

COCSC20: Internet of Things

Exercise 1

Interaction with Arduino Board

Objectives of this lab experiment

1. Introduction to Microcontroller.
2. Arduino Backgrounds, Type of Arduino
3. Components of Arduino Mega/Uno
4. Introduction to C Programming.
5. Interfacing of LEDs and resistors.
6. Making a circuit.
7. Familiarly with First program of Arduino.

Experiment:

Design a circuit for Turn on LED, blinking the LEDs, draw a circuit diagram of your solution (Tinkercad software).

Submission: Complete document file containing problem, solution, components required, understanding, Circuit Diagram, Codes, Difficulty Issues.

Reading Materials:

1. <https://en.wikipedia.org/wiki/Microcontroller>
2. <https://www.elprocus.com/different-types-of-arduino-boards/>
3. <https://www.geeksforgeeks.org/c-language-set-1-introduction/>
4. <https://www.hackerearth.com/blog/developers/arduino-programming-for-beginners/>
5. <https://www.instructables.com/lesson/Your-First-Experiments/>
6. <https://www.arduino.cc/>
7. <https://www.tinkercad.com/>