

Name: Kate Shweta Sanjay

Roll No.: 3083

Div: B Batch: T4

Problem Statement:

Design a C# program that models a multimedia device, such as a television, with multiple functionalities. Create interfaces to represent different aspects of the device, such as power control, volume control, and channel control. Implement classes for the multimedia device, ensuring that each class can support one or more of these interfaces. Allow users to perform actions like turning the device on/off, adjusting the volume, and changing channels.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Interface_program
{
    public interface power_control
    {
        void TurnOn();
        void TurnOff();
    }
    public interface volume_control
    {
        void IncVol();
        void DecVol();
    }
    public interface channel_control
    {
        void NextCh();
        void PrevCh();
    }

    public class Television:power_control,volume_control,channel_control
    {
        public bool isOn;
        public int volume;
        public int channel;

        public Television()
        {
            isOn = false;
            volume = 40;
            channel = 1;
        }

        public void TurnOn()
        {
```

```

        isOn = true;
        Console.WriteLine("Television is On");
    }

    public void TurnOff()
    {
        isOn = false;
        Console.WriteLine("Television is Off");
    }

    public void IncVol()
    {
        if(isOn && volume < 90)
        {
            volume++;
            Console.WriteLine("Volume is Increased : " + volume);
        }
    }

    public void DecVol()
    {
        if (isOn && volume > 0)
        {
            volume--;
            Console.WriteLine("Volume is Decreased : " + volume);
        }
    }

    public void NextCh()
    {
        if (isOn)
        {
            channel++;
            Console.WriteLine("Next channel : " + channel);
        }
    }

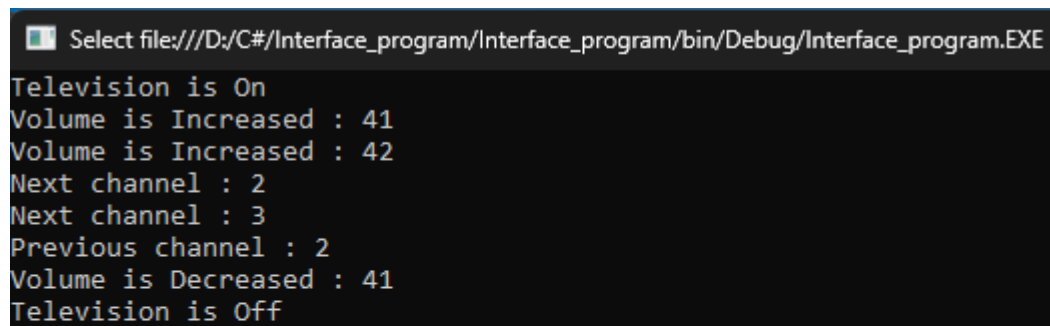
    public void PrevCh()
    {
        if (isOn && channel > 1)
        {
            channel--;
            Console.WriteLine("Previous channel : " + channel);
        }
    }
}

class Program
{
    static void Main(string[] args)

```

```
{  
    Television tv = new Television();  
    tv.TurnOn();  
    tv.IncVol();  
    tv.IncVol();  
    tv.NextCh();  
    tv.NextCh();  
    tv.PrevCh();  
    tv.DecVol();  
    tv.TurnOff();  
    Console.ReadKey();  
}  
}  
}
```

Output:



```
Select file:///D:/C#/Interface_program/Interface_program/bin/Debug/Interface_program.EXE  
Television is On  
Volume is Increased : 41  
Volume is Increased : 42  
Next channel : 2  
Next channel : 3  
Previous channel : 2  
Volume is Decreased : 41  
Television is Off
```