OPERATING SYSTEMS Hw 2 Interprocess Communication

Problem 1 (50 pts). Write a C program in Linux to achieve following operations:

Fork a process to create a child process, The processes make the following;

*Parent process writes "I am parent process my id is %d \n"

*Parent process waits the child process' termination.

*Parent process finds the sum of numbers between 1-20 and displays

*Child process writes "I am child process my id is %d and my parent id is %d \n"

*Child process finds the sum of the numbers between 1-10 and displays

*Use same index and sum variable to see that they are copied from different locations for different processes (Different address spaces are created for different processes).

*Both process writes "%d process finishes"

Problem 2 (50 pts). Write a C program in Linux to achieve following operations. You will design 2 processes and use named pipes in order to communicate.

Process 2 waits for numbers from console and writes to a named pipe until the number is 0.

Process 1 gets each number from a named pipe and finds the sum of the numbers until the number is 0.

You will open 2 consoles. Firstly in the console 1, you will run process 1 which waits something to write in the named pipe. In the second console, you will run process 2 and enter numbers. See how the two processes are communicating.

Homework Policies:

1. Cheating is strongly discouraged.
2. Late homeworks will be graded as 0.
3. Please comment your source codes.
4. Your Class Demo will be on 14.March.2011.
5. You should both run the code in Linux OS and in your Virtual Machine.

Note: Please obey these grading policies, unless your grade will be decreased.

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