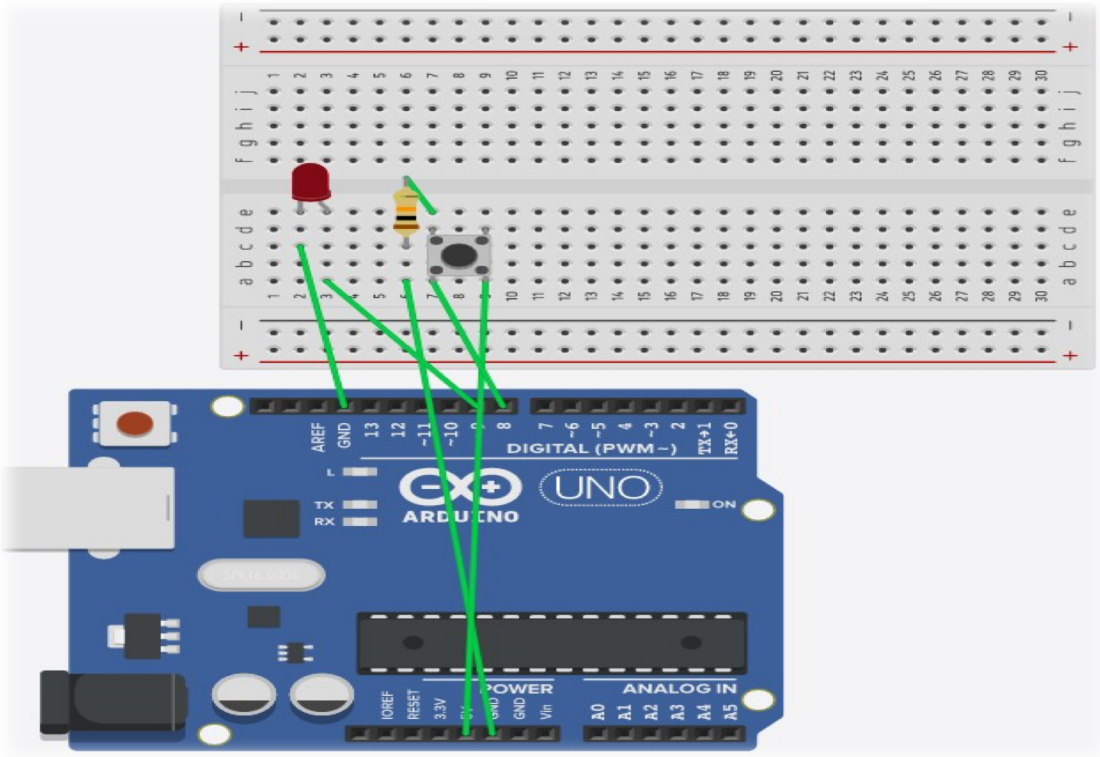
Exp.3: Button controlled LED

Circuit Diagram:



Concept :

The LED turns on when the button is pushed and turns off when the button is released.

Learning and Observations:

Following observations were recorded during the experiment:

- The LED turns on when the input from the button is HIGH and turns of when it is LOW.

- The button needs to be connected to the ground to give LOW input when the button is not pressed.

Problems and Troubleshooting:

The problem faced while performing the experiment was that the program compiled and uploaded to the board successfully but the LED did not glow. The

Problem was troubleshooted by replacing a connecting wire.

Precautions:

The following precautions need to be considered while performing this experiment:

- Disconnect the digital 1 and 0 pins while uploading the program to the board.
- The connections of the USB in both the PC and the ARDUINO UNO board should be snug.
- The USB ports of the PC and the ARDUINO UNO should be in a working condition.
- The sketch should be logically and syntactically correct and germane to the experiment that needs to be performed.
- The correct serial port should be selected that is the one through which the ARDUINO UNO has been connected.
- Look for errors during compilation and upload of the executable to the ARDUINO UNO.
- Do not open more than one instance of the ARDUINO IDE at a time.

Learning outcomes:

The various learnings as the outcome of performing the above-mentioned experiment are:

- Connecting a push button to take input and send it to ARDUINO.
- Use of the digitalRead() function.