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CIS 345

Assignment 1

Code Description:

The attached code uses two pipes between the child and parent process to allow sending and receiving of strings between both the parent and the child. Pipe 1 consists of file descriptors fd[0] and fd[1]. fd[0] allows reading from the child, fd[1] allows writing from the child to the parent. Pipe 2 consists of file descriptors fd[2] and fd[3]. fd[2] allows the child to read from the parent, fd[3] allows writing from the parent to the child.

Pipe 1 flow: Parent 🡨 Child

Pipe 2 flow: Parent 🡪 Child

The unused read and write ends are closed within the process they are not needed. For example, when the parent has control the ability for the child to read from the parent is closed and the ability for the child to write to the parent is closed.

After completing their communication the first child P2 exits and parent process P1 creates a new child process P3 and repeats the same steps send a message from parent to child then from child to the parent.

Group Participation:

Krishaun (50%)

created the three processes parent, child 1, and child 2 using fork() and created pipe that allowed data flow from the child to the parent.

Ryan (50%)

added a second pipe to allow data flow from the parent to the child and wrote the read and write calls to pass the strings back and forth.