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CS 360

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9 December 2013

Course Goals

The first goal of this class is to be able to understand the functional subsystems of modern operating systems. I think that this is something that was covered in every chapter that we covered in this class. I do believe that I understand much more about the lower levels of the operating system than I did before I took this class. Learning about the organization and different architectures gave me a much better understanding of the operating system subsystems. Also understanding how processes and system calls work allowed me to understand these even more.

The second goal was to appreciate the tradeoffs involved in operating system design and learn how to make intelligent choices in a specific situation. I think this is the goal this class was best at. One thing that the book does a very good job at, and that we highlighted in class on multiple occasions, is that there are many different ways to implement parts of the operating system and that there are rarely catch-all solutions that are the best regardless of the situation. Some things that come to mind when talking about this goal are what we learned about process scheduling, paging, CPU scheduling, memory management, and more. It is interesting to see when one should implement one solution instead of another.

The third goal was to understand the interplay of various parts of the computing environment. I think this was successful in that we learned about how physical things such as main memory or I/O devices interact with applications. One example of this is learning how physical memory interacts with main memory which the user application are able to use.

The fourth goal of this class is to be able to apply the knowledge that we have learned to programs we write. All of the programming assignments in this class have were very clearly planned to allow us to apply what we were currently learning in class. When we were learning about how the operating system parts interact with one another through message passing we wrote a system call. When we were learning about processes and forking, we wrote a shell. When we were learning about threads and how they interact we did the IPC assignment which allowed us to see how they interact.

Overall I believe the course goals were met. The book guided us through learning about many of the core aspects of the operating system from the higher level things to the low level details. The mixture of reading the book and the assignments that we have had have allowed us to accomplish these goals and learn a lot about many different aspects of operating systems.