Description of Lab4

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1.Design decisions

(1)The selectivity estimation method is based on histogram, which is mentioned in the instruction. The join ordering is also mentioned with pseudocode.

(2)Scan table twice to build the TableStats. The first time is to get the max/min value of histogram. The second time is to build histogram. PageNum and TupleNum are also recorded.

(3)Join cost and cardinality are done following instructions.

2.No APIs are changed.

3.

(1)avgSelectivity is not done.

(2)Only nested-loop join and HashequiJoin are done.

4.

It takes me 6 hours to finish lab4. The IntHistogram and StringHistogram should based on a same class, but they don't. And the docs of avgSelectivity is not so clear.