LAB REPORT 1

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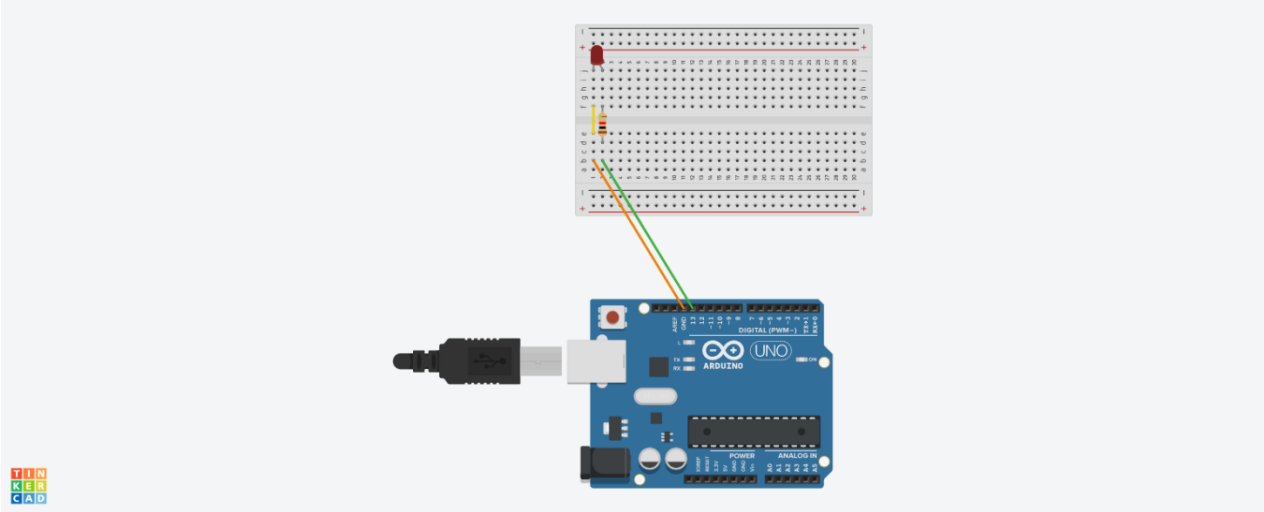
Screenshot + components:



Components:

- LED: Stands for Light Emitting Diode. Can only be powered one way. We needed to use a resistor to lower the voltage that the LED was receiving.
- Breadboard: It is a kind of electric board. It is used to bring the other components together by giving them the base to consume electricity.
- Resistor: It is used to control the amount of electricity flowing. It is measured in Ohms.

Summary:

At first, I brought all the required components on the main screen, and created a simple circuit to test our Arduino code and learn how to work using tinkercard. I first connected the bread board with Arduino uno, then connected resistor and LED in a circuit on breadboard. The resistor's one end was connected to anode of LED and other end was connected to 13V on Arduino uno. While the cathode of LED was connected to the 0V on Arduino Uno, the voltage difference made the current flow in the circuit. By the time I code in the simulator in order to run the simulation.

Results:

- Serial monitor shows: Hello World !, as output on running the simulator.

- Also, the led blinks for longer time changing when changing the time from 1000 to 2000 milli seconds.
- On changing the connection from 13V on Arduino board, we also have to change the code, in order to run the simulator.

Conclusions:

- We learned how to make connections between Arduino uno and breadboard.
- Learned about connecting LED from anode to Cathode.
- Learned why it is compulsory to connect resistor, so that we can maintain the flow of current and circuit doesn't burn.
- Learned how the Arduino code works.

Code:

```
void setup()
{
        pinMode(13, OUTPUT);
        Serial.begin(9600);
        Serial.print("Hello, World!");

}

void loop()
{
  digitalWrite(13, HIGH);
  delay(1000); // Wait for 1000 millisecond(s)
  digitalWrite(13, LOW);
  delay(1000); // Wait for 1000 millisecond(s)
}
```