

Writeup for PA1

Class: CS660

Group Member: Deyan Hao, Zhuyun Chen

Date: September 27, 2020

For PA1, the methods in following java file are completed: Tuple, TupleDesc, Catalog, BufferPool, HeapPage, HeapPageId, HeapFile, RecordId, and SeqScan.

In Tuple, we use a List to store fields for a tuple, and cast it as ArrayList to use the iterator.

In TupleDesc, we use an ArrayList to store information about tuples.

In Catalog, three ConcurrentHashMap stores information about all available tables and their associated schemas for easy looking up.

In BufferPool, a ConcurrentHashMap stores the information about cached pages. getPage method now only gets the cached pages or read page to the cache when there are still available space in the cache. The lock and evict strategy are not implemented as they are left for future implementation.

In HeapPage, all available tuples of this page are stored in an ArrayList for iterator usage.

In HeapFile, an iterator class HfIterator is added to iterator over the heap file, where there are multiple heap pages that store tuples of a table.

The class SeqScan also uses Hfiterator for sequentially scan.