

Writeup Lab 3

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Filter and Join

Filter

In the `fetchNext()` function, I iterate over tuples from the child operator, return the next tuple which pass the filter.

Join

In the `open()` function, I use a **bicirculation** to iterate over the set of child1's tuples cross child2's tuples, to construct a ArrayLists which covers all pair <tp1, tp2> passing the filter.

Aggregates

IntegerAggregator

I use a HashMap `groupByMap` to store Integers which belong to different groups, and a `countMap` to count tuples for average.

StringAggregator

Because there is no need to aggregate Strings, I only use `countMap` for counting.

HeapPage & HeapFile

InsertTuple

Insert the first page which has unused slots, and insert the tuple, mark the page dirty.

DeleteTuple

Delete the tuple from the page it remains, and mark the slot unused, mark the page dirty.

Insert & Delete

Insert

Read the tuple from the child iterator and insert it into the table which has `tableId` in the `insert` class.

Delete

Delete reads tuples from its child operator and removes them from the table they belong to.