Alexandria University
Faculty of Engineering
Computer and Systems Engineering

Computer Organization
Assigned: 07/11/2021
Due: 14/11/2021

Arduino LAB

Assignment 3

Voltage threshold detector

Idea: Use the arduino analog input to act as a simple voltmeter with an alarm to indicate that the voltage has exceeded a certain limit.

Requirements:

- A 10 KΩ potentiometer is connected to the arduino 5V port and GND to act as a variable voltage input to the Analog pin.
- A buzzer is connected to the digital output of the arduino.
- By varying the value of the potentiometer, the value of the voltage on the analog pin varies. The arduino should be able to print the current analog input voltage on the Serial Monitor.
- If this voltage exceeds 3 volts, the buzzer and the built in LED (pin 13) should turn ON, and remain ON as long as the voltage remains above the threshold (3 volts).
- If the voltage drops below 2.5 volts, both the buzzer and LED should turn OFF, and remain OFF as long as the voltage is below the threshold (2.5 volts).

Delivery Policy

- Same groups
- Represent the requirements using components (buzzer, potentiometer, etc.…) and code.
- Each group must submit a recorded video along with a report containing the code
- **Due Date:** Sunday 14/11/2021 @ 13:59
- **Late delivery** = -25% for each day of delay.

Good Luck