Department of Electrical and Computer Engineering

ENCS4380
INTERFACING TECHNIQUES

Task #2
Object detection and interrupts handling

In this task, you will use an ultrasonic sensor, an IR sensor, an LCD, and a push button. The ultrasonic sensor will monitor the right side and display the distance from an object on the LCD, and invoke a delay function to simulate a time-consuming process (3 seconds). The IR sensor will fire an interrupt whenever an object approaches the system from the left side within a distance of less than 5 cm and display an alert on the LCD. Additionally, a push button is implemented to fire an interrupt when pressed, which will light a LED.

Use Tinkercad to simulate the circuit before implementation.