Brow1325
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3.2

a. Remove the legacy code of main(). Change main() so that the example code from Presentation-1.pdf, main() creating/resuming two processing running sndch() printing 'A' and 'B', respectively, are added. Replace putc() with kprintf(). Change their priorities from 20 to 10. Check what the constant INITPRIO is which determines the priority of the process executing main(). Compile, load, and run XINU on a backend. What output to CONSOLE do you observe? Discuss your finding in Lab2Answers.pdf in lab2/.
    i. The INITPRIO is 20.
    ii. The output oscillates between printing several A's and several B's
b. (b) Rerun experiment (a) with QUANTUM set to 5 msec. Discuss your finding.
    i. The output oscillates between printing A and B faster than it did when QUANTUM was set to 30.
c. (c) Go back to the set-up of experiment (a) and change the priority of the process printing 'B' to 15. Discuss your finding.
    i. The output is just B repeating. With A never printing
d. (d) Go back to the set-up of experiment (a) and change the priority of the process printing 'A' to 25. Discuss your finding.
    i. The output is A repeating. With B never printing.
e. (e) Go back to the set-up of experiment (a) and change the priority of the process printing 'A' to 20. Discuss your finding. Explain the difference between (d) and (e).
    i. The output is A repeating. B never prints. The difference between d an e is the priority level for the process. However since in both cases the priority is greater than the priority for the process for printing B, they both have the same effect of running endlessly and never printing B.
f. Explain why this modification is necessary to preserve an important property of the NULL process (or IDLE process in Linux/UNIX and Windows) in today's operating systems.
    i. The modification to chprio is necessary because it makes sure that there are no vulnerabilities. It is important for the NULL process because it is always going to be executed and is the last process to be running. But issues would arise if we were able to change the priority of the NULL process to 0 or a negative priority because it would cause issues when it is the last process because it would not be able to run.