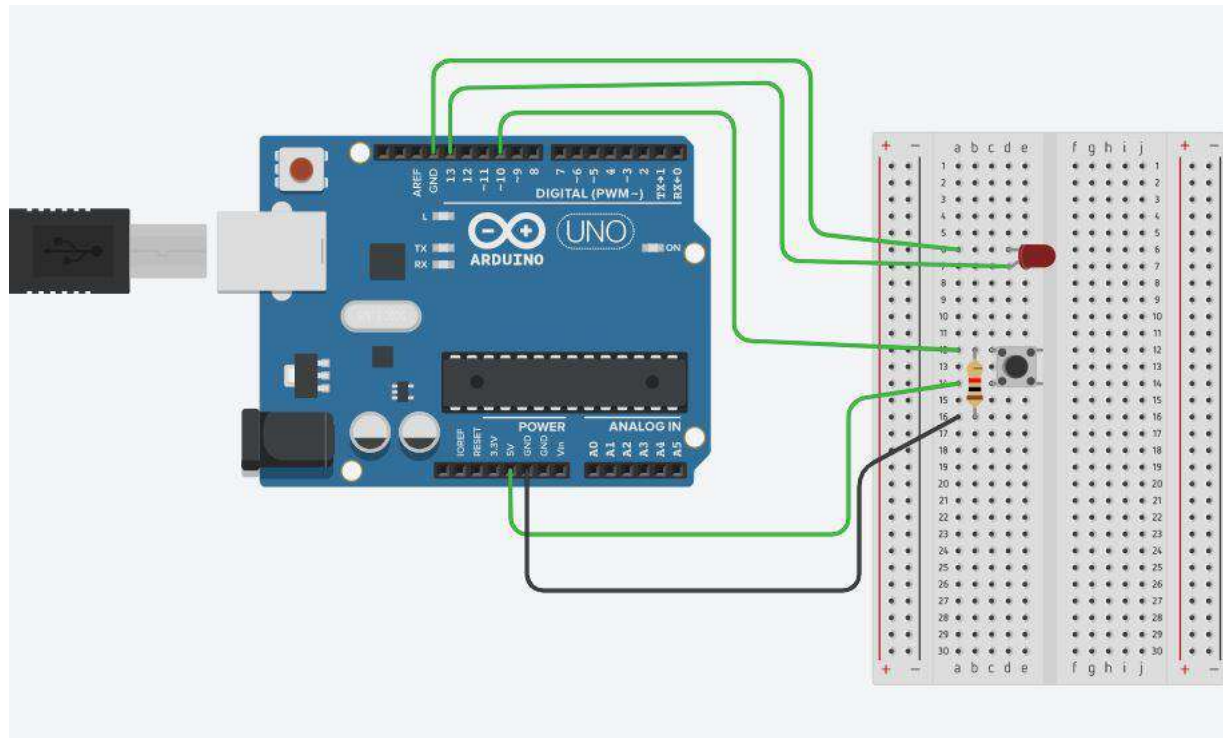# Exp 3   Design a switch controlled LED

Circuit diagram

Theory

Concepts used:

- The LED

    Device which emits light when forward biased.

- The Push Button

    Device that can control the flow of current.

- Requirement of ground

    It provides a return pathway for low value of output voltage while the switch is open.

- Algorithm

    Instructions which implemented to Arduino with the code which is available at my repository.

Learnings and outcomes:

- Designing Arduino with an input component
- Interfacing of switch with Arduino
- Improved troubleshooting and logic designing

Troubleshooting & Problems:

- Not working of circuit after the connecting the whole circuit.
  - This problem was troubleshot by observing the circuit diagram and reconnecting the faulty connections near the switch.
- Error while uploading the code.
  - This should have been foreseen but it didn't and troubleshot by selecting the correct port under tools menu.

Precautions

- Making a rough circuit will be much better than directly connecting the hardware.
- Make sure the Arduino and the Arduino cable is not defective.

Learning Outcomes:

- We can now interface buttons with Arduino.
- Will be able to make upcoming projects with much ease.