CSE 123
Discussion 1
Project 1

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Office Hours: Tuesday 3.00 PM - 4.00 PM (B275)

Due: Nov 1st
Sliding Window Protocol

- **Single Mechanism that supports:**
  - Multiple outstanding packets
  - Reliable Delivery
  - In-order Delivery
  - Flow Control – prevent overrunning the receiver

- Often used in Data Link Layer (OSI Layer 2) as well as in the Transmission Control Protocol. (Transport Layer)

- Sender and receiver each maintain a “window” abstraction to track outstanding packets.
Project 1 Setup

► Sign up for a GitHub account if you don’t have one yet.
► Go to https://classroom.github.com/a/gz_Ej$fs to accept the invitation to the GitHub classroom.
► Once finished, you will see your own private repo here https://github.com/ucsd-cse123-fa19
► Make sure the skeleton code works before you start.
Project 1 Code Structure

- main.c: Responsible for handling command line options and initializing data structures
- communicate.c: Takes care of transporting messages between the sender and receiver threads.
- input.c: Responsible for handling messages inputted by the user (e.g. msg 0 0 hello world).
- util.c: Contains utility functions, namely, all of those for the provided linked list implementation. (Add your own helper functions here if necessary.)
- common.h: Houses commonly used data structures among the various source files. (TO DO)
- sender.c: Contains the skeleton code for the sender threads. (TO DO)
- receiver.c: Contains the skeleton code for the receiver threads. (TO DO)
SWP between threads

- Implementing a version of SWP for communication between sender threads and receiver threads.
► Feel free to add any more files, functions, variables if necessary.
► Please comment and briefly explain how your code works.
► Don’t forget to add/change corresponding header files.
► You also need to make sure your MakeFile successfully compiles all your necessary files that you added.
► Your code must compile and run on lab machines in the department.
► Remember, the design document (README) counts toward your score. Include your name and PID.