Exercises Lecture 4

# Extra Exercise Safe Sequences

Take note of the following resource requests. Determine all safe sequences step by step and review if there is a safe sequence for the whole process & resource allocation schema. If not, what is the last step that has at least one safe sequence?

1. Process 1 requests Resource 2
2. Process 2 requests Resource 3
3. Process 1 requests Resource 1
4. Process 3 requests Resource 4
5. Process 4 requests Resource 1
6. Process 2 requests Resource 2
7. Process 3 requests Resource 3
8. Process 4 requests Resource 4

# Extra Exercise Address Translation

Given the following logical address: 0x1FA7BABC. Give both a valid and invalid address translation for a system that uses a pagesize of **32Kb** (b represents bit here) and a system that uses a pagesize of only 1Kb.

# Study Questions

1. What is meant with “thrashing” in the context of paging?
2. What is the fundamental difference between virtual memory and non-virtual memory?
3. What is a “page fault”?
4. What is the difference between paging and segmentation?
5. Which of the following: static partitioning, dynamic partitioning, (simple) paging and (simple) segmentation is considered to be a strategy using consecutive memory allocation and which of them is considered to be non-consecutive memory allocation?
6. The combination of segmentation + paging will not be asked on the exam.