

Design Pattern

Bridge

```
public interface ITV {
    void on();
    void off();
    void switchChannel(int channel);
}

public abstract class RemoteControl {
    private ITV tv;

    public RemoteControl(ITV tv) {
        this.tv = tv;
    }

    public void turnOn() {
        tv.on();
    }

    public void turnOff() {
        tv.off();
    }

    public void setChannel(int channel) {
        tv.switchChannel(channel);
    }
}

public class SamsungTV implements ITV {
    public void on() {
        System.out.println("samsung tv is turned on");
    }

    public void off() {
        System.out.println("samsung tv is turned off");
    }

    public void switchChannel(int channel) {
        System.out.println("Samsung : channel - " + channel);
    }
}

public class SonyTV implements ITV {
    public void on() {
        System.out.println("sony tv is turned on");
    }

    public void off() {
        System.out.println("sony tv is turned off");
    }

    public void switchChannel(int channel) {
        System.out.println("Sony : channel - " + channel);
    }
}
```

```

public class LogitechRemoteControl extends RemoteControl {
    private int currentStation;
    private int channelCount;

    public LogitechRemoteControl(ITV tv,int channelCount) {
        super(tv);
        this.channelCount = channelCount;
    }

    public void setStation(int station) {
        this.currentStation = station;
    }

    public int nextChannel() {
        if (currentStation == channelCount - 1)
            currentStation = 0;
        else
            currentStation++;

        setChannel(currentStation);

        return currentStation;
    }

    public int previousChannel() {
        if (currentStation == 0)
            currentStation = channelCount - 1;
        else
            currentStation--;

        setChannel(currentStation);
        return currentStation;
    }
}

public class Application {
    public static void main(String... args) {
        ITV sonyTV = new SonyTV();

        LogitechRemoteControl logitechRemoteControl =
            new LogitechRemoteControl(sonyTV, 30);
        logitechRemoteControl.setStation(15);
        logitechRemoteControl.turnOn();

        logitechRemoteControl.turnOff();

        System.out.println("---");

        ITV samsungTV = new SamsungTV();

        logitechRemoteControl = new LogitechRemoteControl(samsungTV, 20);
        logitechRemoteControl.setStation(19);
        logitechRemoteControl.turnOn();

        logitechRemoteControl.turnOff();
    }
}

```