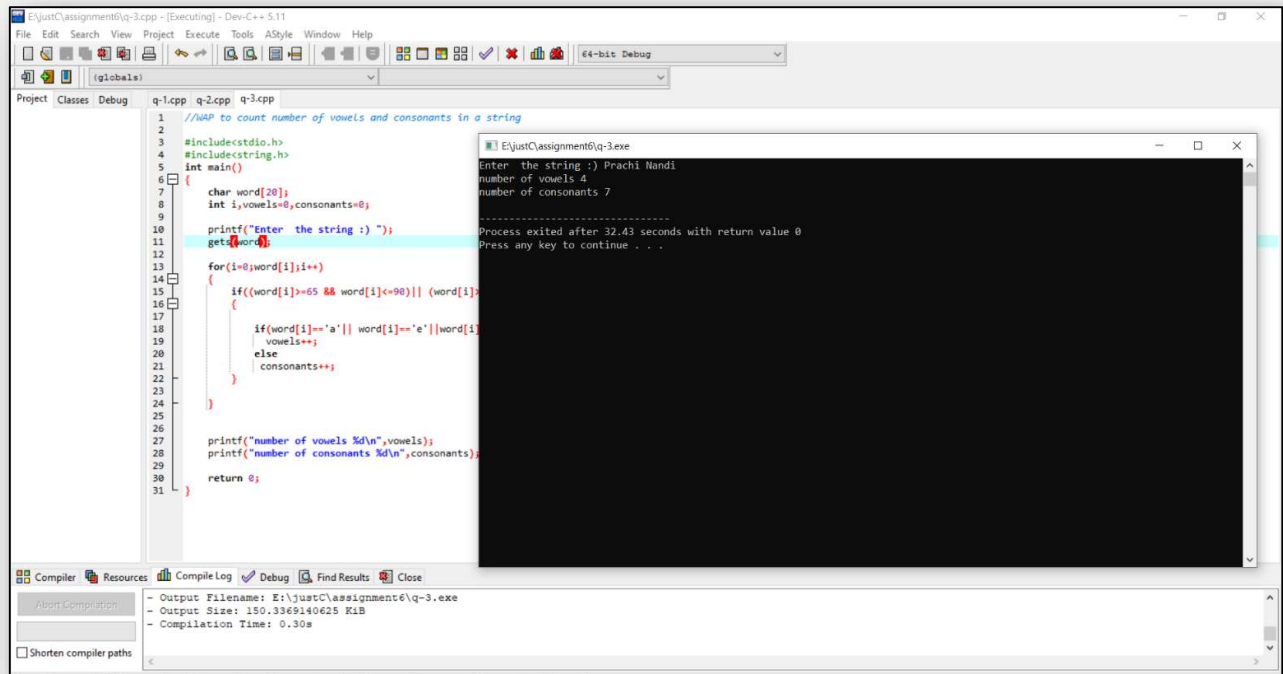
    {
        if((word[i]>=65 && word[i]<=90)|| (word[i]>=97 && word[i]<=122))

        {

            if(word[i]=='a' || word[i]=='e' || word[i]=='i' || word[i]=='o' || word[i]=='u' || word[i]=='A' || word[i]=='E' || word[i]=='I' || word[i]=='O' || word[i]=='U')
                vowels++;

            else
                consonants++;
        }
    }

    printf("number of vowels %d\n",vowels);
    printf("number of consonants %d\n",consonants);
    return 0;
}
```



4) WAP to replace a string by another string. Example: In the sentence "All is well.", replace "well" with "WELL".

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

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

