

CSCI-GA.2250-001
Operating Systems
Homework Assignment#1

1. There are several design goals in building an operating system, for example, resource utilization, timeliness, robustness, fairness, real-time, and so on. Give an example of two design goals that may contradict one another.
2. Which of the following instructions should be allowed only in kernel mode?
 - a. Disable all interrupts
 - b. Read the time-of-day clock
 - c. Set the time-of-day clock
 - d. Change the memory map
3. Why is the process table needed in a timesharing system? Is it also needed in a personal computer system in which only one process exists, that process taking over the entire machine until it is finished?
4. To a programmer, a system call looks like any other call to a library procedure. Is it important that a programmer know which library procedures result in system calls? Under what circumstances and why?