

## **LAB ASSIGNMENT 2**

Parnika Bhatia

Roll no.- 102118027

BS2

**1. WAP to check whether the given number is even or odd (By using if-else and conditional operator).**

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int a;
```

```
    cout<<"Enter your number: ";
```

```
    cin>>a;
```

```
    if(a%2==0)
```

```
        cout<<"The number is even";
```

```
    else
```

```
        cout<<"The number is odd";
```

```
}
```

## 2. WAP to print the following series:

**10,9,8,.....**

**1 2,4,6,8,.....20**

**10,13.5,17,20.5**

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    cout<<"First series:";
```

```
    for(int i=10; i>=1;i--)
```

```
        cout<<i<<endl;
```

```
    cout<<"Second series:"<<endl;
```

```
    for(int i=2;i<=20;i+=2)
```

```
        cout<<i<<endl;
```

```
    cout<<"Third series:"<<endl;
```

```
    for(float i=10;i<=20.5;i+=3.5)
```

```
        cout<<i<<endl;
```

```
}
```

### 3. WAP to factorial of a given no

- Using for loop

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int number, factorial = 1;
```

```
    cout << "Enter a number :" << endl;
```

```
    cin >> number;
```

```
    for (int i = 1; i <= number; i++)
```

```
    {
```

```
        factorial *= i;
```

```
    }
```

```
    cout << "Factorial : " << factorial << endl;
```

```
    return 0;
```

```
}
```

- **Using while loop**

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int number, factorial = 1;
```

```
    cout << "Enter a number :" << endl;
```

```
    cin >> number;
```

```
    while(number > 1)
```

```
    {
```

```
        factorial *= number;
```

```
        number --;
```

```
    }
```

```
    cout << "Factorial : " << factorial << endl;
```

```
    return 0;
```

```
}
```

#### 4. WAP to Print the Fibonacci series up to n numbers.

- Using for loop

```
#include <iostream>
```

```
using namespace std;
```

```
int main() {
```

```
    int n, t1 = 0, t2 = 1, nextTerm = 0;
```

```
    cout << "Enter the number of terms: ";
```

```
    cin >> n;
```

```
    cout << "Fibonacci Series: ";
```

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

```
        // Prints the first two terms.
```

```
        if(i == 1) {
```

```
            cout << t1 << ", ";
```

```
            continue;
```

```
        }
```

```
        if(i == 2) {
```

```
            cout << t2 << ", ";
```

```
            continue;
```

```
        }
```

```
    nextTerm = t1 + t2;

    t1 = t2;
    t2 = nextTerm;

    cout << nextTerm << ", ";
}
return 0;
}
```

- **Using while loop**

```
#include<iostream>
```

```
#include<conio.h>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int n,f,f1=-1,f2=1;
```

```
    cout<<" Enter The Number Of Terms:";
```

```
    cin>>n;
```

```
    cout<<" The Fibonacci Series is:";
```

```
    while(n>0)
```

```

    {
        f=f1+f2;
        f1=f2;
        f2=f;
        cout<<" \n"<<f;
        n--;
    }
    getch();
}

```

## 5. WAP to find out largest element of an array.

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int arr[6]={60,11,105,70,59,34};
```

```
    int max=arr[0];
```

```
    for(int i=0;i<6;i++)
```

```
    {
```

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

```
        {
```

```
            max=arr[i];
```

```
        }
```

```
    }  
    cout<<"Largest element in the array is: "<<max;  
}
```

## **6. WAP to sort element of an array in ascending order.**

```
#include<iostream>  
  
using namespace std;  
  
int main(){  
    int arr[6]={62,11,105,70,59,34};  
    for(int i=0;i<=6;i++)  
    {  
        int temp= arr[i];  
        int j=i-1;  
        while((j>=0)&&(arr[j]>temp))  
        {  
            arr[j+1]=arr[j];  
            j--;  
        }  
        arr[j+1]=temp;  
    }  
    for(int i=0;i<=6;i++)  
        cout<<arr[i]<<endl;  
}
```



## 7. WAP to print the sum of each rows of a 2-D matrix.

```
#include<iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int rows, sum, cols;
```

```
    int a[3][3] = {
```

```
        {5,3,1},
```

```
        {4,2,7},
```

```
        {1,6,3}
```

```
    };
```

```
    rows = (sizeof(a)/sizeof(a[0]));
```

```
    cols = (sizeof(a)/sizeof(a[0][0]))/rows;
```

```
    for(int i = 0; i < rows; i++){
```

```
        sum = 0;
```

```
        for(int j = 0; j < cols; j++){
```

```
            sum = sum + a[i][j];
```

```
        }
```

```
        printf("Sum of %d row: %d\n", (i+1), sum);
```

```
}

    return 0;
}
```

### **8. WAP to print transpose of a matrix.**

```
#include <iostream>

using namespace std;

int main() {
    int a[10][10], transpose[10][10], row, column, i, j;

    cout << "Enter rows and columns of matrix: ";
    cin >> row >> column;

    cout << "\nEnter elements of matrix: " << endl;

    for (int i = 0; i < row; ++i) {
        for (int j = 0; j < column; ++j) {
            cout << "Enter element a" << i + 1 << j + 1 << ": ";
            cin >> a[i][j];
        }
    }
```

```
}
```

```
cout << "\nEntered Matrix: " << endl;
```

```
for (int i = 0; i < row; ++i) {
```

```
    for (int j = 0; j < column; ++j) {
```

```
        cout << " " << a[i][j];
```

```
        if (j == column - 1)
```

```
            cout << endl << endl;
```

```
    }
```

```
}
```

```
for (int i = 0; i < row; ++i)
```

```
    for (int j = 0; j < column; ++j) {
```

```
        transpose[j][i] = a[i][j];
```

```
    }
```

```
cout << "\nTranspose of Matrix: " << endl;
```

```
for (int i = 0; i < column; ++i)
```

```
    for (int j = 0; j < row; ++j) {
```

```
        cout << " " << transpose[i][j];
```

```
        if (j == row - 1)
```

```
            cout << endl << endl;
```

```
    }
```

```
    return 0;
}
```

## **9. WAP to convert the string from uppercase to lowercase.**

```
#include<iostream>
```

```
#include<string>
```

```
void lower_string(string st)
```

```
{
    for(int i=0;st[i]!='\0';i++){
        if(st[i]>='A'&& st[i]<='Z'&& st[i]!=32){
            st[i]=st[i]+32;
        }
    }
    cout<<st;
}
```

```
using namespace std;
```

```
int main(){
```

```
    string str;
```

```
    cout<<"Enter the string in Uppercase"<<endl;
```

```
    getline(cin,str);//to get a line of text from the user
```

```
lower_string(str);

return 0;

}
```

### **10. WAP program to copy the strings without using strcpy function.**

```
#include<iostream>
#include<string>

using namespace std;

int main(){
    char str[1000], copy[1000];
    int i=0;

    cout<<"Enter a string"<< endl;
    cin.getline(str, 1000);
    while(str[i] !='\0'){
        copy[i]=str[i];
        i++;
    }
```

```
copy[i]='\0';  
cout<<"Input string: "<<str<<endl;  
cout<<"Copy string: "<<copy;  
}
```