```
void new_string(char [],char[],char[]); //function declaration
```

```
int main()
```

```
{
```

```
char string[10],replace[10],new_str[10];
```

```
printf("\nEnter a string: ");
```

```
gets(string);
```

```
printf("\nEnter the word that you want to replace: ");
```

```
gets(replace);
```

```

printf("\nEnter the new word: ");
gets(new_str);
new_string(string,replace,new_str);           //function call
printf("\nThe string after replacing that word: %s\n",string);
}
void new_string(char string[],char replace[],char new_str[]) //function
{
int stringLen,replaceLen,newLen;
int i=0,j,k;
int flag=0,start,end;
stringLen=strlen(string);
replaceLen=strlen(replace);
newLen=strlen(new_str);

for(i=0;i<stringLen;i++)
{
flag=0;
start=i;
for(j=0;string[i]==replace[j];j++,i++)
if(j==subLen-1)
flag=1;
end=i;
if(flag==0)
i-=j;
else
{
for(j=start;j<end;j++)
{
for(k=start;k<stringLen;k++)
string[k]=string[k+1];
stringLen--;
i--;
}
}
}

```

```

for(j=start;j<start+newLen;j++)
{
for(k=stringLen;k>=j;k--)
string[k+1]=string[k];
string[j]=new_str[j-start];
stringLen++;
i++;
}
}
}
}

return 0;
}

```

The screenshot displays the Dev-C++ IDE with a C++ source file named `q-4.cpp` and its execution output in a separate window.

**Source Code (q-4.cpp):**

```

1 //WAP to replace a string by another string. Example: In the sentence "All is well.", replace "well" with "WELL".
2
3 #include<stdio.h>
4 #include<string.h>
5
6 void new_string(char [],char[])
7
8 int main()
9 {
10 char string[10],replace[10],new_str[10];
11 printf("\nEnter a string: ");
12 gets(string);
13 printf("\nEnter the word that you want to replace: ");
14 gets(replace);
15 printf("\nEnter the new word: ");
16 gets(new_str);
17 new_string(string,replace,new_str);
18 printf("\nThe string after replacement is: ");
19 puts(string);
20
21 void new_string(char string[],char replace[],char new_str[])
22 {
23 int stringLen=strlen(string);
24 int i=0,j,k;
25 int flag=0,start,end;
26 stringLen=strlen(string);
27 subLen=strlen(replace);
28 newLen=strlen(new_str);
29
30 for(i=0;i<stringLen;i++)
31 {
32 flag=0;
33 start=i;
34 for(j=0;j<subLen;j++)
35 if(string[i+j]==replace[j])
36 flag=1;

```

**Execution Output (q-4.exe):**

```

Enter a string: All is well
Enter the word that you want to replace: well
Enter the new word: WELL
The string after replacing that word: All is WELL
Process exited after 44.39 seconds with return value 0
Press any key to continue . . .

```

The bottom status bar of the IDE shows: Line: 61, Col: 1, Sel: 0, Lines: 63, Length: 1270, Insert, Done parsing in 0.015 seconds.



5) WWAP which print initial of any name.

Example Input: Sachin Ramesh Tendulkar

Output: SRT

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

