Operating Systems

Fezile Manana

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Problem 2.1

Threads	Flips	Times /ms		
		Global	Table	Coin
100	1,000	19.267	199.033	1,680.238
100	10,000	65,249	2,030.289	16,848.696
1,000	1,000	121.635	2,151.664	19,226.470
1,000	10,000	993.472	22,197.140	201,515.880
100	10	11.232	3.444	18.271

The table above shows the times of each strategy for different numbers of threads and flips. The runtimes for each strategy increase with an increase of the number of threads and flips. The trend shows that the Global and Coin lock have the lowest and highest runtimes respectively. This is because the Global lock has the largest amount of code in the critical section and the overhead of locking and unlocking mutexes is less than the Table and Coin lock methods.

However, when the number of flips is small relative to the number of threads, the Table lock method exhibits the fastest runtime.