

\*\*\*\*\***ASSIGNMENT 5**\*\*\*\*\*

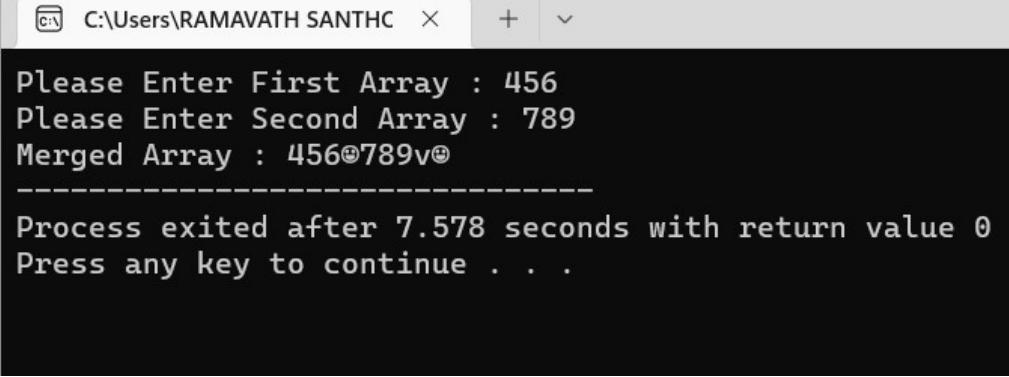
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**Q1)**    //Program to merge two 1-D arrays

```
#include<iostream>
using namespace std;

int merge(char a[10],char b[10]){
    int i, d;
    char c[20];
    for(i=0;i<10;i++)
    {
        if(a[i]!=0)
        {
            c[d]=a[i];
            d++;
        }
    }
    for(i=0;i<10;i++)
    {
        if(b[i]!=0)
        {
            c[d]=b[i];
            d++;
        }
    }
    cout<<"Merged Array : "<<c;
    return 0;
}

int main(){
    char arr1[10],arr2[10];
    cout<<"Please Enter First Array : ";
    cin>>arr1;
    cout<<"Please Enter Second Array : ";
    cin>>arr2;
    merge(arr1,arr2);
    return 0;
}
```



```
C:\Users\RAMAVATH SANTHC  ×  +  v

Please Enter First Array : 456
Please Enter Second Array : 789
Merged Array : 456789v

-----
Process exited after 7.578 seconds with return value 0
Press any key to continue . . .
```

```
//Q2    Program to perform operations like addition, multiplication, etc. on matrix

#include<iostream>

using namespace std;

int main(){

    int n;

    cout<<"Please Enter the Number of Rows or Colume of Square Matrix : "<<endl;

    cin>>n;

    int arr1[10][10], arr2[10][10], arr3[10][10];

    int i, j, k;

    cout<<"Please Enter the Element of First Matrix : "<<endl;

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

        for(j=1;j<=n;j++){

            cout<<"arr1["<<i<<"]"<<["<<j<<"] = ";

            cin>>arr1[i][j];

        }

    }

    cout<<"Please Enter the Element of Second Matrix : "<<endl;

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

        for(j=1;j<=n;j++){

            cout<<"arr2["<<i<<"]"<<["<<j<<"] = ";

            cin>>arr2[i][j];

        }

    }

    cout<<"Sum of Above Two Matrix : "<<endl;

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

        for(j=1;j<=n;j++){

            cout<<arr1[i][j]+arr2[i][j]<<"\t";

        }

        cout<<"\n";

    }
```

```

    }

    cout<<"Multiplication of Above Two Matrix : "<<endl;

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

        for(j=1;j<=n;j++){

            arr3[i][j]=0;

            for(k=1;k<=n;k++){

                arr3[i][j]+=arr1[i][k]*arr2[k][j];

            }

        }

    }

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

        for(j=1;j<=n;j++){

            cout<<arr3[i][j]<<"\t";

        }

        cout<<"\n";

    }

    return 0;

}

```

```

C:\Users\RAMAVATH SANTHC
Please Enter the Number of Rows or Column of Square Matrix :
3
Please Enter the Element of First Matrix :
arr1[1][1] = 3
arr1[1][2] = 2
arr1[1][3] = 5
arr1[2][1] = 6
arr1[2][2] = 9
arr1[2][3] = 4
arr1[3][1] = 8
arr1[3][2] = 9
arr1[3][3] = 7
Please Enter the Element of Second Matrix :
arr2[1][1] = 7
arr2[1][2] = 8
arr2[1][3] = 9
arr2[2][1] = 5
arr2[2][2] = 3
arr2[2][3] = 12
arr2[3][1] = 64
arr2[3][2] = 5
arr2[3][3] = 6
Sum of Above Two Matrix :
10      10      14
11      12      16
72      14      13
Multiplication of Above Two Matrix :
351     55      81
343     95     186
549     126     222

-----
Process exited after 30.31 seconds with return value 0
Press any key to continue . . .

