Su22-ENGR-40M-01 Prelab 3b

Jannah Sabic El-Rayess

TOTAL POINTS

10 / 10

QUESTION 1

1 P1 2 / 2

✓ **- 0 pts** **Project idea is described in a clear manner and is feasible to complete within the given time**

- 0.5 pts Project idea lacks clarity

- 0.5 pts Project idea is not feasible to complete in the allotted time

- 0.5 pts Some errors

- 2 pts Project idea is confusing and not feasible to complete in the allotted time

- 2 pts Late

- 3 pts No Submission/ Very little done

- 0.5 pts No one-page explanation

- 0.5 pts (music) Project idea not specified

- 2 pts Project Submission not Included

QUESTION 2

2 P2 8 / 8

✓ **- 0 pts** **Correct**

- 0.5 pts Music: P1 Incorrect range calculation

- 2 pts Switch debouncing: P2/P3 Incorrect orientation of switch

- 0.1 pts Music: P3 (said 410 and/or 614)

- 8 pts Late

- 8 pts Switch debouncing: no work shown

- 0.1 pts Music: P2 (said 511.5 or 512)

- 0.1 pts Music: P3 (said 408/410 - 612/614)

- 0.1 pts Music: P3 Did not round down

- 0.1 pts Music: P2 and P3: calculated (correct) non-integer values

Lab 3b This is the Music Prelab

P1

$2^{10} - 1 = 1023$

[0, 1023]

P2

$\frac{2.5}{5}(1023) = 511.5$ (always rounds down)

511

P3

$\frac{2}{5}(1023) = 409.2$

$\frac{3}{5}(1023) = 613.8$

[409, 613]

P5

Based on the raw signal, I want the amplitude to make the LEDs move up and down vertically like an equalizer on a boombox. For example: the higher the amplitude, the higher the vertical bars are.

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