Kyle Butler

CPE301 – SPRING 2018

Design Assignment 4

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

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

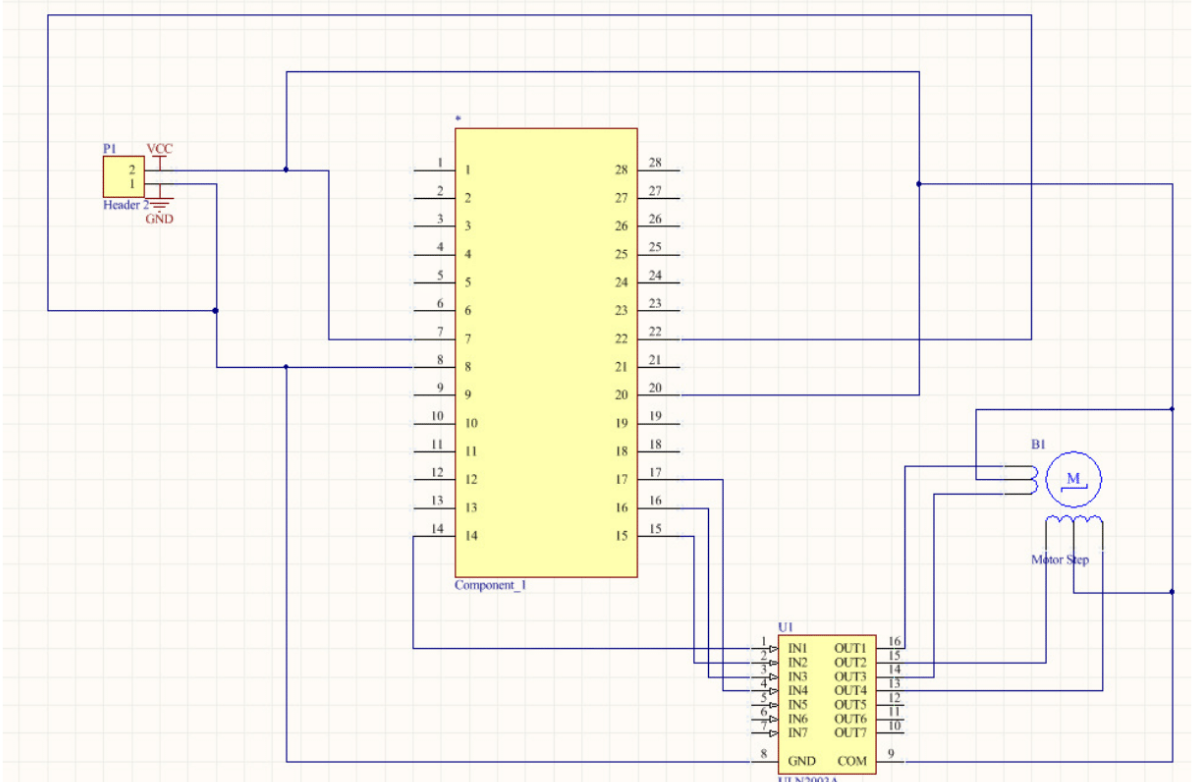
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| --- | --- | --- | --- |
| **NO** | **SUBMISSION ITEM** | **COMPLETED (Y/N)** | **MARKS**  **(/MAX)** |
| 1 | COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS |  |  |
| 2. | INITIAL CODE OF TASK 1/A |  |  |
| 3. | INCREMENTAL / DIFFERENTIAL CODE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

