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CMPUT 379 Assignment 2 Part 1

1. To test, I have a process that is continuously writing to a named pipe (FIFO). On another terminal, I repeatedly run the command 'ls -l' to see if the size of the FIFO would change. As a result, the size of a FIFO cannot be monitored as it will always return 0B using the 'ls -l' command. Therefore, no. One cannot detect a transmission activity by monitoring the size of a FIFO.
2. To test, I ssh'd into ui02.cs.ualberta.ca with one terminal and another into ui01.cs.ualberta.ca. I then started a server in one host and a client in another. As a result, they are not able to communicate through a FIFO because pipes are only within a single host and use virtual files.
3. To test, I opened a FIFO with O_RDWR mode in one process and then opened the same FIFO in O_RDONLY mode. As a result, B does not block when calling open()
4. I tested this by using the lockf command with the F_LOCK operation on a FIFO and then I used the lockf command with the F_TEST operation. Yes, a process can detect a locked FIFO by using the F_LOCK operation
5. To test, I ran both the given loops. Only loop B works properly because the buffer needs to be cleared before a read is done so that whatever was there previously will be cleared. Loop A will have a previous string in the buffer concatenated with the current string since it is not cleared