CS 377 – Operating Systems
Discussion Session 8 Questions

Name: _____

Write your answers individually, without consulting notes, slides, books, or the internet. Be succinct (complete sentences not necessary). **Remember to turn your paper over.**

1. **Memory management**. In memory management, what do we mean by a *segment*, a *physical address*, and a *virtual address*? What is the relationship between physical and virtual addresses?

2. **Relocation**. *Relocation* refers to placing a process' position in physical memory (allowing the program to execute independently of whatever its current physical address is). Explain how **dynamic relocation** works.

3. **Fragmentation**. What is fragmentation and what (at a high level) can we do to address it?

4. **Paging**. Suppose we have a system with 8k of physical memory in which the OS uses 2k and a single running process A uses 4k. Assuming the system is using paging with a 1k page size, sketch a diagram showing what the logical memory of A and the physical memory of the machine might look like.