CIS 345/CIS 545 Assignment 1

Inter process communication

Due date: July 15, 2018 (Sunday)

Points: 30

Write an inter process communication program in C language to exchange message between parent process and child processes. This Assignment is aimed to learn fork() and pipe() functionalities.

1. You are expected to create a program where parent process P1 should send a message “Hi, I am your parent from CIS 345 ” to the child process P2, P3. To create a child process use fork(). Child processes should send the acknowledgement ”Message from Child 2: RECEIVED” to the parent process after receiving the message.
2. To exchange/communicate the message, use pipe().
   pipe() is unidirectional data exchange channel.
3. Submit your document to TA (Email: liangjy10@gmail.com) and your instructor through blackboard course message with the following:
   a. working code (10 points)
   b. code explanation/documentation (10 points)
   c. screenshots with timestamp (10 points)
4. Use Fenn Hall lab (FH128) systems or virtual Linux machines to execute the program.
5. Mention individual contribution of each member (in percentage) and include your team members in email list while submitting the assignment.
6. Email subject and Document name should use the following format.
   CourseID_AssignmentNumber_GroupNumber <e.g: CIS345_Assignment3_Group10 >

Sample structure:

```
int main()
{
   // Fork() declaration section
    if(pid==0)
    {
         printf("the first child\n" );
    }
    else if(pid>0)
    {
         printf("the first parent\n");
```

```
        wait();
    }
    if(pid1==0)
    {
         printf("the second child\n" );
    }
    else if(pid1>0)
    {
         printf("the second parent);
        wait();
    }

    return 0;
}
```

Hint: You can use the above code or you can modify the above program for child process, if required. It is not mandatory to use the same code.