

CSEE W4840 Embedded System Design Lab 6

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Due March 25, 2004

Abstract

Bring it all together. Restructure your TV Typewriter code from Lab 3 to use the character display from Lab 5.

1 Introduction

Integration is one of the most important activities performed by most engineers. Integration, basically, is putting together a bunch of things to make a bigger, better thing. The main challenge is that pieces never fit perfectly: square pegs have to be sanded down to fit in round holes, you need an adapter to connect this plug to this socket, and so forth. And the growing complexity of systems make the adapters much more complex.

The point of this lab is to integrate the things you and we have written before to build a functioning system.

2 The Assignment

Adapt the TV typewriter code you wrote for lab 3 (e.g., serial interrupts, character generation, and cursor control) to work with the character display you adapted in lab 5. You will have to rewrite the code for displaying characters (it should be much easier now) and for clearing and scrolling the screen. The serial interface code should remain largely the same. Use the same specifications for cursor control (e.g., control characters, one-line scrolling, etc.) as that in lab 3.

In the end, turn in all the code you have written or modified for this lab. As usual, coding style, clarity, and succinctness will be taken into account during grading. Show your working (at it should run much faster) TV Typewriter to a TA and have him sign off on it.