

Lab 3 Deliverables:

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tmb39156

Location	DataBuffer	Format	32-Bit UnSigned Int
0x202001E4	...		
0x20200200	DataBuffer		
0x20200200	262144	0	262144
0x2020021C	0	262144	0
0x20200238	262144	0	262144
0x20200254	0	262144	0
0x20200270	262144	0	262144
0x2020028C	0	262144	0
0x202002A8	262144	0	262144
0x202002C4	0		
0x202002C8	TimeBuffer		
0x202002C8	4294967091	4294721782	4293304927
0x202002E4	4289718577	4288301722	4288051147
0x20200300	4283299112	4283048537	4281631682
0x2020031C	4278045607	4276628752	4276378177
0x20200338	4271626142	4271375567	4269958392
0x20200354	4266372647	4264955792	4264705217
0x20200370	4259953182	4259702287	4258285432
0x2020038C	4254699687		
0x20200390	Inflag		
0x20200390	0	1	1

Debug Period Pseudocode:

1. Mask Data and store in a new array
2. Revalue the array, to make the data a 1 if masked data != 1 and a 0 if the masked data is a 0
3. Store the time value of each rising edge of the masked data in an array, when the index is a 1 and the index-1 is a 0
4. Count the number of rising edges
5. If there is not more than two then there is not a full period, and return a zero
6. Calculate the elapsed time by adding the time difference between each rising edge
7. Calculate the average period by dividing the elapsed time by one less than the number of rising edges
8. Return average period

Lab 3, Spring 2025, Grader.

EID= TMB3956

Step 1) Score= 5

Step 2) Score= 10

Step 3) Score= 20

Step 4) Score= 25 out of 25

Done

Extra Credit Duty Cycle Calculations:

Duty Cycle Mask 0: 0%

Duty Cycle Mask 1: 50%

Duty Cycle Mask 2: 54%

Duty Cycle Mask 3: 75%

Duty Cycle Mask 4: 60%

Duty Cycle Mask 5: 75%

Duty Cycle Mask 6: 90%

Duty Cycle Mask 7: 87%

Duty Cycle Mask 8: 0%

Duty Cycle Mask 0xABCD1230: 0%



