Brian Duenas

CSE 460

Lab 4

20 points Total

2. **Process Pipes**

**Q:** What do you see when you execute "pipe1" ? Why?

**A:** We see the “*ps –auxw*” execute and print on screen. The program holds the command in *buffer* then it is printed on screen.

**Q:** Modify the program pipe1.cpp to pipe1a.cpp so that it accepts a command (e.g. "ls -l") from the keyboard. For example, when you execute "./pipe1a ps -auxw", it should give you the same output as pipe1.cpp.

**A:**

**Example:**



**Q:** What do you see when you execute "pipe2" ? Why?

**Output:**

 **A:** The string from the program is printed as the “*od –c”* command is executing.

**Q:** Modify the program so that it prints out the first three words of the sentence in reverse by making use of awk (see lab 2) (i.e. 'If said, Arnod....).

**A:**

**Output:**

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3. **The pipe Call**

**Q:** What do you see when you execute "pipe3" ? Why?

**Output:**

** A:** You made an array of size two and sent “*CSUSB*” to array from pipe. Then the pipe is read using the unused array space using pipe.

4. **Parent and Child Processes**

**Q:** Modify pipe4.cpp so that it accepts a message from the keyboard and sends it to pipe5.

**A:**

**Output:**

5. **Special Pipes**

**Q:** modify the scripts so that received characters are converted to lower case rather than upper case.

**A:** Changed *server.cpp* so that it is not sending upper case characters by removing *toupper()*.



**Output:**

****6. **Study of XV6**



**Output:**

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