Lab Four

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1 Problem One

Question: What is the relationship between a guest operating system and a host operating system in a system like VMware? What factors need to be considered in choosing the host operating system?

Answer: When a guest operating system is functioning on a host operating system, they must be connected in such a manner that the system calls of the guest system is properly translated to make system calls on the host system. Since the guest system has a status of essentially a user program acting through VMware, it is required to make requests to the system call interface of the host system in order to perform actions in kernal mode [1]. Likewise, the VMware must perform a layer of abstraction for the guest system to receive hardware system interrupts similar to how we are using event listeners to catch keyboard interrupts in our project. Considerations when choosing a host operating system would be how complex its system call interface is and whether it can be abstracted/translated by the VMware easily to work with the guest operating system as well as opting for a less monolithic styled host operating system that won't interfere excessively with any hardware virtualization.

References

[1] A. Silberschatz, P. B. Galvin, and G. Gagne. *Operating System Concepts (9. ed.)*. Wiley, 2013.