

CSCI-GA.2250-001
Operating Systems
Homework Assignment # 2

1. In slide 17 of lecture 2, three process states are shown. In theory, with three states, there could be six transitions, two out of each state. However, only four transitions are shown. Are there any circumstances in which either or both of the missing transitions might occur?

2. In a system with threads, is there one stack per thread or one stack per process when user-level threads are used? What about when kernel-level threads are used? Explain

3. Suppose there is a deadlock in a system. Give an example to show that the set of processes deadlocked can include processes that are not in the circular chain in the corresponding resource allocation graph.

4. A system has two processes and three identical resources. Each process needs a maximum of two resources. Is deadlock possible? Explain your answer.