Pthreads Reflection

A Reflection of the Pthreads assignment for Operating Systems

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For this assignment, I was to develop a multithreaded application using C that is able to approximate the value of pi. It utilizes the Monte Carlo technique in addition to Pthreads.

This assignment was quite the challenge for me. Prior to this assignment I struggled with the understanding of Pthreads and multithreaded applications. Taking this struggle and coupling it with the Monte Carlo technique definitely pushed me to better my understanding of the system level processes that occur when programs run.

In order for me to accurately implement Pthreads, I really needed to make sure I had a solid understanding of what multithreading was. Multithreading is a core aspect of system level processes. Without multithreading, applications would be incredibly slow and incredibly inefficient. It takes advantage of the maximum capabilities of the CPU. In addition to understanding multithreading, I also had to learn how to program a multithreading application that is safe. This means that the threading I implement needs to allow for resources to be protected so that two threads don't access and change the same data at the same time. Having an understanding of not only how threads work, but how to correctly implement them was essential.

Considering all of this, this assignment demonstrates the Computer Science Program Goals of understanding concepts and techniques of software design as well as attaining a system level understanding of the computer.