Andrew Wells

CPE301 – SPRING 2016

Design Assignment 5

**DO NOT REMOVE THIS PAGE DURING SUBMISSION:**

The student understands that all required components should be submitted in complete for grading of this assignment.

|  |  |  |  |
| --- | --- | --- | --- |
| **NO** | **SUBMISSION ITEM** | **COMPLETED (Y/N)** | **MARKS**  **(/MAX)** |
| 0. | COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS |  |  |
| 1. | INITIAL CODE OF TASK 1/A |  |  |
| 2. | INCREMENTAL / DIFFERENTIAL CODE OF TASK 2/B |  |  |
| 3. | INCREMENTAL / DIFFERENTIAL CODE OF TASK 3/C |  |  |
| 4. | INCREMENTAL / DIFFERENTIAL CODE OF TASK 4/D |  |  |
| 5. | INCREMENTAL / DIFFERENTIAL CODE OF TASK 5/E |  |  |
| 6. | SCHEMATICS |  |  |
| 7. | SCREENSHOTS OF EACH TASK OUTPUT |  |  |
| 8. | SCREENSHOT OF EACH DEMO |  |  |
| 9. | VIDEO LINKS OF EACH DEMO |  |  |
| 10. | GOOGLECODE LINK OF THE DA |  |  |
|  |  |  |  |
|  |  |  |  |

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| --- | --- | --- | --- |
| 0. | COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS |  |  |

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| --- | --- | --- | --- |
| 1. | INITIAL CODE OF TASK 1 |  |  |

/\*

\* CPE\_301\_Design\_Assignment\_2.c

\* Created: 3/7/2014 4:12:28 PM

\* Author: l

\*/

#include <avr/io.h>

//#include <util/delay.h>

#include <avr/interrupt.h>

unsigned char counter; // # of falling edges of generated waveform (50% duty cycle, 0.5 sec period)

unsigned char edge\_count; // # of edges of generated waveform

unsigned char int0\_count; // # of INT0 (LED9) interrupts

void delay\_ms(int d);

int main(int argc, char\* argv[])

