CSE325 Scheduler

Assignment #3

Design and Implement 2 schedulers.

Design due:	Feb 21, 4:00pm
Implementation due:	Mar 1, 4:00pm

You are to design two different scheduling schemes to schedule processes within your developing operating system. It should be implemented within the process manager that was completed for a previous assignment. The selection of one of the schemes will be done at boot time and will be a configuration parameter in a future config file. The scheduling algorithms you are to design are:
1. A general-purpose scheduler that implements the Fair-Share Group algorithm.
2. A scheduler supporting interactive needs, such as a priority-based algorithm.

You will develop a design document that will consist of at least the following information:

- The high-level execution-flow diagram for each scheduler to be implemented
- A description of each algorithm and how it meets the design goals
- The process control block, with descriptions for scheduler-related information
- Any design decisions you made (including things like queue size, elements of the PCB, etc)

Constraints on your design and implementation are:
- Single-core system
- **No** system calls are allowed in your implementation of the scheduler
- Systems calls are allowed in your test interface portion of the assignment

Your design does not have to be approved before you perform the implementation. If you want your design reviewed before you perform implementation, submit it as soon as possible.

Your implementation is not to use system calls within the process manager or the scheduler code, except for those necessary to show the implementation works properly (such as printf). You are to provide a test set of inputs that exercises your process manager/scheduler combination showing the operation of your scheduler. Systems calls may be used in code that is to setup for testing of the process-manager and scheduler.

You are to work in groups of 2 or 3, with names of group members listed on the design document.