```

// **Q3** program to find the sum of all the elements of an array using pointer

```
#include<iostream>

using namespace std;

int Sum(int *p, int a){
    int j, sum = 0 ;

    for(j=0;j<a;j++){
        sum += *(p+j);
    }

    cout<<"Sum of All "<<a<<" Number = "<<sum;

    return 0;
}

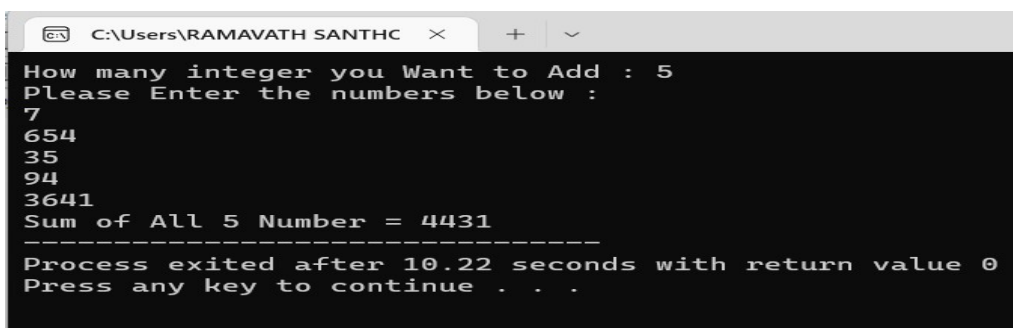
int main(){
    int n, arr[10];
    int i;

    cout<<"How many integer you Want to Add : ";
    cin>>n;

    cout<<"Please Enter the numbers below : "<<endl;
    for(i=0;i<n;i++){
        cin>>arr[i];
    }

    Sum(arr,n);

    return 0;
}
```



```
C:\Users\RAMAVATH SANTHC >
How many integer you Want to Add : 5
Please Enter the numbers below :
7
654
35
94
3641
Sum of All 5 Number = 4431
-----
Process exited after 10.22 seconds with return value 0
Press any key to continue . . .
```

//Q4 Write a program to sort 5 string words stored in an array of pointers.

```
#include <iostream>
```

```
using namespace std;
```

```
void swap(string *s1, string *s2)
```

```
{  
    string t = *s1;  
    *s1 = *s2;  
    *s2 = t;  
}
```

```
int main()
```

```
{  
    string words[5] = {"SANTHOSH", "can", "a", "flower", "bring"};  
    string *word_p[5];
```

```
    for(int i = 0; i < 5; i++) word_p[i] = &words[i];
```

```
    int i, j;
```

```
    for (i = 0; i < 4; i++)
```

```
        for (j = 0; j < 5 - i - 1; j++)
```

```
            if (*word_p[j] > *word_p[j + 1])
```

```
                swap(word_p[j], word_p[j + 1]);
```

```
    for(int i = 0; i < 5; i++) cout << words[i] << " ";
```

```
    return 0;
```

```
}
```

