DESIGN AN LED FLASHER

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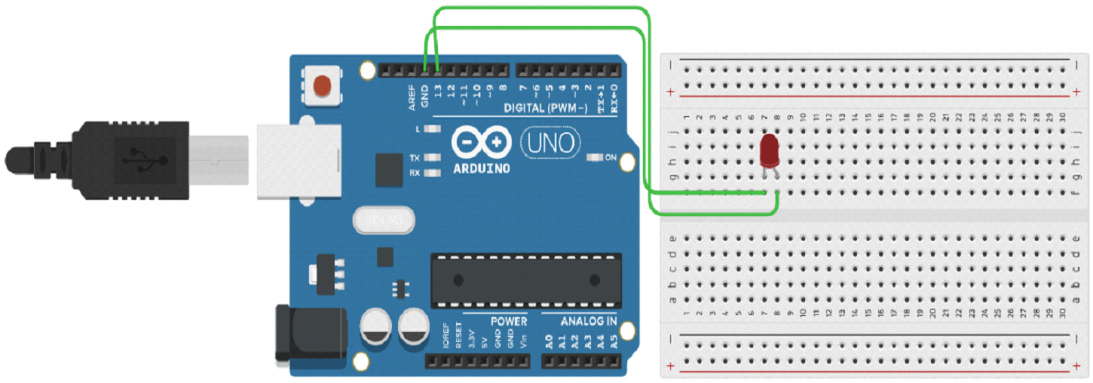
Experiment 1

Circuit Diagram:



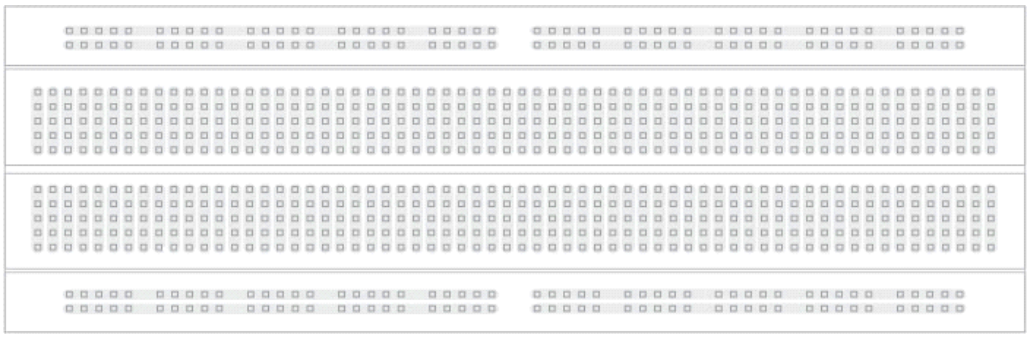
Theory

Concept used:

The concepts used by me for doing this task can be listed as:

- The Arduino board can supply a power of 5V as digital output signals through the 14 pins (via 0-13) present in it as digital input or output pins.
- The GND pin on the Arduino board acts as grounding the circuit by providing negative charge.
- In the above circuit diagram, the two rows present at the top and bottom, each are connected to one another in series and the columns present in

between them connected in a set of 5 each. The connection pattern is shown below:



Learning and Observations

Learning:

- I’ve learned how to make a series circuit using an Arduino board and a Breadboard.
- I’ve learned about the connection patterns in the Breadboard & how to utilize them to make it work with an Arduino.

Observations:

- When we pass an electric signal to the Arduino through our code the LED blinks accordingly.

Problems and Troubleshooting:

The problems faced by me while doing this task are:

- The Arduino wasn’t working at the beginning due to some library update issues.
- The PC wasn’t able to detect the port on which the Arduino was connected, had to disconnect & connect it frequently to get detected.

Precautions:

The precautions that we need to keep in mind while doing this experiment are:

- The wires at different pins must not be loose and it should be inserted properly.
- 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 GND.

Learning Outcomes:

- I’ve learned the basic concepts of Arduino coding, Arduino circuits and LED & Breadboard connections.