

# 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

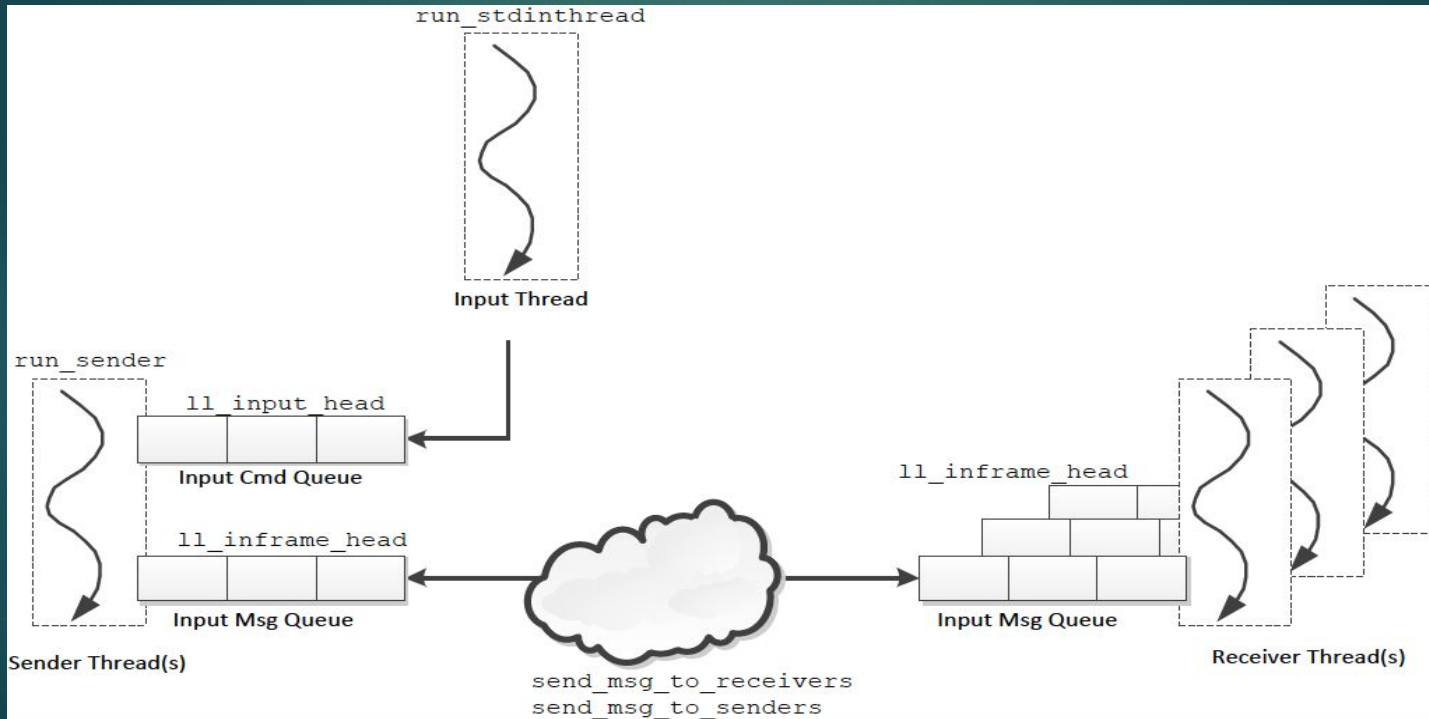
- ▶ Sign up for a GitHub account if you don't have one yet.
- ▶ Go to [https://classroom.github.com/a/gz\\_EjSfS](https://classroom.github.com/a/gz_EjSfS) to accept the invitation to the GitHub classroom.
- ▶ Once finished, you will see your own private repo here <https://github.com/ucsd-cse123-fa19>
- ▶ 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.