OS project 1

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Design

main function

1. scan input
2. sort processes by ready time, just in case
3. set main process CPU and priority
4. initialize variables
5. loop
    1. fork processes that should be ready
    2. check if current processing should be finished, if yes the wait for it.
    3. find the next process according to the schedule policy
    4. if there is contect switch, block the previous process and run the current one by setting their priorities
    5. if nothing is running, then do nothing; if all processes have ended, exit the loop.
    6. run a unit of time.
6. print output.

forked process

1. set process CPU and priority
2. get start time through system call
3. loop time units
4. get end time though system call
5. print message to kernel through system call
6. exit process

Kernel Version: linux-5.3.0

Discussion

There is some minor order displacement between the expected and actual result. I suppose that changing priority does not entirely block or unblock processes.