Experiment Note: Push Button Control System

This experiment demonstrates the use of a push button as a digital input to control an LED using an Arduino board. The objective was to understand how microcontrollers read input signals and control output devices through simple logic written in Arduino C++.

A push button was connected to a digital input pin, while an LED was connected to a digital output pin through a resistor. By reading the button state, the Arduino was programmed to toggle the LED ON and OFF with each button press. The experiment also introduced the concept of pull-up resistors and basic button debouncing.

Through this experiment, I gained practical experience in digital input/output handling, GPIO control, and basic embedded systems programming.