Operating System
Project 2 TestCase Design Document

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Testcases

C code

All testcases are located in the *test* folder.

- **create16.c**: One thread creates as much files as possible.
- **createAndOpen.c**: One thread creates a file and then open it, show different descriptors.
- **writeAndClose.c**: Pass parameters to one thread to open a file with given name, write given sequence and then close the file.
- **CwriteAndClose.c**: Pass parameters to one thread to create a file with given name, write given sequence and then close the file.
- **exec.c**: Pass parameters to one thread to execute a given file.
- **openAndReadout.c**: Open the file and readout bytes with given length.
- **unlinkBeforeClose.c**: Two processes share a file. First process writes the file and unlinks it without closing, second process then exec **cp** to copy the file.
- **twoProcessesOpen.c**: Two processes share a file. First process writes the file and closes it and then opens it again, the second process opens the file and writes to it before the first process readouts the file.

Some test combines these testcases and **sh.coff**. For example, we first call **sh.coff**, then run **exec.coff** with calling **halt.coff** to verify the halt can only be called by the root process.

JAVA code

Testcases in java code are mainly for LotteryScheduler. All testcases are located in *Test.java* in the threads folder.

- **priorityTest1**: three ping threads with priorities seted to be reversed order of fork.
- **priorityTest2**: three ping threads, thread 1 and thread 3 have priority 1 as main, thread 2 has priority 0 but joins main.
- **priorityTest3**: two ping threads, thread 1 has priority 3 and thread 2 has priority 1, but thread 2 first acquires a priority queue and thread 1 waits for it.