**Design a system for car stereo systems such that whenever the increase volume button is pressed, a Green Light is emitted for 20 ms & whenever the decrease volume button is pressed, a Red Light is emitted for 40 ms.**

Circuit Diagram:

Theory:

Concept Used:

1)When the volume up button is pushed the value becomes High, so green LED emits light.

2)When the volume down button is pushed the value again becomes High, so Red LED emits light.

3) Arduino takes input from Push button as on digital input.

4)Arduino gives output to LED from digital pins.

Learning & Observations:

**Learning:**

1)I have learnt to use Arduino Board and how the code will work whenever the volume up is pressed in car stereo the green light is emitted for 20 ms and red light is emitted for 40 ms when volume down is pressed.

2)How a circuit is placed on breadboard so that it can work properly.

3)Arduino board has Digital pins and Analog pins.

Digital pin provides Input as well as Output, but Analog pin provides only input.

4)The Arduino board has ~ sign in Digital pin side which is also known as Pulse Width Modulation(PWM)**.**

These pins help’s in getting Analog signals with digital means.

**Observations:**

1)Whenever button is pressed Arduino takes input from the button and works accordingly.

2)When Volume up button is pressed than Green light LED connected to that emits light for 20 milliseconds.

3)When Volume down button is pressed than Red light LED connected to that emits light for 40 milliseconds.

Problems and Troubleshooting:

* Making a functional was a bit time taking as it becomes a bit confusing on arranging the wires.

Precaution:

1)We need to handle the elements of the device with good care.

2)The connections on the Arduino board must coincide with the pins written on the software.

3)During the writing of the codes, the insertion of delay should not be forgotten and that too of the required time interval and not any random value.

Learning and Outcomes:

1)I have learnt to make circuits using breadboard, Arduino board and other equipment.

2)I have learnt to make other type of gadgets related to this concept.

3)I have learnt how we can use the Arduino board for doing various tasks.

4)I have learnt about the elements of Arduino board and its functions.