

Sample Commands for Project 1

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Command Definition	Sample Command
<p>1. Create a record-oriented file system</p> <pre>createRFS <disk_name> <disk_size> <block_size></pre>	<pre>createRFS d1 200000 1000</pre> <p>(This creates a recorded-oriented file system on a disk d1 that is 200k in size, each block being 1k)</p>
<p>2. Create a table T with a given schema</p> <pre>createTable <name of table> <disk on which the table is stored> <number of fields in the table> [(<attribute name>, <attribute value>)] <primary extent size for the table file in blocks> <secondary extent size in blocks></pre>	<pre>createTable t1 d1 5 (first_name, vstring) (middle_initial, fstring) (last_name, vstring) (age, integer) (height, real) 10 5</pre> <p>(This creates a table called t1 on disk d1 that contains 5 fields. The first name is a variable string, the middle initial is a fixed length string, the last name is a variable string, the age is an integer, and the height is a real value. The initial size of the table is 10 blocks (10 pages), and each additional extent is 5 blocks (5 pages).</p>
<p>3. Drop an attribute from the table</p> <pre>dropAttribute <table name> <name of attribute></pre>	<pre>dropAttribute t1 middle_initial</pre> <p>(This drops the middle initial from the table t1)</p>
<p>4. Add an attribute to a table</p> <pre>addAttribute <table name> <name of attribute> <type of attribute></pre>	<pre>addAttribute t1 middle_name vstring</pre> <p>(This adds an attribute middle_name to table t1 of type variable string)</p>
<p>5. Delete a table</p> <pre>deleteTable <table name></pre>	<pre>deleteTable t1</pre> <p>(This deletes table t1)</p>
<p>6. Insert a tuple into a table</p> <pre>insertTuple <table name> [(<attribute name>, <attribute value>)]</pre>	<pre>insertTuple t1 (first_name, John) (middle_name, Mark) (last_name, Doe) (age, 30) (height, 5.6)</pre> <p>(This inserts the tuple John Mark Doe aged 30 and is 5.6ft tall in table t1)</p>
<p>7. Delete all tuples</p> <pre>deleteAllTuples <table name></pre>	<pre>deleteAllTuples t1</pre> <p>(This deletes all the records in table t1)</p>
<p>8. Delete a tuple given an id</p>	

deleteTuple <TID of tuple>	deleteTuple 0 (This deletes tuple 0)
9. Update a tuple updateTuple <TID> [(<attribute name, new attribute value>)]	updateTuple 0 (first_name, David) (This updates record with TID 0. The old first name of John is now David.)
10. Read a tuple given a TID readTuple <TID>	readTuple 0 (This displays the information about tuple 0 on the screen.)
11. Read a specific attribute from a tuple given a TID readAttribute <TID> <attribute name>	readAttribute 0 first_name (Reads the first name from record with TID of 0)
12. Reorganize a page reorganizePage <table name> <page number>	reorganizePage t1 0 (Reorganizes page 0 of table 1)
13. Reorganize a table, reorganizes all the pages which that table occupies in addition to also removing redirections. reorganizeTable <table name>	reorganizeTable t1 (Reorganizes table t1)
14. Scan a table – this reads all the entries in a table and prints them to the screen. By default, all the entries are printed out. If parameters are given, then it will only print out the attributes given in the parameters. scanTable <table name> [<attributes>]	scanTable t1 (This prints out all the records from t1) scanTable t1 first_name last_name (This prints out only the first and last names from table t1)

Assumptions:

1. Tuples never grow more than a page
2. Tuples do not contain repeating groups within them. (for example, only 1 field is first_name)
3. A table maps to a single file and a single file contains only one table. For example, table t1 is a file in the file system.