

DB Project 3 Report

Documentation

I_Join: Takes in 2 attributes and a table. The first one belongs to the current table and the 2nd one belongs to the 2nd table. The 2nd attribute must also be the primary key of the 2nd table. The values of the attribute of the 1st table is compared to the index of the 2nd table. If the 2 attributes exists and the values are the same then they are added to the new table.

H_Join: Implement join function using the standard hash join algorithm.

Point Sequential Select: traverse all the tuples to look for the value that is passed in

Range Index Select: traverse all the keys in the index and compares the value to the predicate

PLEASE NOTE

To run performance test on different map types you must manually change *mType* in the Tables.java file at line 70

Unit Test Cases

I_Join: We ran test cases of passing in an attribute that is not a primary key of the 2nd table and got an empty table as expected since the index is built around the primary key.

We also test when a table has multiple primary key but only one of the primary key is passed in. For this we got a proper table as expected since the key to the index can contain multiple values.

Point Select: We made multiple test files for each of the map type.

Work Division

Phuc Nguyen: Worked on I_Join, Range Select Index, performance testing, writing report

Junwei Ren: Worked on H_Join, Point Select Sequential, Range Select Index, and performance testing

David Ponder: Worked on performance testing, writing report, writing UML for and revising the term project proposal

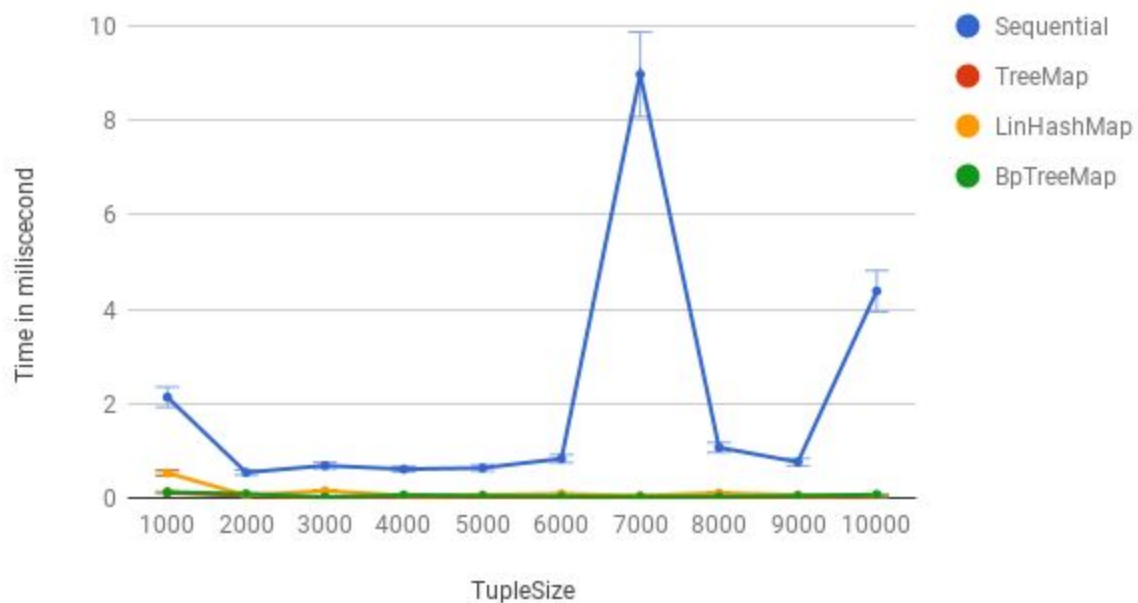
Yifan Dai: Worked on testing Point Select, plotting data from performance testing, term project proposal

Graphs and Data

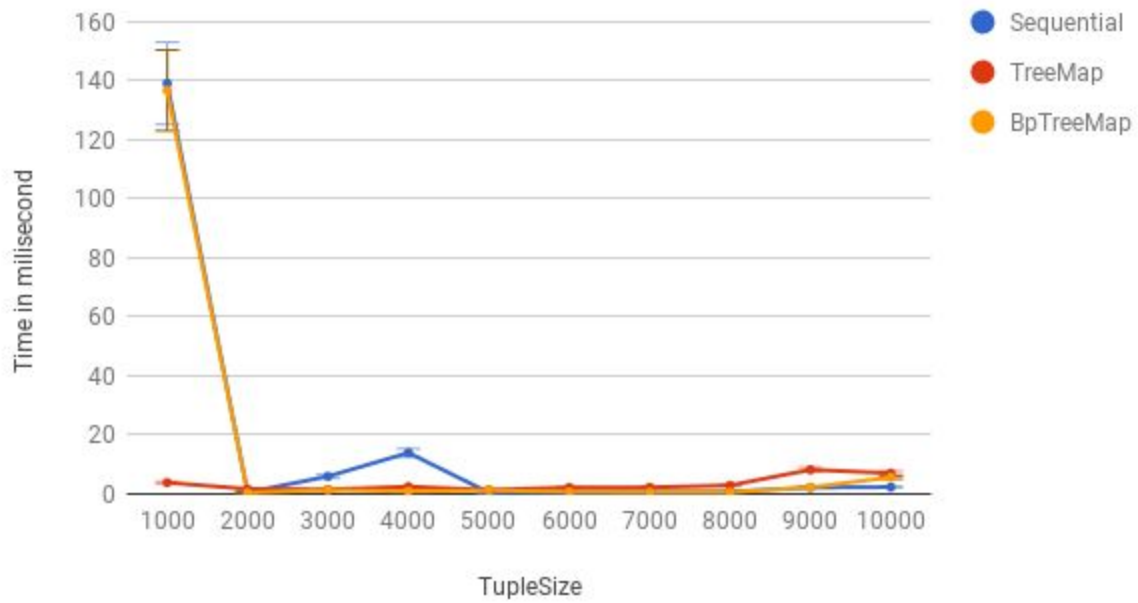
Raw data and original charts can be accessed through this link.

<https://docs.google.com/spreadsheets/d/1t7WJ3UXqy7ovv3lOeveFmJF3yNjraNoG8GoC-eAuCrU/edit#gid=1388809257>

Point Select



Range Select



Join