1. **COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS**

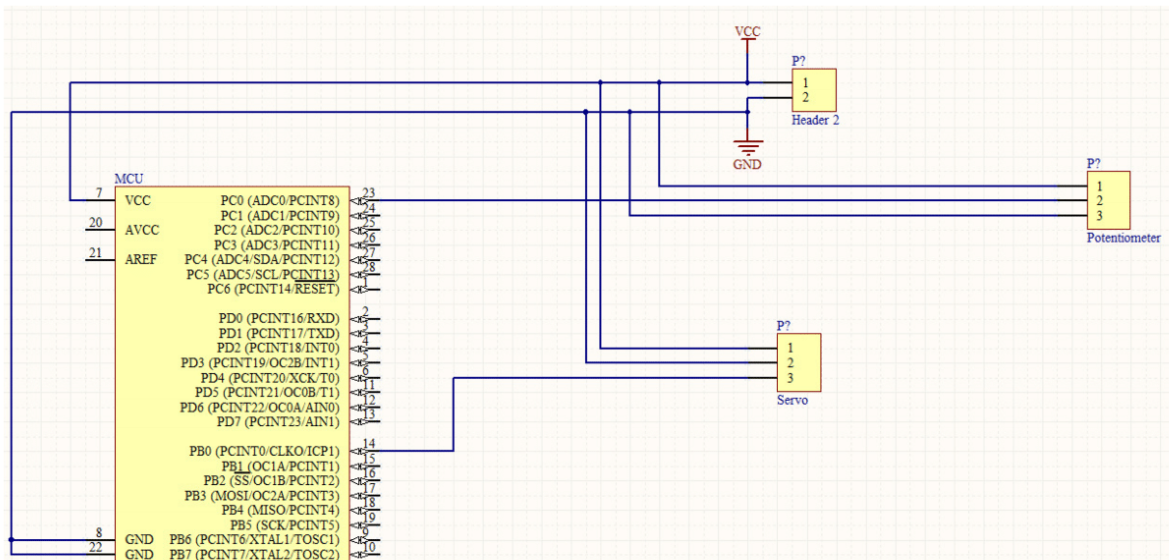
**Components:**

Stepper Motor, UNL2003, 10K Potentiometer, Servo Motor, and a FTDI chip for USART.

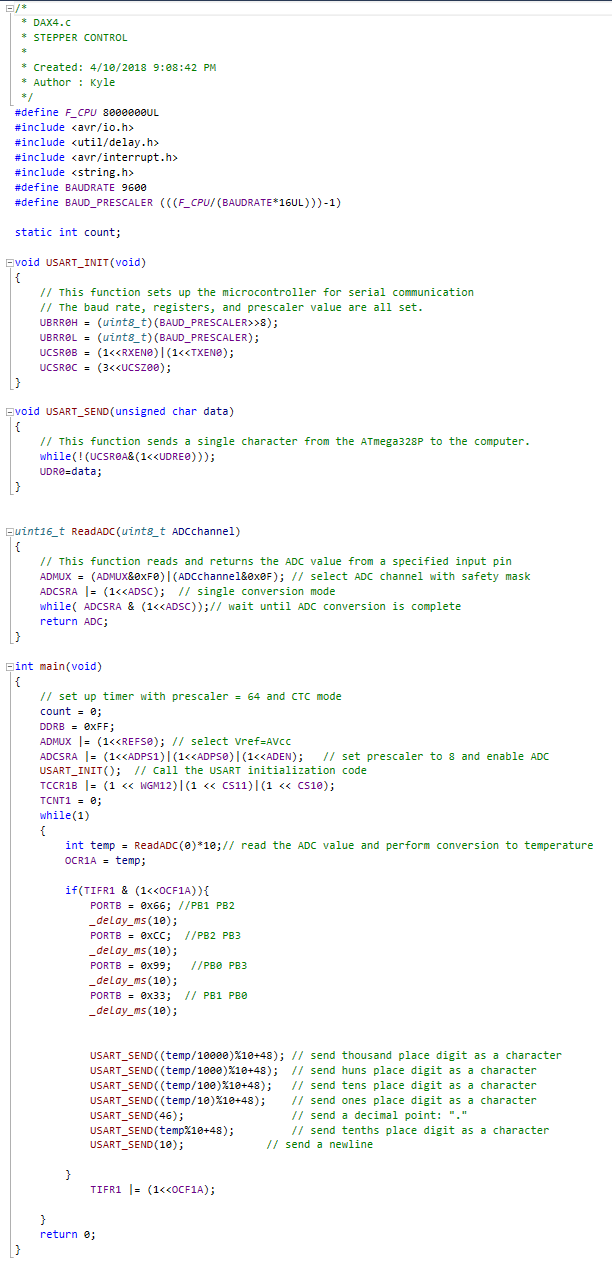
Stepper Motor:



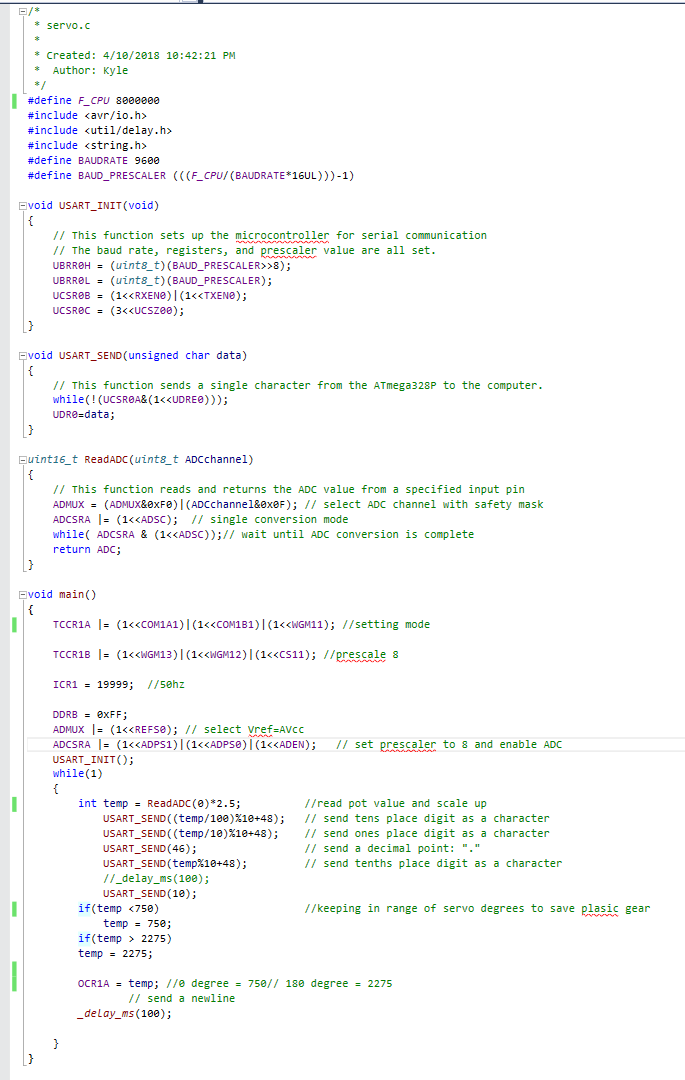
Servo Motor:



1. **DEVELOPED CODE OF TASK 2**

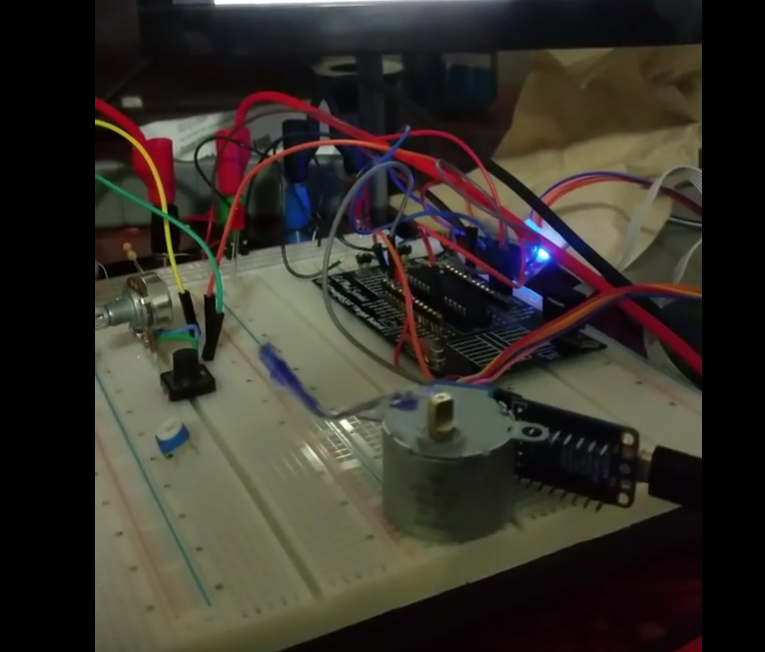


1. **DEVELOPED CODE OF TASK 3 (Servo motor)**

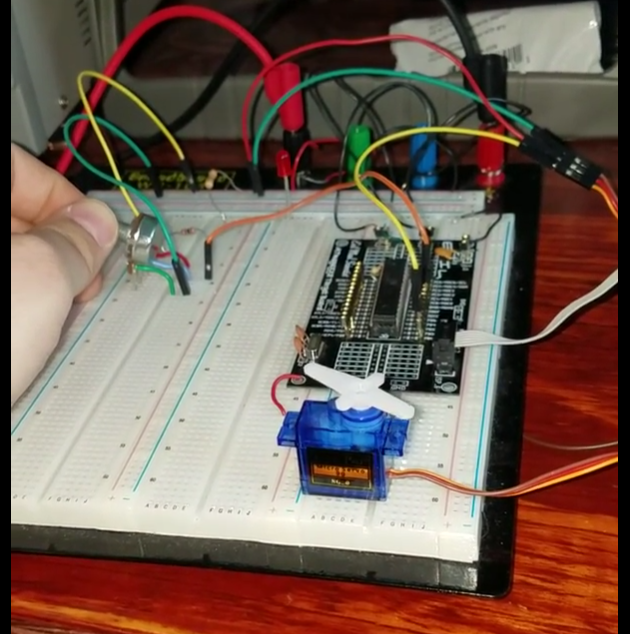


1. **SCREENSHOT OF EACH DEMO (BOARD SETUP)**

Stepper motor setup:



Servo motor setup:



1. **VIDEO LINKS OF EACH DEMO**

Stepper Motor link:

<https://www.youtube.com/watch?v=H35hvpMS6tI>

Servo Motor link:

<https://www.youtube.com/watch?v=igk-ImROjMg>

1. **GITHUB LINK OF THIS DA**

<https://github.com/alwayscaps/DAx/tree/master/DAxT4>

**Student Academic Misconduct Policy**

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

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

Kyle Butler