```
int main()
```

```
{
```

```
    char name[20];                //variable declaration
```

```
    int i=0;
```

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

```
    gets(name);
```

```
    printf("%c",*name);
```

```
    while(name[i]!='\0')
```

```
    {
```

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

```
        {
```

```
            i++;
```

```
            printf("%c",*(name+i));
```

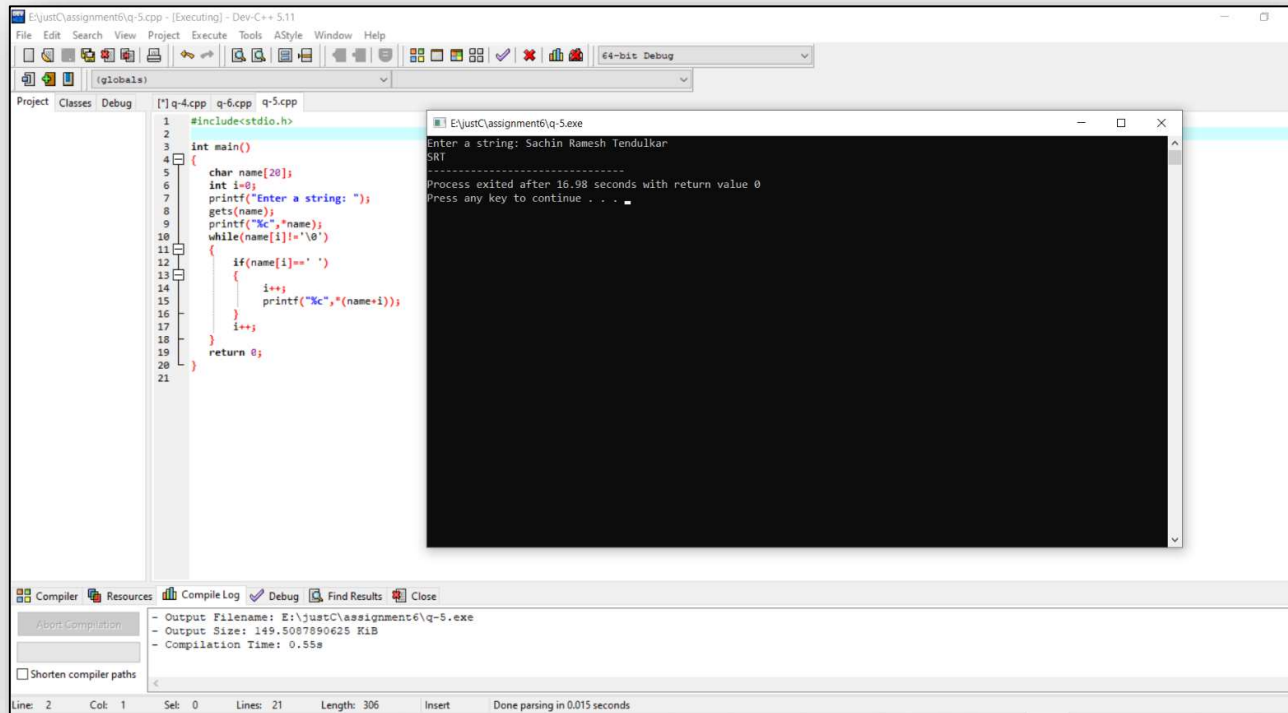
```
        }
```

```
        i++;
```

```
    }
```

```
    return 0;
```

```
}
```



6) WAP to enter two strings and compare whether they are equal or not.

```
#include<stdio.h>
#include<string.h>
int main()
{
char string1[20],string2[20];
int i,j=0;
printf("Enter the string1: ");
gets(string1);
printf("Enter the string2: ");
gets(string2);
if(strlen(string1)==strlen(string2))
{
for(i=0;string2[i]!='\0';i++)
{
```

```

        if(string1[i]==string2[i])

            j++;

        }

        if(j==i)

            printf("strings are equal");

        else

            printf("strings are unequal");

    }

    else

        printf("strings are unequal");

return 0;

}

```

The screenshot displays the Dev-C++ IDE with a C program for string comparison. The code is as follows:

```

1  #include<stdio.h>
2  #include<string.h>
3
4  int main()
5  {
6      char string1[20],string2[20];
7      int i,j=0;
8
9      printf("Enter the string1: ");
10     gets(string1);
11     printf("Enter the string2: ");
12     gets(string2);
13     if(strlen(string1)==strlen(string2))
14     {
15         for(i=0;string2[i]!='\0';i++)
16         {
17             if(string1[i]==string2[i])
18                 j++;
19         }
20         if(j==i)
21             printf("strings are equal");
22         else
23             printf("strings are unequal");
24     }
25     else
26         printf("strings are unequal");
27
28     return 0;
29 }

```

The execution output window shows the following interaction:

```

Enter the string1: computer
Enter the string2: technology
strings are unequal
-----
Process exited after 23.53 seconds with return value 0
Press any key to continue . . .

```

The bottom status bar indicates the file is E:\justC\assignment6\q-6.cpp, line 29, column 2, with a length of 572 characters. The status is "Done parsing in 0.015 seconds".

Codes are uploaded on my GitHub account :

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

Submitted by: Prachi Nandi 120CS0196

THANK YOU