

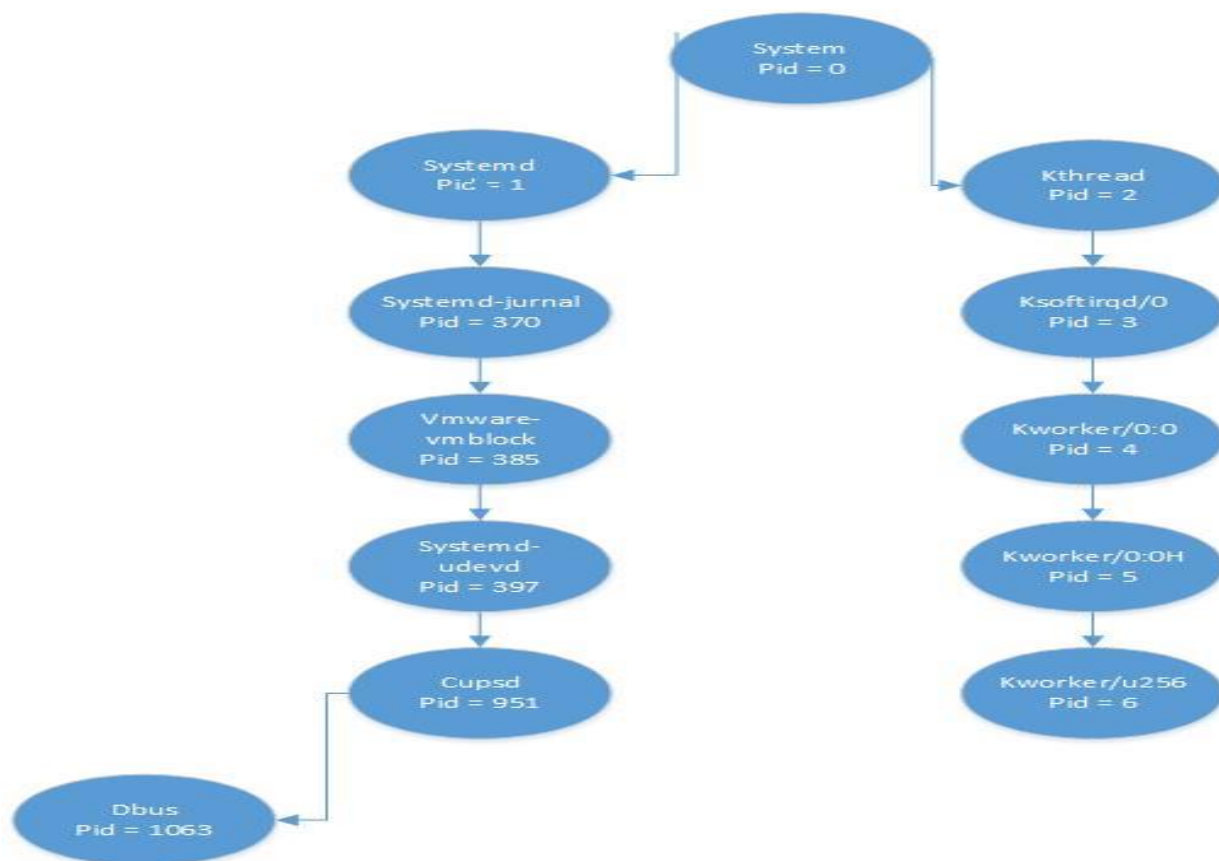
3.6 Describe the differences among short term, medium term, and long-term scheduling.

- **Short-term Scheduler:** The short-term scheduler usually takes just a few milliseconds to execute a job. Which is mostly to do with I/O bound tasks.
- **Mid-term Scheduler:** The mid-term scheduler manages processes by time. It will pull out a task in mid computation from the CPU and let another process execute and restart that process later on again.
- **Long-term Scheduler:** The long-term scheduler executes processes that take longer than 100 milliseconds to execute or are created minutes apart. These are mostly to do with CPU bound processes.

