

## **Lab 5**

***1. Two strings are anagram of each other, if we can rearrange characters of one string to form another string. All the characters of one string must be present in another string and should appear the same number of times in another string. The strings can contain any ASCII characters.***

### **A. CODE:**

```
#include <iostream>
#include<bits/stdc++.h>
using namespace std;
bool areAnagram(string s1, string s2)
{
    int n1 = s1.length();
    int n2 = s2.length();
    if (n1 != n2)
        return false;
    sort(s1.begin(), s1.end());
    sort(s2.begin(), s2.end());

    for (int i = 0; i < n1; i++)
        if (s1[i] != s2[i])
            return false;
    return true;
}
int main()
{
    string s1="",s2="";
    cout<<"Enter the value of s1 : ";
```

```
cin>>s1;
cout<<"Enter the value of s2 : ";
cin>>s2;
if (areAnagram(s1, s2))
    cout << "The two strings are anagram of each other";
else
    cout << "The two strings are not anagram of each "
        "other";
}
```

### **SAMPLE INPUT AND SAMPLE OUTPUT:**

```
Enter the value of s1 : lohith
Enter the value of s2 : ohithl
The two strings are anagram of each other
```

**2. There are  $N$  teams participating in a knockout tournament. Each team is assigned an ID. In this tournament, the ID of the first team is 1, second team is 2, and so on till upto  $N$ . The strength of each team is decided by the strength that it contains in the following units:**

**A. CODE:**

```
#include <iostream>
using namespace std;
int main()
{
    int teams,best;
    int match[teams][5],strength[teams]={0};
    best=0;
    cout<<"Enter the no.of teams participating in th tournament : ";
    cin>>teams;
    for(int i=0;i<teams;i++)
    {
        cout<<"Team "<<i+1<<" : ";
        for(int j=0;j<5;j++)
        {
            cin>>match[i][j];
            strength[i]=strength[i]+match[i][j];
        }
    }
    for(int i=1;i<teams;i++)
    {
        if(strength[i]>strength[best])
        {
            best=i;
        }
    }
}
```

```
}  
cout<<"The winning team is "<<best+1;  
}
```

### **SAMPLE INPUT AND SAMPLE OUTPUT:**

```
Enter the no.of teams participating in th tournament : 5  
Team 1 : 1 2 3 4 5  
Team 2 : 2 4 5 6 7  
Team 3 : 1 2 3 4 5  
Team 4 : 1 4 2 2 3  
Team 5 : 1 2 3 4 5  
The winning team is 2
```