



**ENCS4110 – Computer Design Lab
Mini-Project**

Summer 2021

Deadline: Wednesday 1/9/2021

Use Keil & Proteus to design and implement a controlled room with ARM LPC2138 controller.
The circuit has the following I/O peripherals:

1. Ultrasonic distance sensor to measure the distance, if there is something in a distance of 1m or less, a door (Servo meter) will open for a period of time and then be closed if nothing within this distance.
2. Light Dependent Resistor - LDR (to detect Light) and Passive Infrared sensor - PIR (to detect movement). The light can be ON depend on the value of LDR, the Value of PIR or both (use pushbutton key to control this).
3. LCD to show all the situations (e.g. Door open, Door close, ligh on, light off...etc).
4. Any other components you need.