

CS 452 Project -- Simulation: Token-Ring Communication

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Idea of how project will run:

1. **run ./makeFile.exe**
2. **ask use for length of token ring, val word needs to go to, and word, and display users input and test values**
3. **Test that the values are valid**
4. **idea of output:**

PID 1111 – Process 1

I wrote: value

PID 1112 – Process 2

I Read: value

I write: value

PID 1113 – Process 3

I Read: value

I write: value

PID 1114 – Process 4

I Read: nothing

I write: nothing

Enter process ring length, process Word gets sent to, word:

5. **To exit, user types ^C, show that all PIDs get closed**

Enter process ring length, process Word gets sent to, word: ^C

PID 1111 shutting down

PID 1112 shutting down

PID 1113 shutting down

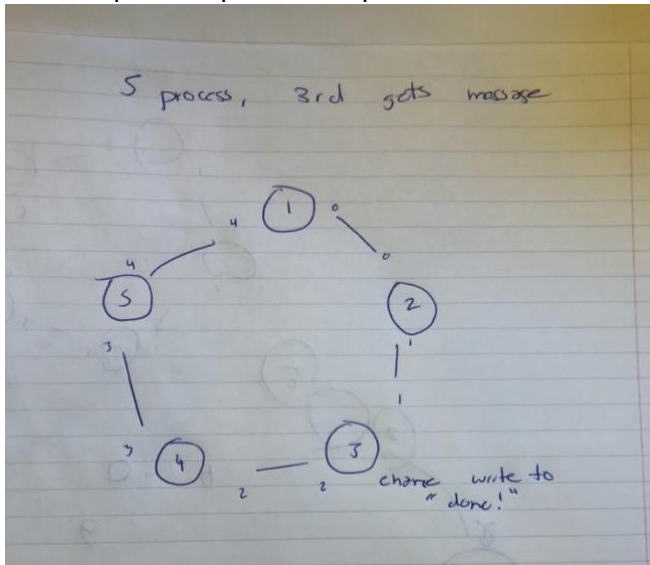
PID 1114 shutting down

How it works in my head:

In the program I parse user input to get the length of the token ring (X), where the message needs to get sent to, and the word.

After the program creates X amount of PIDs along with piping the previous write to the current read.

then loops from process to process.



“make” command:

```
erating-Systems/token-ring-project$ make -B
make: *** No targets specified and no makefile found. Stop.
[monicaklosin@MacBook-Pro-13-Monica:~/Desktop/GoogleDocs/GVSU/Fall
erating-Systems/token-ring-project$ make
make: *** No targets specified and no makefile found. Stop.
[monicaklosin@MacBook-Pro-13-Monica:~/Desktop/GoogleDocs/GVSU/Fall
erating-Systems/token-ring-project$ vim makeFile.exe
[monicaklosin@MacBook-Pro-13-Monica:~/Desktop/GoogleDocs/GVSU/Fall
erating-Systems/token-ring-project$ make -f makeFile.exe
makeFile.exe:1: *** missing separator. Stop.
[monicaklosin@MacBook-Pro-13-Monica:~/Desktop/GoogleDocs/GVSU/Fall
erating-Systems/token-ring-project$ make target
make: *** No rule to make target `target'. Stop.
[monicaklosin@MacBook-Pro-13-Monica:~/Desktop/GoogleDocs/GVSU/Fall
erating-Systems/token-ring-project$ make clean
make: *** No rule to make target `clean'. Stop.
```

I was unsuccessful in making the “make” command run my makefile.exe. To run my program, you must in the command line type, “./makefile.exe”

version 2:

I was able to correctly spawn the right number of children asked by user, but had issues making the pipes.

```
How many Processes? 5
Where does message go? 2
5 children
Parent = 59845
Process (59846)-(PPID: 59845)
read message:
                ?1_
write message: apple

Process (59847)-(PPID: 59845)
read message:
                ?1_
write message: apple

Process (59848)-(PPID: 59845)
read message:
                ?1_
write message: apple

Process (59849)-(PPID: 59845)
read message:
                ?1_
write message: apple

Process (59845)-(PPID: 59841)
read message: apple

write message: apple

Process (59850)-(PPID: 59845)
read message:
                ?1_
write message: apple
```

version 5:

```
What is message? apple
How many Processes? 5
Where does message go? 3
Parent = 2890
-----
INITIAL Process 1 (2891)-(PPID: 2890) write message: apple

Process 5 (2895)-(PPID:1) read message:
                                ?1_Process 5 (2895)-(PPID:1) write message:
                                ?1_

Process 4 (2894)-(PPID:1) read message: apple
Process 4 (2894)-(PPID:1) write message: apple

Process 3 (2893)-(PPID:1) read message: apple
Process 3 (2893)-(PPID:1) write message: apple

Process 2 (2892)-(PPID:1) read message: apple
monicaklosin@MacBook-Pro-13-Monica:~/Desktop/GoogleDocs/GVBU/Fall_2020/CIS452/Operating-s
```

I had it reading backwards for some reason, I wasn't able to retrieve how I did this version in time to submit this version (rip version).

version submitted:

```
What is message? apple
How many Processes? 5
Where does message go? 4
Parent = 16529
-----
INITIAL Process 1 (16531)-(PPID: 16529) write message: apple

Process 2 (16532)-(PPID:16529) read message: ???
[Process 2 (16532)-(PPID:16529) write message: ???

Process 3 (16533)-(PPID:16529) read message: ???
Process 3 (16533)-(PPID:16529) write message: ???

Process 4 (16534)-(PPID:16529) DELIEVERY! read message: ???
Process 4 (16534)-(PPID:16529) write message: done!

Process 5 (16535)-(PPID:16529) read message: ???
monicaklosin@MacBook-Pro-13-Monica:~/Desktop/GoogleDocs/GVBU/Fall_2020/CIS452/O
```

edit : thank you Professor for letting me turn in my right version from last night, I appreciate it! Also thank you for helping me getting it to work – it makes a lot more sense conceptually now.