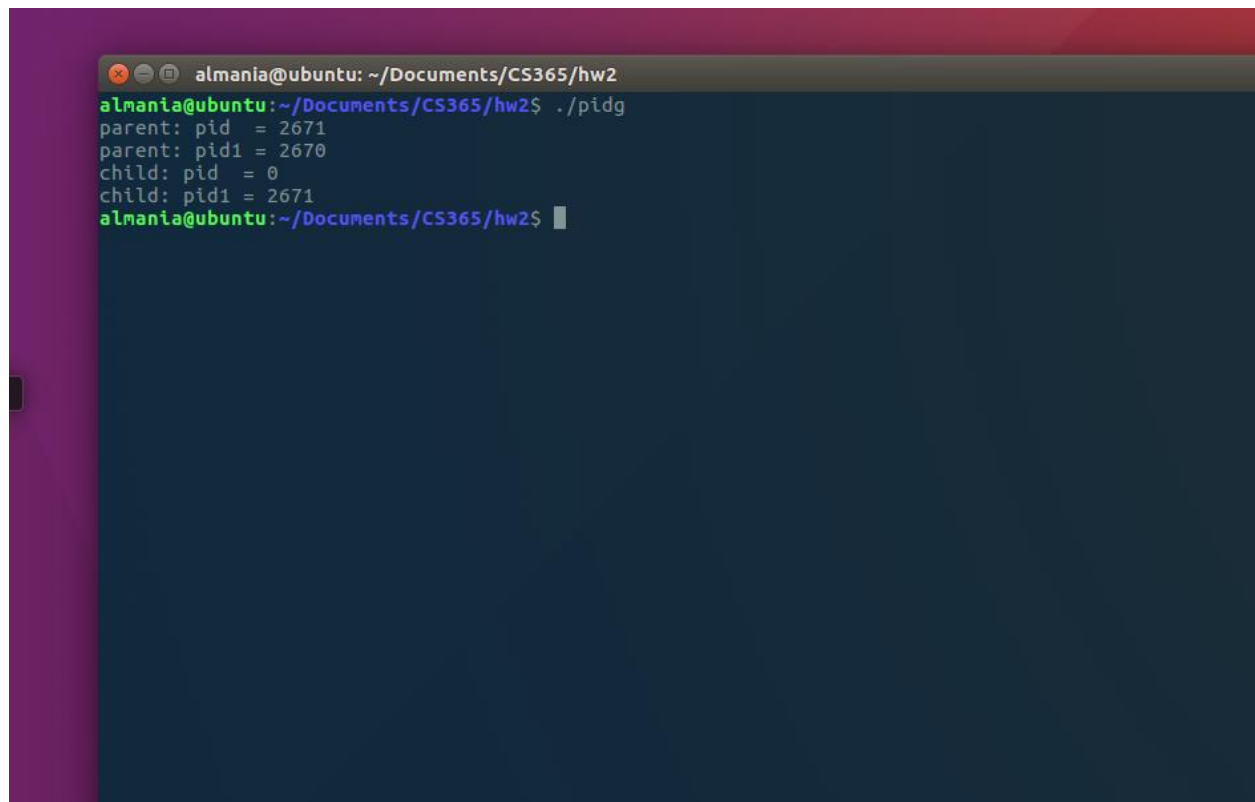
3.7 Describe the actions taken by a kernel to context switch between processes.

The kernel must save the context of the old process from its pcb and load the saved context of the new process to be run.

3.8 Construct a process tree similar to Figure 3.9.



What are the pid values? Run the following code to prove your guess. Submit the result of the screenshot.

A screenshot of a terminal window with a dark blue background and a purple title bar. The title bar contains the text 'almania@ubuntu: ~/Documents/CS365/hw2'. The terminal shows the command './pidg' being executed, followed by four lines of output: 'parent: pid = 2671', 'parent: pid1 = 2670', 'child: pid = 0', and 'child: pid1 = 2671'. The prompt 'almania@ubuntu:~/Documents/CS365/hw2\$' is visible at the end of the output lines.

```
almania@ubuntu: ~/Documents/CS365/hw2
almania@ubuntu:~/Documents/CS365/hw2$ ./pidg
parent: pid = 2671
parent: pid1 = 2670
child: pid = 0
child: pid1 = 2671
almania@ubuntu:~/Documents/CS365/hw2$
```