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Lab writeup

### SimpleDB Storage

For lab 1, we decided to make the Tuptdesc into an arraylist. It seemed like a good choice given that it was a variable length data structure, which seemed appropriate for simplicity within the tupledesc class. For catalog, it seemed most appropriate to utilize hashmaps for a table class. The table class, made by us, is so that catalog can, as the 2.3 assignment writes, keep track of the tables currently in the database in a more organized fashion. In fact, the majority of the implementations use hashmaps where appropriate due to the ease of checking whether or not something exists. This is backed by an army of try-catch statements so that we don't need to continuously cushion for errors should they come up. Finally, in seqscan, we took the liberty of importing the dbfile file in addition to the dbfileiterator (the latter was the only one imported in the beginning), since having the file declared within the constructor will make it much easier to access the iterator (that, or I'm just bad at coding). The remaining decisions made by us are fairly intuitive, and the less intuitive steps are commented within the code itself.

4 years into both of our CS majors, we still don't have a good understanding of what an API is. Zaitians internship supervisor and Alex's postdoc also don't have a firm and collected definition on what an API is, so we're not ashamed to admit it either. In feedback for this lab, we would love your definition on what an API is, and are proud to say we made no changes to it either (we think).

As for incomplete elements, we decided not to do add the eviction policy at the moment, since we're both overloaded on classes. Further, the not-necessary-for-lab1 commented methods are also not implemented for similar reasons.

Overall, the lab had a steep learning curve at the very beginning. We hope we understood the stuff we had to do properly (since both of us typically write in python), so we had to clean up our Java skills and relive AP Computer Science A as we went on. In terms of hours, we put roughly 20 hours each into the assignment, for a total of 40 hours. Much of the work went into the table class configuration within catalog, the iterators, readfile due to not doing so hot on computer systems, and similar reasonably long methods.