Implementing a Reliable Transport Protocol

Important Modification

You only need to implement Alternating-Bit-Protocol version for our project #1.

Overview

In this laboratory programming assignment, you will be writing the sending and receiving transport-level code for implementing a simple reliable data transfer protocol. There are two versions of this lab, the Alternating-Bit-Protocol version and the Go-Back-N version. This lab should be fun since your implementation will differ very little from what would be required in a real-world situation.

Since you probably don't have standalone machines (with an OS that you can modify), your code will have to execute in a simulated hardware/software environment. However, the programming interface provided to your routines, i.e., the code that would call your entities from above and from below is very close to what is done in an actual UNIX environment. (Indeed, the software interfaces described in this programming assignment are much more realistic that the infinite loop senders and receivers that many texts describe). Stopping/starting of timers are also simulated, and timer interrupts will cause your timer handling routine to be activated.

Detailed Description

You can find full details of the assignment and various questions posted by students, as well as important snippets of code, at the web site http://www.awl.com/kurose-ross.

1. Go to web site http://www.awl.com/kurose-ross, select your edition (both 2nd and 3rd edition have this programming assignment);
2. Click Student Resources and log in;
3. Select Programming Assignments;
4. Assignment 5 (3rd edition): Implementing a Reliable Transport Protocol (Chapter 3) is our Project #1. Remember that you only need to implement Alternating-Bit-Protocol version.

Submission
Send all the source files along with a README file which has instructions on how to compile and run your program to the TA, zhuzhang@engineering.uiowa.edu by midnight on the project due date.