PA3 Report

Video Link: https://youtu.be/CoGB0DCnZtI

1K and File Transfer Timing

I timed my each of the Inter-Process Communication methods getting 1K data points from a .csv file, and transferring a 1MB .dat file. In both of these instances, the data fetching was split among 5 other channels (meaning that *-c 5* was passed in). The data is shown and labelled below.

IPC Method (5 channels)	**Time to get 1K (s)**	**Time to transfer 1MB.dat (s)**
FIFO	2.641912	0.109463
Message Queue	2.698746	0.097745
Shared Memory	2.243843	0.093415

Timing Differences and Additional Thoughts

The timing differences are not large, but in all cases the shared memory was the fastest method of sending messages. This could be because there isn't a "middle man" when sending messages. As the name implies, the messages all go to a shared memory. The FIFO and Message Queue were about the same in timing, this could be because they function similarly. Of the three IPC methods, the Shared Memory was the most unique. Both FIFO and the Message Queue both send messages to a place where the receiving end must go to read them.