

Roll no. 102103267

Group-2CO10



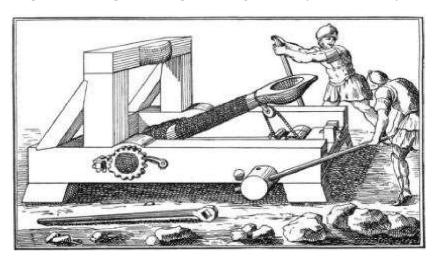
# **DEPARTMENT**

OF

### **ELECTRONICS AND COMMUNICATION ENGINEERING**



# Handout/Assignment-1 for Engineering Design Project-I (UTA013)



INSTRUCTOR INCHARGE



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#### Exercise 1 (C) - Tinkercad

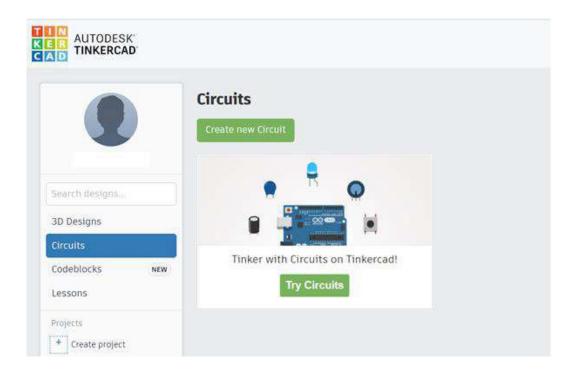
Tinkercad is a free, online collection of software tools for 3D design, electronics, and coding

#### **Software Required**

• Tinkercad Software tool (<a href="https://www.tinkercad.com/">https://www.tinkercad.com/</a>)

### **Getting Started:**

- 1. Visit <a href="https://www.tinkercad.com/">https://www.tinkercad.com/</a>
- 2. Sign in through your google account (Thapar Email ID only)
- 3. On the Dashboard, select Circuits from the drop box and click on Create new Circuit



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# **Assignment Tasks:**

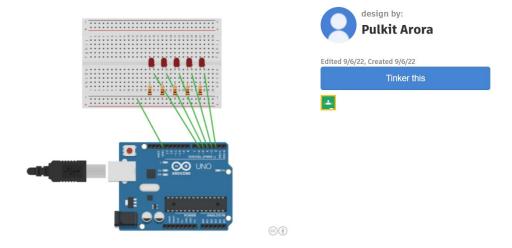
Note: Each student must attach separate sheets for submitting the below mentioned Assignment Task A-C.

A. Using Tinkercad, hook up 5 LEDs to pins 2 through 6 (with resistors). Modify the code to turn on each one in order and then extinguish them in order.

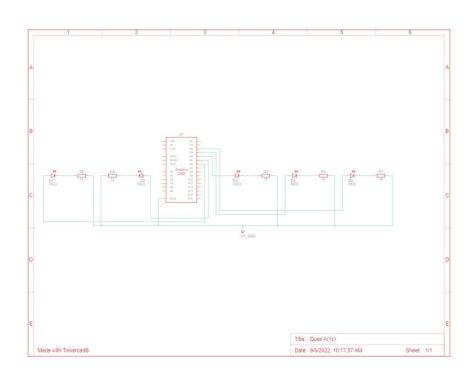
(<u>HINT</u>: hook them up one additional LED at a time and make sure the new one works before you add the next one.)

Code:

#### **Tinkercad Screenshot-**

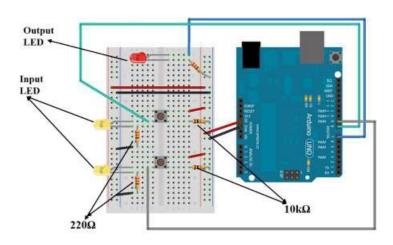


# **Schematic:**



- B. With the help of Tinkercad, use push buttons to simulate the behaviour of listed logic gates (Without using ICs of logic gates)
  - a) Logic gates: AND, NAND, XOR for students with odd numbered Roll Number.

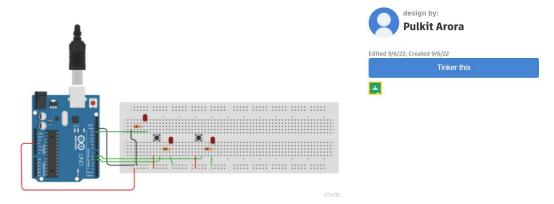
#### Hint:



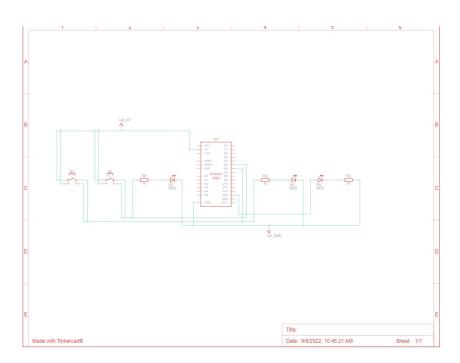
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# **Tinkercad Screenshot:**



# **Schematic:**



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**CODE:** 

(i) AND Gate

(ii) NAND Gate

(iii) XOR Gate