

**Operating Systems – Fall 2003**  
**Homework Number 2**  
**Assigned August 18, 2003**  
**Due August 25, 2003**  
**100 Points**

Problems 2.1, 2.2, 2.3, 2.5 from the textbook (3<sup>rd</sup> Edition pages 95-96) and the following problems:

5. What is the purpose of the command interpreter? Why is it usually separate from the kernel?
6. Writing an operating system that can operate without interference from malicious or undebugged user programs requires some hardware assistance. Name three hardware aids for writing an operating system, and describe how they may be used together to protect the operating system.
7. If a cache can be made as large as the device it is caching for (for instance, a cache as large as a disk) why not do so and eliminate the device?