Mini Project 1: Transactional Programming

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Make Notes:

Run “make” command to make all targets. Run “make test” to make the given bank account test. Run “make custom_test” to make our custom test.

Our implementation works as intended and the performance results are shown in the graphs and tables below. These results were obtained by running the given bank account test program. The first compares the throughput values when changing the bit filter size and the thread count. The second compares the average abort count of each thread. They show a trend that is consistent with what is expected of the algorithm. In addition, running the system with disjoint access still produces aborts as expected because the Bloom Filter can give false aborts. Finally, we created a scenario to test the RingSTM where there is a fee being collected of $10,000. It runs successfully and shows the proper operation of the algorithm.

Average Abort count

	1024	512	256	128
1 Thread	0	0	0	0
2 Threads	118651.5	166807.5	196708.5	210322
4 Threads	177759.75	217077.25	246829	268857.25

Throughput

	1024	512	256	128
1 Thread	736841	725897	749894	750512
2 Threads	970425	1246677	1304937	1296741
4 Threads	1246561	1964827	2003610	2055363