Comp 3980 - Assignment #1

"Dumb" Terminal Emulation

Due Date: October 3, 2007 - 0930 hrs . This is an individual assignment

Objective:

To design and code a dumb terminal emulator in C or C++.

Your Mission:

Write a minimal terminal emulator which will basically just transmit all characters typed on the keyboard to the serial port and display all characters received via the serial port. Include a set of menu items that will allow a user to:

- Select, modify or set the communication parameters such as port number, bit rate, number of data bits, number of stop and start bits, and parity (i.e., "command mode").
- Enter "connect mode". In this mode, the application goes into a loop in which the keyboard is monitored; when a key is typed, the character is sent to the serial port (after checking to ensure that the port is ready). Also within the same loop, the serial communications port is monitored; when a character is received, it is displayed on the screen. <**ESC**> from the keyboard causes a return to "command Mode".
- As an alternative to the above approach you can simply use a separate thread to monitor the serial port input.

- Other menu items you may want to provide are:

    - o   Exit to Command Prompt.
    - o   Help

Constraints: You must use the layered (OSI) approach in the design and implementation of your code.

To be Submitted:
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- Detailed design work of your program
- Printed program listing.
- A disk containing the C/C++ source listings and executable code.

Evaluation:

Design Work: / 10
Code Quality: / 5
Functionality: / 15

                    Total: / 30