EEE 212-1-Odd

LAB 1

Part A. [40 points]

Using a crystal of 11.0592 MHz, produce a blinking LED of frequency 300 Hz on P1.1 with variable duty cycle of Y%, where Y is given below according to last digit of your student number.

Digit	0	1	2	3	4	5	6	7	8	9
Y	20	25	30	33.3	40	60	66.6	70	75	80

Part B [60 points]

For this part, you will generate two different signals sequentially. The first sequence is the signal you have generated for part B. The second one will have a frequency of 75 Hz with variable duty cycle between 10% and 90%. The duty cycle 10D (the percentage of time the LED is ON) will be determined at the beginning by an input D from the keypad such that 10D% will be duty cycle provided D is the typed key.

Both signals will be generated at the same pin. Generate each signal for 1 s duration. Note that you might need to make adjustments to your code from part A to compensate for additional instructions.

Example: