

Assignment 2

Sensors, Instruments and Experimentation 2021-22

Last date of submission: September 7, 2021

You have to study Arduino board and its programming. Plenty of information is available on the net for this. Also there is a free software called Tinkercad which will allow you to study Arduino without any need for hardware. Plenty of tutorials are available for Tinkercad also on the net. Do study and practice.

Further do the following using Tinkercad:

- Interface a potentiometer (pot) to Arduino using an analog pin.
- Verify that the angle of pot and the output voltage from the pot is approximately linear.
- Note that the angle rotates from 0 to 270 degree. Also the value read by the Arduino is 0 for 0 angle and 1023 for angle = 270 degrees. Next write a program so that the serial monitor displays the angle of the potentiometer.
- Connect a blue LED to any digital port of the Arduino. Write a program such that the LED flashes if the pot angle is in between (and including) 180 and 270 degree, else LED remains off.

LMS Submission: Upload a PDF file with required narrations and a link to your tinkercad file (Share-> Invite people-> copy paste the link in pdf file).