

CpE301 - Design Assignment 5

DUE: See Website

Design Assignment 5

This DA is to be implemented in groups of two students. The goal of the assignment is to develop the above code to do the following:

1. Interface the provided NRF24L01+ RF Module to the ATmega328p using the SPI interface. Using the earlier developed code for ADC, transmit the ADC value of the internal temperature sensor, or LM35 sensor between two RF Modules. The ATmega328p interfacing the RF Modules should alternate between TX and RX modes every 1 sec (hopefully they are not both at TX and RX modes in the same interval). The temperature of both ATmega328p's should be displayed on both ATmega328p's.

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.
- d. Specify your assignment partner's name on the submission doc.

Points:

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

Evaluation Rubrics:

See class website for the DA evaluation rubrics.