{

// Initialization

…

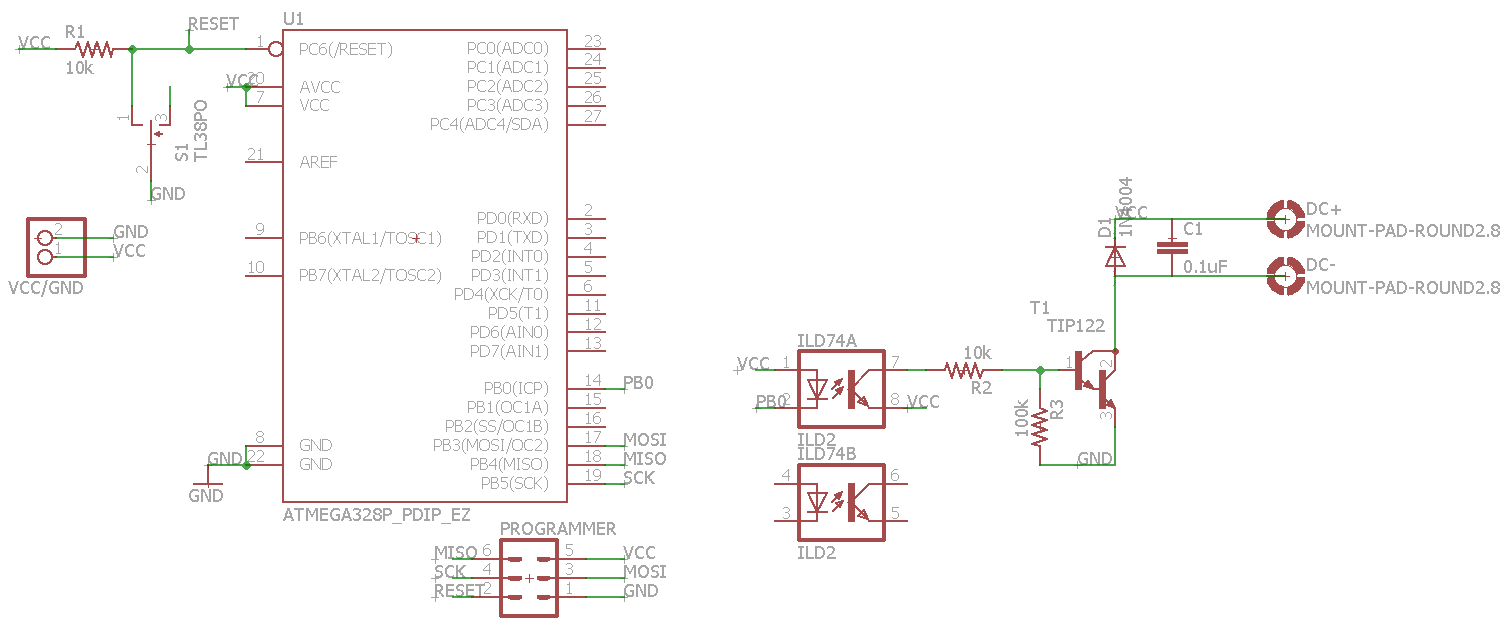
}

|  |  |  |  |
| --- | --- | --- | --- |
| 2. | INCREMENTAL / DIFFERENTIAL CODE OF TASK 2 |  |  |

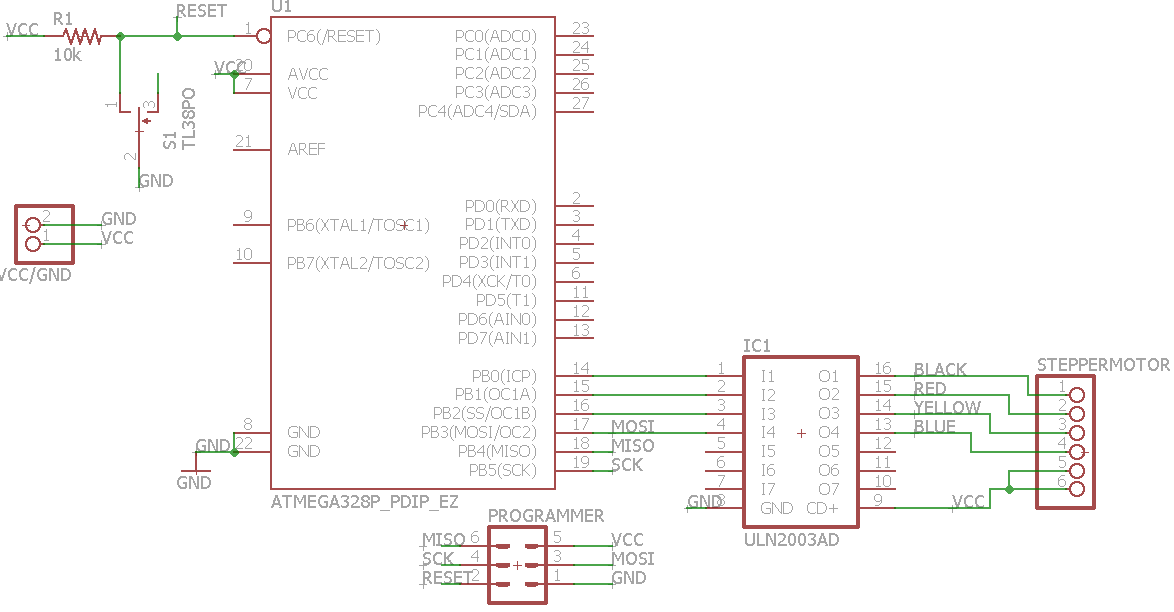
|  |  |  |  |
| --- | --- | --- | --- |
| 3. | INCREMENTAL / DIFFERENTIAL CODE OF TASK 3 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 6. | SCHEMATICS |  |  |

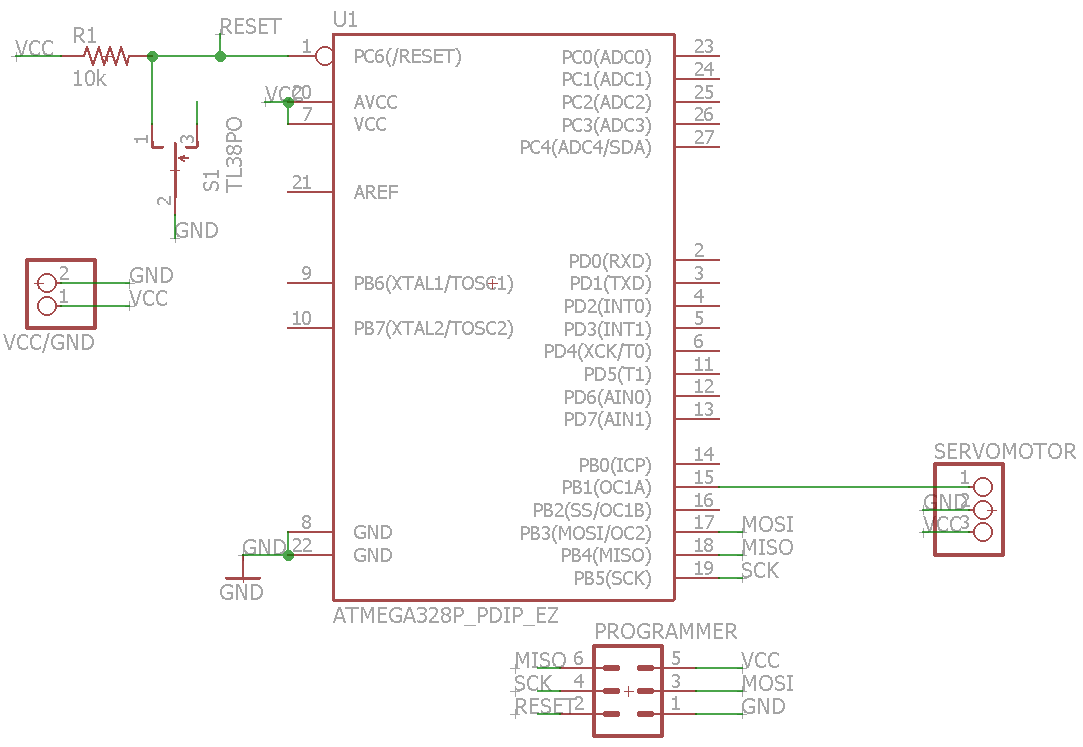
TASK 1:



TASK 2:



TASK 3:



|  |  |  |  |
| --- | --- | --- | --- |
| 7. | SCREENSHOTS OF EACH TASK OUTPUT |  |  |

TASK 1:

TASK 2:

TASK 3:

|  |  |  |  |
| --- | --- | --- | --- |
| 8. | SCREENSHOT OF EACH DEMO |  |  |

TASK 1: Counter reaches 10, the 9th LED is toggled on

TASK 2:

TASK 3:

|  |  |  |  |
| --- | --- | --- | --- |
| 9. | VIDEO LINKS OF EACH DEMO |  |  |
|  | | | |
| 10. | GOOGLECODE LINK OF THE DA |  |  |
| https://github.com/Wellsa15/wellsa\_unlv | | | |

**Student Academic Misconduct Policy**

<http://studentconduct.unlv.edu/misconduct/policy.html>

“This assignment submission is my own, original work”.

Andrew Wells