|  |  |
| --- | --- |
| **Files to change** | **Changes** |
| simpledb/parse/Lexer.java | 1. Added keywords “order”, “by”, “asc”, “desc” to keywords (in routine initKeywords()) |
| simpledb/parse/Parser.java | 1. Instantiated new Hash Map to store order by commands where the key is the field and value is either a string value “asc” or “desc”  * E.g. [order by sname desc] will add <sname,  “desc”> into the hashmap.  1. Created a new method orderList() which will update and return the HashMap above with the correct key value pairs while reading the input command |
| simpledb/plan/BasicQueryPlanner.java | 1. Created a new plan node after the ProjectPlan node, in createPlan(). |
| simpledb/plan/PlannerTest1.java | 1. Replaced string b with “” + i; so that we can observe that the records are ordered in ascending order. |
| Simpledb/plan/QueryData.java | 1. Included an additional Hashmap field in the constructor, which allows us to know whether we should sort in ascending or descending order. 2. Added a new method that serves as the getter for the HashMap stored (which contains the field as well as the order to sort by). |
| Simpledb/materialize/GroupByPlan.java | 1. Include each groupfields in a hashmap, to be passed to the SortPlan constructor. |
| Simpledb/materialize/MergeJoinPlan.java | 1. Add each fldname into a hashmap, to be passed to the SortPlan constructor. |
| Simpledb/materialize/RecordComparator.java | 1. Changed the “fields” attribute to be of type HashMap, and changed the constructor input type accordingly. 2. Updated compare() method to take descending order into account by checking the value of the HashMap if it is meant to be sorted in ascending or descending order. |
| Simpledb/materialize/SortPlan.java | 1. Change the constructor such that it uses a hashmap instead of List<String> for the sortfields. |