**QUESTION**

**12. Design a system for cars such that, whenever someone walks along its front side, Red LED starts blinking once every 10 ms and if someone walks along its back, Green LED starts blinking once every 20 ms.**

HARDWARE USED:

Arduino UNO

2 UTLTRASONIC sensor

2 LEDS

THEORY:

Concept:

An optical sensor has a transmitter and receiver, whereas an ultrasonic sensor uses a single ultrasonic element for both emission and reception. In a reflective model ultrasonic sensor, a single oscillator emits and receives ultrasonic waves alternately. This enables miniaturization of the sensor head.

LEARNING AND OBSERVATIONS

1)I HAVE LEARNT HOW TO USE ARDUINO

2) HOW TO CREATE CIRCUITS ON BREAD BOARD

3) HOW TO USE ULTRA SONIC SENSOR

OBSERVATIONS:

1)ARDUINO CAN PROVIDE 5v OF SUPLLY

2) LIGHTS BLINKS WHEN THE SENSOR CATCHES MOVEMENTS IN ITS RANGE

3)BREADBOARD IS USED TO CREAT CIRCUIT .

PRECAUTION

1)WE NEED TO HANDLE THE ELEMENT CAREFULLY

2)THE CONNECTIONS OF ARDUINO SHOULD BE THOROUGH AND TIGHT

3)INSERTION OF DELAY SHOULD NOT BE FORGOTTEN

LEARNINGS

1)I HAVE LEARNT TO MAKE CIRCIUTS USING BREAD BOARD

2) I HAVE LEARNT ABOUT SENSOR

3)I HAVE LEARNT HOW TO CONNECT AND USE ARDUINO WITH SENSORS