OOP-LAB Task 2

Roll No: 24P-0706 **Dept: BS-CS**

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Qns1:

```
#include<iostream>
using namespace std;
int  main()
{
   int n,count=0;
   bool palindro=true;
   cout <<"The size of string :"<<endl;
   cin>>n;
   char *a=new char[n+1];
   cout <<"Enter any word which should not have any space and should be less then: "<<n<<" characters."<<endl;

   for(int i=0;i<n;i++){
      cin>>*(a+i);
   }

   for(int i=0;i<n/2;i++)
      {
         if(*(a+i) != *(a+n-i-1)){
         palindro=false;
         break;
         }
```

```
    }
  if(palindro)
  {
    cout <<"The array is Palindrome."<<endl;
  }
  else{
    cout <<"The array is not palindrome."<<endl;
  }
   char ch;
  cout <<"Enter the character to count its frequency."<<endl;
  cin>>ch;
  for (int i=0;i<n;i++)
  {
    if(*(a+i) == ch)
    {
      count++;
    }
  }
  cout <<"The Frequency of this character in the string is:"<<count<<endl;
  delete[] a;
  return 0;
}
```

Output:

```
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-2> g++ -g qns1.cpp -o ./output
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-2> ./output
The size of string :
5
Enter any string without spaces, should contain maximum: 5 characters.
aazan
The array is not palindrome.
Enter the character to count its frequency.
a
The Frequency of this character in the string is:3
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-2> ./output
The size of string :
5
Enter any string without spaces, should contain maximum: 5 characters.
civic
The array is Palindrome.
Enter the character to count its frequency.
c
The Frequency of this character in the string is:2
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-2>
```

Qns 2:

```
#include<iostream>

using namespace std;

int main()

{

   int row_s,col_s,sum=0;

   cout <<"enter number of rows you want:"<<endl;

   cin>>row_s;

   cout<<"Enter number of coloums you want:"<<endl;

   cin>>col_s;

   int **a=new int*[row_s];

   for(int i=0;i<row_s;i++)

   {
```

```
    a[i]=new int[col_s];
  }
  for(int i=0;i<row_s;i++)
  {
    for(int j=0;j<col_s;j++)
    {
      cout <<"Enter the elements of 2d array : ";
      cin>>a[i][j];
    }
  }
  int first=a[0][0],least=a[0][0];
  for(int i=0;i<row_s;i++)
  {
    for(int j=0;j<col_s;j++)
    {
      sum+=a[i][j];
      if(first<a[i][j])
      {
        first=a[i][j];
      }
      if(least>a[i][j])
      {
        least=a[i][j];
      }
    }
  }

cout <<"The Sum OF elements of 2d array is :"<<sum<<endl;
cout<< "\nThe maximum element in this 2d array is :"<<first<<endl;
```

```
 cout <<"\nThe minimum number in this 2d array is :"<<least<<endl;
 cout<<"\n\n\nThe matrix before transpose."<<endl;
   for(int i=0;i<row_s;i++)
   {
      for(int j=0;j<col_s;j++)
      {
         cout <<a[i][j]<<" ";
      }
      cout <<endl;
   }
 cout <<"The transpose matrix is: "<<endl;
   for(int i=0;i<col_s;i++)
   {
      for(int j=0;j<row_s;j++)
      {
         cout <<a[j][i]<<" ";
      }
      cout<<endl;
   }
   for(int i=0;i<row_s;i++)
   {
      delete[] a[i];
   }
   delete[] a;

   return 0;
}
```

Output:

```
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-2> g++ -g qns2.cpp -o ./output
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-2> ./output
enter number of rows you want:
2
Enter number of coloums you want:
3
Enter the elements of 2d array : 9
Enter the elements of 2d array : 1
Enter the elements of 2d array : 6
Enter the elements of 2d array : 3
Enter the elements of 2d array : 6
Enter the elements of 2d array : 2
The Sum OF elements of 2d array is :27

The maximum element in this 2d array is :9

The minimum number in this 2d array is :1



The matrix before transpose.
9 1 6
3 6 2
The transpose matrix is:
9 3
1 6
6 2
PS C:\Users\Azan Noor\OneDrive\Desktop\Lab Task Opp\labtask-2>
```