

Project milestone report

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Project progress

- We have finished reading the related papers and make our design & implementation decisions
- We have finished the implementation of fine-grained locking BST with ...
- We have finished the implementation of lock-free BST with GCC atomic builtin function `__sync_bool_compare_and_swap` as the CAS operation prototype

Period	Goal
<input checked="" type="checkbox"/> 11.3 - 11.8	paper reading and implementation decisions discussion
<input type="checkbox"/> 11.9 - 11.15	implementation of fine-grained locking BST
<input checked="" type="checkbox"/> 11.16 - 11.21	implementation of lock-free BST

Future schedule

- During the poster session, we plan to show our benchmark results for two different BST implementations under different workloads. The demo form will mainly be with diagrams and tables.
- The future work will be writing a harness program to generate different kinds of workloads and apply the workload to the BST implementations. The benchmark result will be the speedup we achieved as more cores are being used.

<input type="checkbox"/> 11.22 - 11.25	Implement harness program and design workloads (Sean)
<input type="checkbox"/> 11.26 - 11.29	Preliminary correctness test with harness program (Ye)
<input type="checkbox"/> 11.30 - 12.2	Benchmark on fine grained lock BST and optimization (Sean)
<input type="checkbox"/> 12.3 - 12.5	Benchmark on lock-free BST and optimization (Ye)
<input type="checkbox"/> 12.6 - 12.9	writing final report and prepare for poster session (Ye, Sean)