Jason Fagerberg
Prof. Suresh
Operating Systems
October 12, 2017

Assignment 2

2.12

There can be periodic interrupts that record the IR register value. This value will tell you the address of the current command being executed. With this information, you can see what section of the code is being executed at each time interval. With this you can tell how long each section of code takes to execute and the programmer can optimize sections that take longer to execute.

2.19

When mechanisms and policy are separate it allows system to be modified more easily. If a policy is changed, having mechanisms separate ensures they can remain the same despite the policy change.

2.20

Virtual memory subsystem and storage subsystem are tightly coupled. Many systems allow files to be placed in virtual memory space of an executing process. However, the virtual memory subsystem usually uses the storage subsystem as a backing store for pages that do not exist in memory yet. Sometimes file systems buffers in physical memory before it is flushed to the physical disk. This means memory between a virtual subsystem and a file system needs to be carefully coordinated.

2.21

     Microkernels allow for adding new services without having to modify the kernel. More operations are done in the more secure kernel mode. Simpler kernel designs and functions lead to more reliable operating systems. User programs and system services interact using inter process communications such as message passing. These messages are conveyed by the operating system. The major disadvantage of microkernels is the overhead associated with communication between the operating system and user programs.