EECS 484 Project 4 Test Report

By: Wennan Zhou & Yungang Wang

Our basic test methodology was enumerating all possible input scenarios.
Below is a table of our test cases and their purposes.

Testcase Name	Purpose
`insert-nonindex.sql`	Test insertion without indices. Test insertion in and out of order.
`insert-index.sql`	Test insertion with indices. Test insertion in and out of order. Use a select on an attribute with index to test if the new index is added.
`select-scan.sql`	See if scan select is chosen when index does not exist. Test all the operators, i.e. LT, LTE, EQ, GTE, GT, and NE. Test on all three types: int, double, and string. Test if the result is ordered as requested. Test if the projection works when different numbers of attributes are requested.
`select-index.sql`	See if index select is chosen when index exists and the operator is EQ. Test on all three types: int, double, and string. Test if the result is ordered as requested. Test if the projection works when different numbers of attributes are requested.
`join-snl.sql`	See if simple nested loop is chosen for join queries that are not EQ. Test all the operators except EQ, i.e. LT, LTE, GTE, GT, and NE. Test on all three types: int, double and string. Test if the result is ordered as requested. Test if the projection works when different numbers of attributes are requested. Test if the projection works when attributes from either relation is requested. Test on simple nested loop joins with attributes that is unique.
`join-snl-dup.sql`	Test on simple nested loop joins with attributes that is heavily duplicated.
`join-index.sql`	See if index join is chosen when index exists and the operator is EQ. Test on two types: int and double. (Not on string since index on string is not implemented.) Test if the result is ordered as requested. Test if the projection works when different numbers of attributes are requested.

	Test if the projection works when attributes from either relation is requested. Test when only the left, only the right, and both relations have indices. Test on index joins with attributes that is unique.
`join-index-dup.sql`	Test on index joins with attributes that is heavily duplicated. Test when only the left, only the right, and both relations have indices.
`join-smj-samelen.sql`	See if sort merge join is chosen for queries that are EQ and has no indices. Test on all three types: int, double and string. Test if the result is ordered as requested. Test if the projection works when different numbers of attributes are requested. Test if the projection works when attributes from either relation is requested. Test on sort merge joins with attributes that is unique or heavily duplicated. Test on two relations that have same length on the field to be joined.
`join-smj-difflen.sql`	See if sort merge join is chosen for queries that are EQ and has no indices. Test on all three types: int, double and string. Test if the result is ordered as requested. Test if the projection works when different numbers of attributes are requested. Test if the projection works when attributes from either relation is requested. Test on sort merge joins with attributes that is unique or heavily duplicated. Test on two relations that have different length on the field to be joined. (Both left > right and left < right.)