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Professor Rogers

CS 339

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### *Lab 3 Writeup*

Describe any design decisions you made, including your choice of page eviction policy. If you used something other than a nested-loops join, describe the tradeoffs of the algorithm you chose.

- We did not make any major design decisions other than adding helper functions or variables throughout our code to help with implementing the methods described in the lab pdf. Our most major design decision was in IntegerAggregator, where we created two helper functions to determine the correct output based on the inputted aggregation operator, as well as a map to track groupVal and aggregateVal which would be used to create the OpIterator. For our page eviction policy, we used the Least Recently Used (LRU) eviction policy, using a map of PageId's and access times to determine which page would be evicted. We made this decision because it was the eviction policy that we understood most in depth. For our Join, we used nested loops as was advised in the pdf.

Discuss and justify any changes you made to the API.

- No changes made to the API, we stuck to the original code as much as possible, and attempted to edit the codebase as little as possible.

Describe any missing or incomplete elements of your code.

- Passing all tests and seems to be working as intended.

Describe how long you spent on the lab, and whether there was anything you found particularly difficult or confusing.

- We spent approximately 6-8 hours in the lab in total. Similar to the previous portion of this Lab, what we found most confusing was initial setup, becoming familiar with the codebase, learning Java itself, and building out the HeapFile and HeapPage functions.