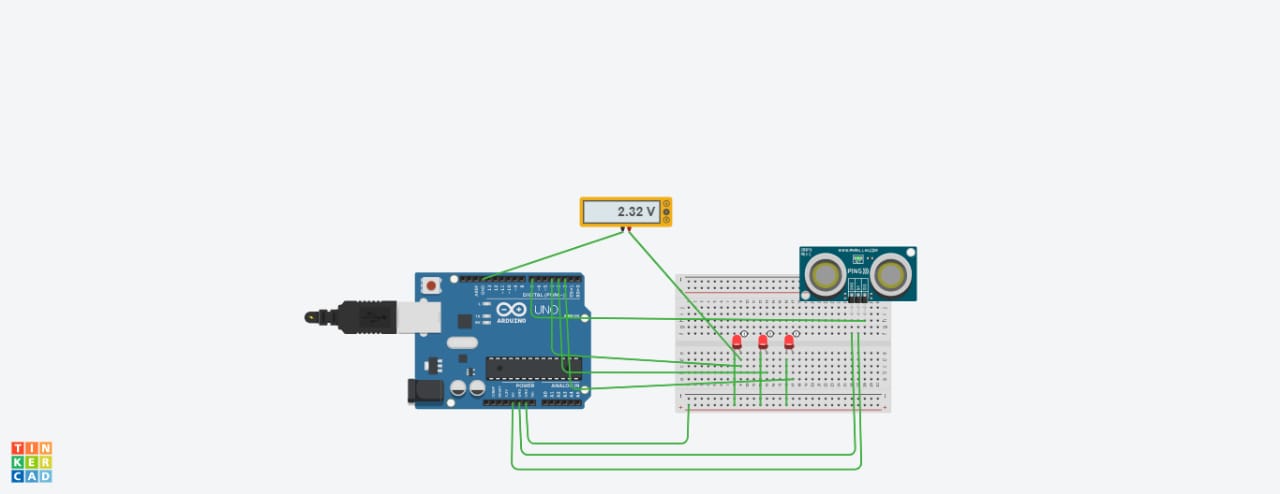
Experiment

Design an Obstacle Detector and distance measuring device

Circuit diagram:



**Theory:**

# CONCEPT USED:

* **By using kirchoff’s voltage law**

&

* **By using kirchoff’s current law**
* **Use of ultrasonic sensor**
* **Automated motion sensor**

# LEARNING AND OBSERVATIONS:

* **Connections in Breadboard and wiring.**
* **How to control arduino and its coding.**
* **Use of multimeter for continuity.**
* **Use of ultrasonic sensor for measuring of distance**

# OBSERVATION:

* **Measure of distance on obstacle interfere**
* **Relation between software and hardware.**
* **Variation of voltage and distance**

# PROBLEMS & TROUBLESHOOTING:

* **To select the right port and type of arduino**
* **To check the loose connections**
* **To check the connections according to the codes**
* **To check the continuity of the circuit**
* **To check the flow of current in the circuit**
* **Errors in code**
* **Setting up right connections**
* **Display in proper order**

# PRECAUTIONS:

* **Handle tools carefully**
* **Wear gloves**
* **Do not connect arduino till the circuit is complete**
* **Do not connect leds without a limiting resistor**

# OUTCOMES:

* **Understanding the properties of ultrasonic sensor**
* **Motion detector and obstacle detector**
* **Proper use of Arduino and breadboard**

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