

CpE301 - Design Assignment 4B

DUE: See Website

Design Assignment 4B:

The goal of the assignment is to develop the above code to do the following:

1. Write an AVR C program to control the speed of the Stepper Motor using a potentiometer connected to any of the analog-in port. Use a timer in CTC mode to control the delay.
2. Write an AVR C program to control the position of the Servo Motor using a potentiometer connected to any of the analog-in port. When pot value is 0 the servo is at position 0 deg. and when pot value is max (approx. 5V) the servo is at position 180 deg.

Submission:

The following are required for successful completion of the design assignment:

- a. AVR C code that has been compiled and working.
- b. The C code should be well documented with explanation of every instruction.
- c. A word document that contains the flow chart of the assembly code along with the snapshots of the schematics, components connected on the breadboard and screenshots.

Points:

Task 1~2: 100%. (Code=60%, Documentation=20%, Verification/Snapshots=20%)

Evaluation Rubrics:

See class website for the DA evaluation rubrics.