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ECE 3710
Final Project Proposal

We propose for our final project to create a serial computer terminal. Such terminals have a keyboard and a screen where text is printed. They send keystoke data to the attached computer, and display text from the computer. They also handle various escape codes for cursor movement, color, output modes, and various other functions. On our microcontroller we will use the PS/2 port to attach a keyboard, and the LCD screen to be the terminal screen. We will use the RS-232 module to provide serial communication to the host computer. We will connect the terminal to a personal computer (such as the Raspberry Pi) and enjoy state of the 1980's mainframe computing on a system that fits on a few small boards.

This project will provide a challenge because there are many facets that must be dealt with. We will have to configure and use several peripherals of the microcontroller. We will have to determine a system for printing characters in lines and columns, find or create a bitmap font, and deal with line scrolling. There are many ANSI escape codes that must be handled properly. However, we feel that it will not be too difficult, and will fit within the scope of the project.