Experiment No 1

Aim: To control the LED with Arduino Board using Tinkercad software.

Objectives: To get the knowledge of Arduino Board and controlling of the output device (LED).

Outcomes: A program to blink LED using Arduino Board.

Hardware Required:

- 1x Breadboard
- 1x Arduino Uno
- 1x LED
- 1x 330Ω Resistor
- 2x Jumper Wires

| Component List			Download CSV
Name	**Quantity**	**Component**	
U3	1	Arduino Uno R3	
D1	1	Red LED	
R1	1	330 Ω Resistor	

Procedure:

This example uses an LED connected to a digital pin. In this circuit, we connect one end of the resistor to the digital pin. Then we connect the long leg of the LED (the positive leg, called the anode) to the other end of the resistor and the short leg of the LED (the negative leg, called the cathode) to the GND. The value of the resistor in series with the LED may be of a different value. The LED will light up also with values up to 1K ohm.

Observation:

On starting the simulation, we observe that the LED starts blinking on and off at specified time intervals.
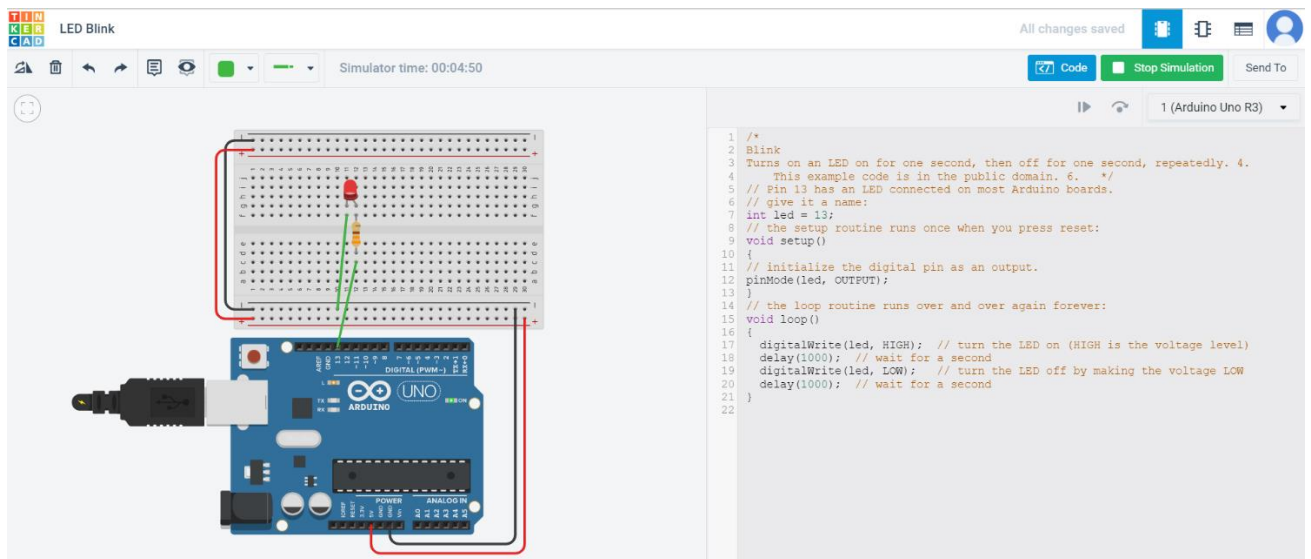
Arduino Board with LED_BUILTIN constant value as D13 along with code.
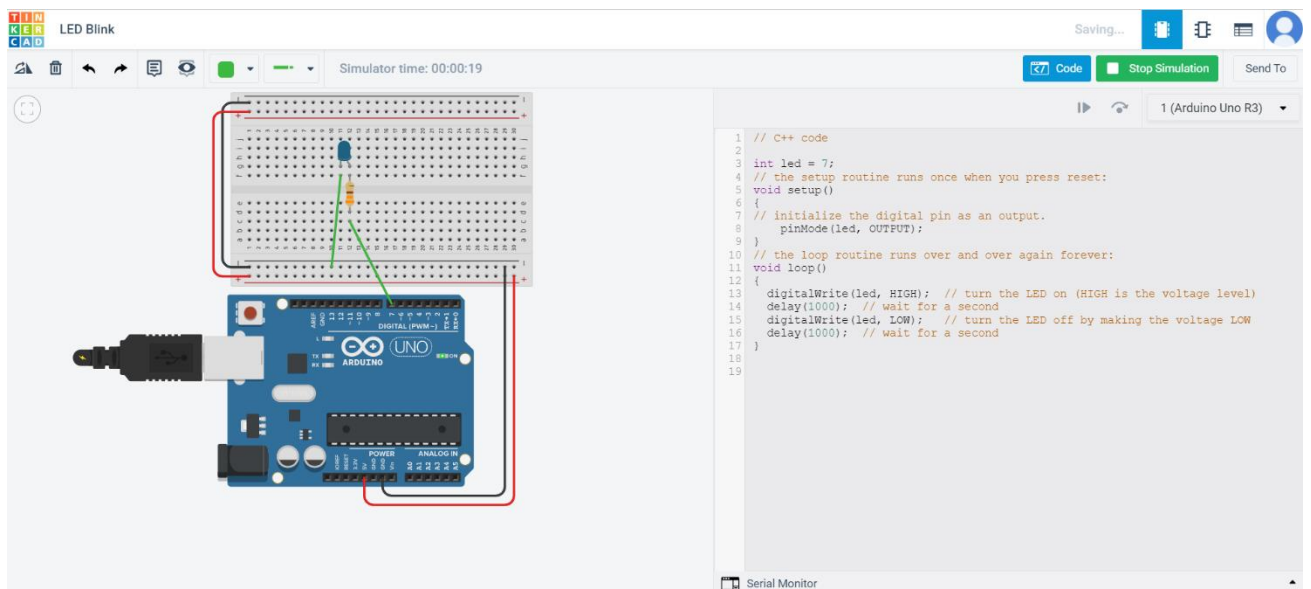
Arduino Board with LED_BUILTIN constant value as D7 along with code.

Code Block: