

Rochester Institute of Technology

Real Time and Embedded Systems

Project 2b

Overview:

Redesign and implement Project #2a on the QNX “Purple box”. Utilize as many of the OS capabilities as are appropriate.

Please note that the user commands are limited to the first two characters in a line, any other characters entered after the first two and before the <CR> are ignored.

For your report, please include a paragraph or two comparing and contrasting your implementation of Project 2a versus Project 2b.

Warning:

Be sure to check your PWM signal with the oscilloscope before connecting the servo motors. Producing a steady PWM signal in software is more challenging than producing it from hardware!

Due Date:

Please refer to the course schedule for the due date. An in-class demo will be required. Please submit your source code and your report (in either PDF or Word compatible format) to the corresponding myCourses drop box.

Grading Criteria:

- Program Operation and Demo – 50%
 - Hardware setup is orderly and well organized – 10%
 - Demo sheet functions all completed – 30%
 - Demo operates without faults or restarts – 10%
- Program Design --- 15%
 - Proper initialization
 - Correct use of functions (no copy/paste/edit slightly)
 - Separation of hardware related code from pure software (e.g. the results reporting code)
- Source Code Structure and Readability – 10%
 - Appropriate use of white space – 2%
 - Consistent and good indentation – 2%
 - Appropriate comments at the function and paragraph levels (such as a for loop) – 2%
 - Following C style guide (good names, etc.)
- Report Content – 25%
 - Report is at least 2 pages (not counting pictures, cover page, diagrams) – 5%
 - Demonstrates team understands the problem, solution, and technology (hardware and software) – 10%
 - Report contains all required sections per the report guideline