CSE 179: Lab 4

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Task1: Monte Carlo estimation of PI based on Pthreads

Same\_points\_per\_thead : 10,000

|  |  |  |
| --- | --- | --- |
| Number of Threads | Computed\_PI (output value of pi) | Execution time of the program (seconds) |
| 4 | 3.115600 | 1.960801 |
| 8 | 3.130400 | 2.050639 |
| 16 | 3.118000 | 1.703868 |
| 32 | 3.134800 | 2.880779 |

Task2: Bank Account Simulation

Before Fix the error

|  |  |
| --- | --- |
| Number of Threads | Final balance of the account ($) |
| 2 | 0.00 |
| 4 | -27200.00 |
| 8 | 0.00 |
| 16 | -2100.00 |
| 32 | 0.00 |

The problem of the code is from bankAccount.h. In bankAccount.h, the withdraw doesn’t wait unit deposit finished. It gives negative account balance at the output. So, it should have lock and unlock in the deposit and withdraw function.

After fix the error

|  |  |
| --- | --- |
| Number of Threads | Final balance of the account ($) |
| 2 | 0.00 |
| 4 | 0.00 |
| 8 | 0.00 |
| 16 | 0.00 |
| 32 | 0.00 |