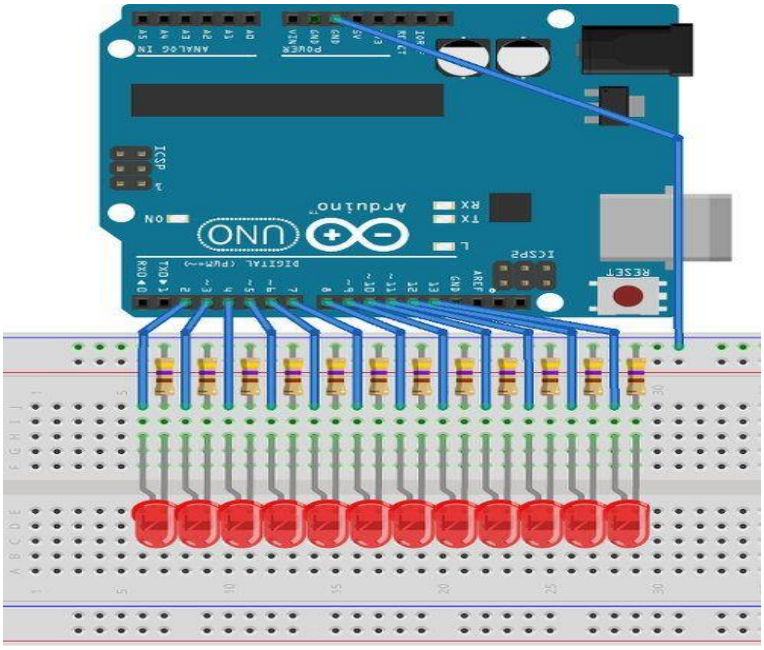

DESIGN AN LED FLASHER

EXPERIMENT 1

ABSTRAC

In the project, we will use the "Blink" sketch with a proper LED instead of the on-breadboard LED. Through this, we can have a clear idea of how a LED works and how they can be used in a circuit.

Ritul Singh

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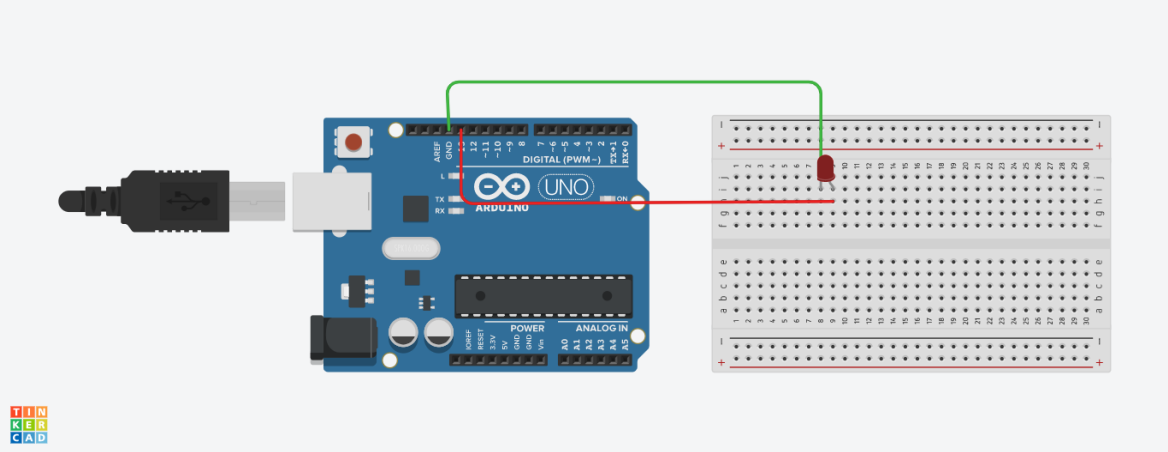
Stream: CSE(G&G) GROUP: A
University: CHANDIGARH UNIVERSITY

Experiment:- 1 (LED Flasher)

Circuit Diagram:



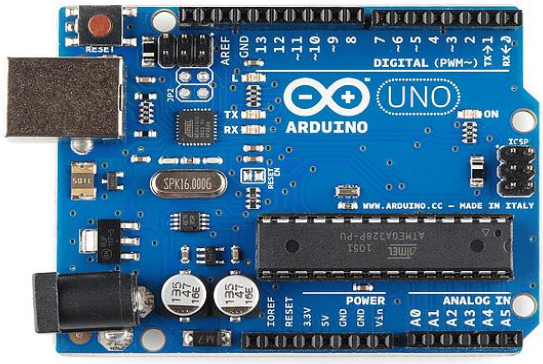
Theory:

CONCEPT USED:

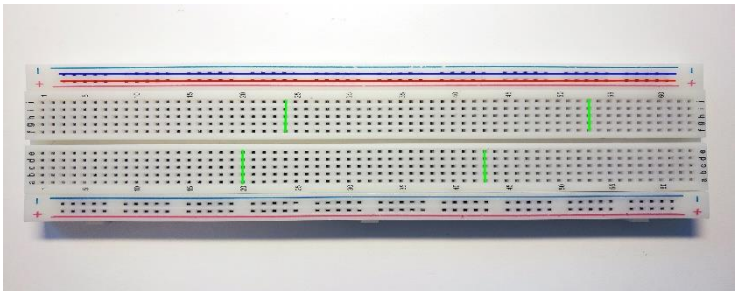
I. By using Kirchhoff's voltage law.
II. By using Kirchhoff's current law.

Hardware Required

I. Arduino



II. Breadboard



III. Light Emitting Diode (LED)

LEARNING:

I. Connections in Breadboard and wiring.
II. How to control Arduino and its coding.
III. Use of Multimeter for continuity.
IV. I've learned about the connection patterns in the Breadboard & how to utilize them to make it work with an Arduino.

OBSERVATION:

I. Blinking of an LED.
II. Relation between software and hardware.
III. When we pass an electric signal to the Arduino through our code the LED blinks accordingly.

PROBLEMS & TROUBLESHOOTING:

The problems faced by me while doing this task are:

I. The Arduino wasn't working at the beginning due to some library update issues.
II. To select the right port and type of Arduino.

III. To check the loose connections.
IV. To check the connections according to the codes.
V. To check the continuity of the circuit.
VI. To check the flow of current in the circuit.

PRECAUTIONS:

I. Handle tools carefully.
II. Wear gloves.
III. Do not connect Arduino till the circuit is complete.
IV. The two pins of the LED should be connected at their appropriate point i.e., the anode should be connected to the positive pin and the cathode should be connected to the ground.

LEARNING OUTCOMES:

I. I've learned the basic concepts of Arduino coding, Arduino circuits and LED & Breadboard connections.
II. On and off of an LED.
III. Used in project works.

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