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P2 Exp2b

There are a couple of things that were done to the hashtable-biglock.c skeleton file such that it functions correctly and scales well. The first implementation was to create an H(k) function that automatically takes a key to find which hashtable the key-value pair must go to using the equation, . In the void \*thread\_func(void \*thread\_id) function, I called find\_which\_hashtable(int key), which gets the H(k) value for a given key, to extract the correct hash table index. I changed the arguments in the locking and unlocking mutex so that only the mutex that corresponds to the correct hash table index locks or unlocks. In addition, the key-value pairs are inserted into the correct hash table. Finally, in the main(int argc, char \*\*argv)function, numHashTables was set to 100 \* numThreads to reduce contention for hash table resources.

A graph with red lines and numbers

Description automatically generated

Original Scalability Plot

A graph with a red line

Description automatically generated

After Improvements