The Chinese University of Hong Kong

Department of Computer Science and Engineering

CENG2030 Fundamentals of Embedded System Design

Lab 7: Finite State Machine

Answer Sheet

**Hung Yiu Pan 1155108381**

**Demo Video [36%]**

1. **Simple Traffic Light [32%]**
   1. Hardware Connections

How many digit I/O pins are used?

3

In total, how many digit I/O pins are available on Arduino UNO board?

12

* 1. Software Programming

What is the total number of states in the FSM?

4

What kind of event triggers the transitions between different states?

loop();

1. **Traffic Light with Pedestrian Light [32%]**
   1. Hardware Connections

At each digit I/O pins of Arduino UNO board, what is the DC current available?

From the power of the computer through the USB cable

In total, how many **analog input** pins are available on Arduino UNO board?

6

* 1. Software Programming

In State 2, how many times will the PGreen light flashing before transiting to State 3?

3

What kind of programming statement is required to accomplish the flashing?

For loop, delay(500)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

THE END