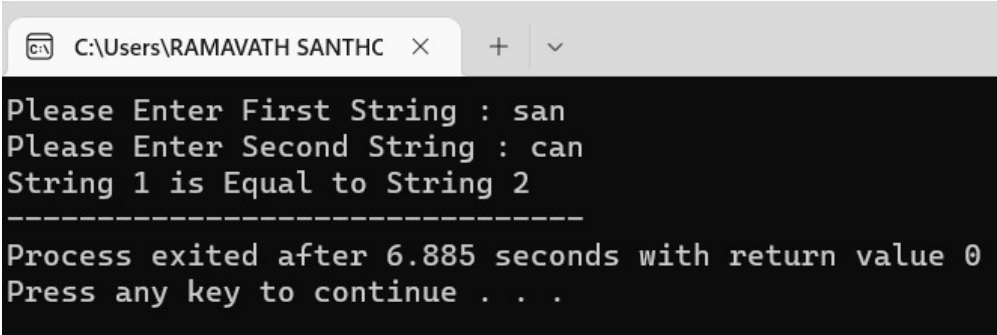
```
Q4.cpp  
1 //Q4  
2 #include <iostream>  
3  
4 using namespace std;  
5  
6 void swap(string *s1, string *s2)  
7 {  
8     string t = *s1;  
9     *s1 = *s2;  
10    *s2 = t;  
11 }  
12  
13 int main()  
14 {  
15     string words[5] = {"santhosh", "can", "a", "flower", "bring"};  
16     string *word_p[5];  
17  
18     for(int i = 0; i < 5; i++) word_p[i] = &words[i];  
19  
20     int i, j;  
21     for (i = 0; i < 4; i++)  
22         for (j = 0; j < 5 - i - 1; j++)  
23             if (*word_p[j] > *word_p[j + 1])  
24                 swap(word_p[j], word_p[j + 1]);  
25  
26     for(int i = 0; i < 5; i++) cout << words[i] << " ";  
27     return 0;  
28 }
```

```
C:\Users\RAMAVATH SANTHC × + v  
a bring can flower santhosh  
-----  
Process exited after 0.07451 seconds with return value 0  
Press any key to continue . . . |
```

// **Q5** Program to Compare Two Strings

```
#include<iostream>
#include<string.h>
using namespace std;

int main(){
    int i;
    string str1, str2;
    cout<<"Please Enter First String : ";
    cin>>str1;
    cout<<"Please Enter Second String : ";
    cin>>str2;
    if(str1.length()==str2.length()){
        for(i=1;i<=str1.length();i++){
            if(str1[i]==str2[i]){
                if(i==str1.length()){
                    cout<<"String 1 is Equal to String 2 ";
                }
                continue;
            }
            else{
                cout<<"String 1 is Not Equal to String 2 ";
                break;
            }
        }
    }
    else{
        cout<<"String 1 is Not Equal to String 2 ";
    }
}
```



```
C:\Users\RAMAVATH SANTHC >
Please Enter First String : san
Please Enter Second String : can
String 1 is Equal to String 2
-----
Process exited after 6.885 seconds with return value 0
Press any key to continue . . .
```

// **Q6** Program to Concatenate Two Strings

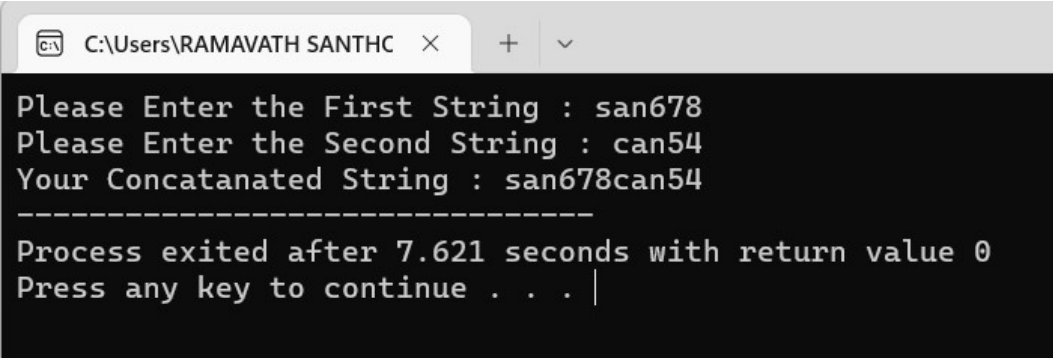
```
#include<iostream>
using namespace std;

int main(){
```

```

string str1, str2, str3;
cout<<"Please Enter the First String : ";
cin>>str1;
cout<<"Please Enter the Second String : ";
cin>>str2;
str3 = str1+str2;
cout<<"Your Concatanated String : ";
cout<<str3;
return 0;
}

```



```

C:\Users\RAMAVATH SANTHC
Please Enter the First String : san678
Please Enter the Second String : can54
Your Concatanated String : san678can54
-----
Process exited after 7.621 seconds with return value 0
Press any key to continue . . . |

