Alexandria University
Faculty of Engineering
Computer and Systems Engineering

Computer Organization
Assigned: Thursday 18/11/2021
Due: Sunday 05/12/2021

Arduino Assignment

You should complete both requirements.

a- Temperature warning system

Use the LM35 to measure the current air temperature and print the readings in Centigrade (°C) on the LCD screen. If the temperature exceeds a certain limit (30°C for example), a buzzer should turn on and the LCD should print a warning message 'WARNING!! High Temperature'.

NOTE: In order for you to increase the surrounding temperature use any heating device that doesn't use flames. (Hairdresser for example or any similar device).

IMPORTANT: If you are using the LCD shield then the correct codes are available in this link: https://www.dfrobot.com/wiki/index.php/Arduino_LCD_KeyPad_Shield_(SKU:_DFR0009)

b- Remote Control Blink Rate

Use any Infrared remote control (Receiver or TV remote should work) as an indicator to the blink rate of an LED by directing the IR beam to the IR receiver (1838).

You are required to control the delay between blinking using the numbers on the remote control. By pressing '1' the blink rate will be 100ms, by pressing '9' it will be 900ms.

NOTE: In order to read the value of each remote control button you have to use an external library: https://github.com/z3t0/Arduino-IRremote

Please read the library documentation and how to use it since there will be a collision with the RobotIRremote library that comes already with the arduino software. One approach is to delete the RobotIRremote , the other is to simply rename the downloaded library files and includes to another name. You should clearly show the pressing of the remote buttons and their effect on the serial monitor as well as the blinking LED during the discussion. (Use at least 2 blink rates).

Delivery Policy

- You should submit a report giving the code and **SIMULATION** video showing your work.
- **Due Date:** Sunday 05/12/2021 @13:59
- **Late delivery** = -25% for each day of delay.

Good Luck