PROJECT 5 REPORT – DATABSE SYSTEM IMPLEMENTATION – PUTTING IT ALL TOGETHER

GROUP MEMBERS:

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INSTRUCTIONS TO COMPILE THE CODE:

1. Unzip "shreyaDasgupta1_yashPattarkine2_p5.zip". Open terminal on the machine and go to the folder where the unzipped files are. Use command -- cd<pathname/foldername>
2. Command – make clean
3. Compile main function. Use command – make main
4. Run using ./test.out
5. Run the queries through command line
6. For gtests, compile using – make gtest.out
7. Run gtests using -- ./gtest.out

BRIEF OVERVIEW OF ALL THE METHODS IMPLEMENTED IN THIS PROJECT:

In this part of the project, we are needed to put all the pieces that we have built, together. As per the instructions, we, here, fire up the database, create a few tables, insert data into them and run queries and optimize them, and finally drop the tables and turn the database off.

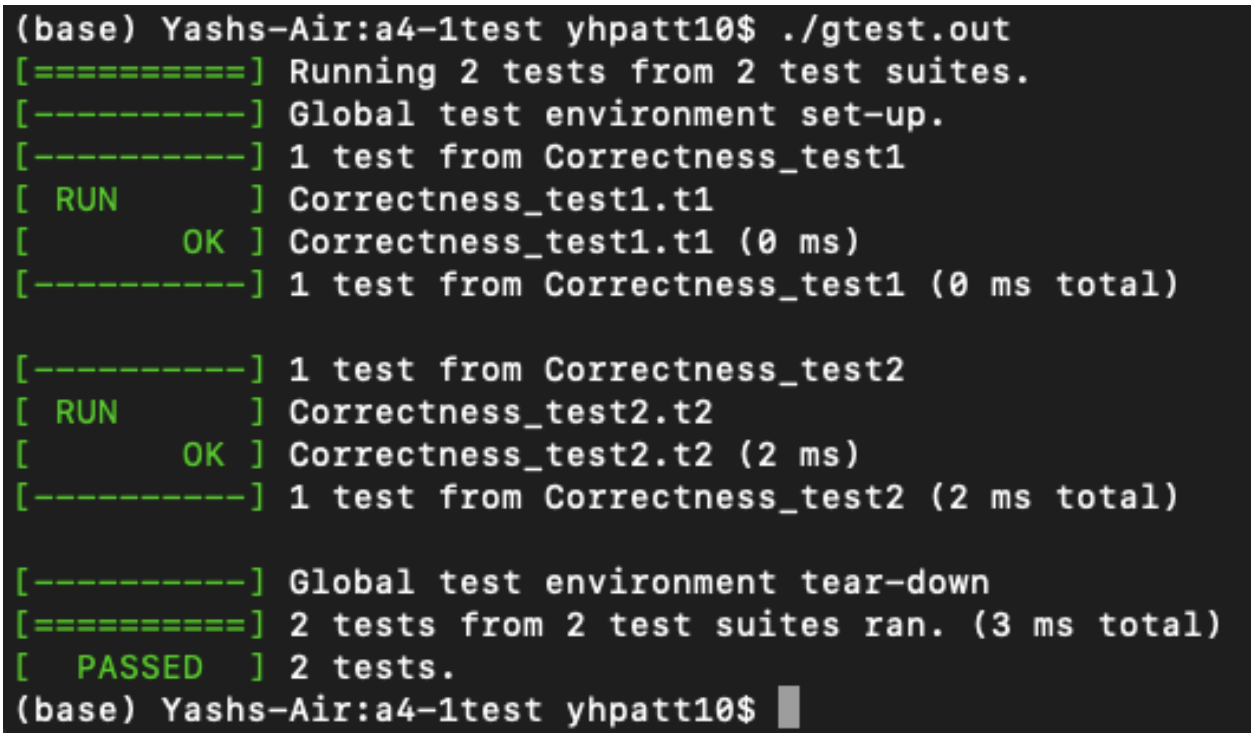
We achieve all these through modifying the parser.y file and along the way, utilizing the program we have built so far, having Statistics class, BigQ class, Heap/Sorted/Tree implementations of the database files.

Our parser.y contains the below snippets to achieve the job.

1. **CREATE TABLE** – This creates the table with the attributes given. We have implemented two forms of it – one creating the database table in heap form, the other in sorted form.
2. **INSERT** – This is used to inserts rows into the created tables. We simply append the rows from the text file, which is given as a string argument.
3. **DROP TABLE** – This simply removes or drops the table and deletes the .bin file related to it.
4. **SET OUTPUT** – This tells us where to write or record the output. We have kept the provision for printing the output on screen as well as storing it in an Output file.
5. **SELECT** – This is the clause to select specific rows from the database depending on the where clause. Through this we implement various queries which involves, joining, sum, group by etc, to get the required outputs from our database tables.

All the other methods were already implemented in projects 1 to 4.2.

Gtest:


(base) Yashs-Air:a4-1test yhpatt10$ ./gtest.out
[==========] Running 2 tests from 2 test suites.
[----------] Global test environment set-up.
[----------] 1 test from Correctness_test1
[RUN   ] Correctness_test1.t1
[OK] Correctness_test1.t1 (0 ms)
[----------] 1 test from Correctness_test1 (0 ms total)
[----------] 1 test from Correctness_test2
[RUN   ] Correctness_test2.t2
[OK] Correctness_test2.t2 (2 ms)
[----------] 1 test from Correctness_test2 (2 ms total)
[----------] Global test environment tear-down
[==========] 2 tests from 2 test suites ran. (3 ms total)
[PASSED] 2 tests.
(base) Yashs-Air:a4-1test yhpatt10$