```

//Q7 program to print the following pattern

```

UN
UNIV
UNIVER
UNIVERSI
UNIVERSITY
UNIVERSI
UNIVER
UNIV
UN
*/

```

```

#include<iostream>
using namespace std;

```

```

int Pattern(string a){
    int i, j;
    cout<<"Required Pattern : "<<endl;
    for(i=0;i<=10;i=i+2){

        for(j=0;j<i;j++){
            cout<<a[j]<<" ";
        }
        cout<<endl;
    }
    for(i=8;i>=0;i=i-2){

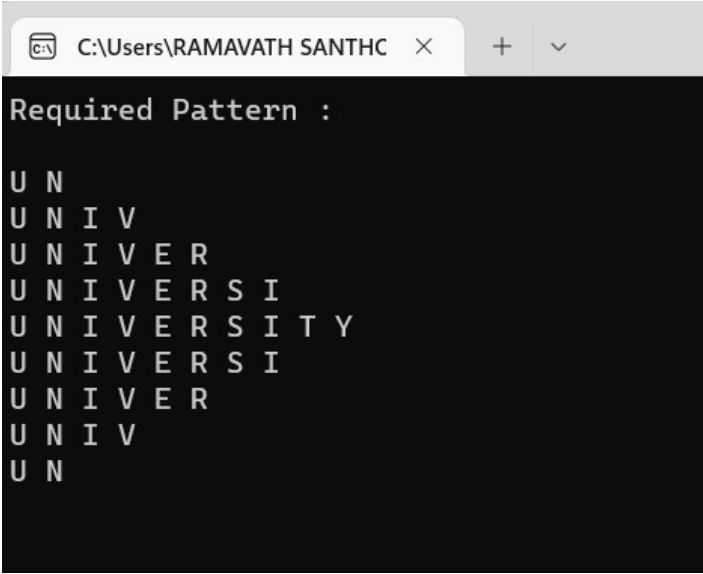
```

```

        for(j=0;j<i;j++){
            cout<<a[j]<<" ";
        }
        cout<<endl;
    }
    return 0;
}

int main(){
    string str;
    str = "UNIVERSITY";
    Pattern(str);
    return 0;
}

```



```

Required Pattern :
U N
U N I V
U N I V E R
U N I V E R S I
U N I V E R S I T Y
U N I V E R S I
U N I V E R
U N I V
U N

```

//**Q8** program to read a sentence and count the number of characters & words in that sentence

```

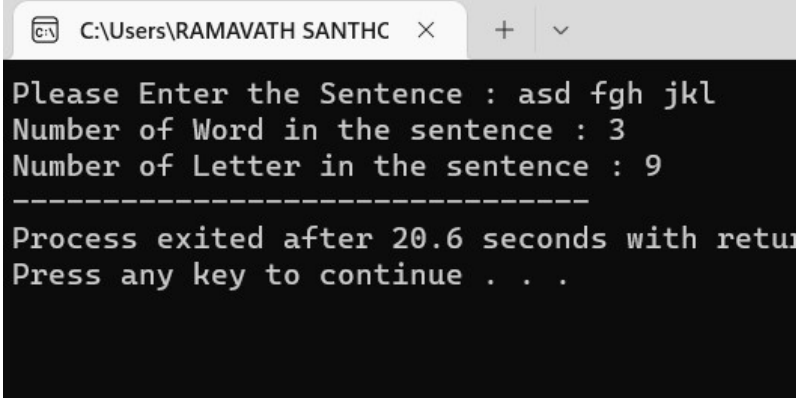
#include<iostream>
using namespace std;

int main(){
    int i, word=1;
    string str;
    cout<<"Please Enter the Sentence : ";
    getline(cin,str);
}

```



```
//      cout<<str.length();
      for(i=0;i<str.length();i++){
          if(str[i]==' '){
              if(str[i+1]!=' ')
                  word++;
          }
      }
      cout<<"Number of Word in the sentence : "<<word<<endl;
      cout<<"Number of Letter in the sentence : "<<str.length()-word+1;
      return 0;
}
```



```
C:\Users\RAMAVATH SANTHC  X  +  v

Please Enter the Sentence : asd fgh jkl
Number of Word in the sentence : 3
Number of Letter in the sentence : 9
-----
Process exited after 20.6 seconds with return code 0
Press any key to continue . . .
```