Bug Report

Bug Name: Mismatched column data

Versions: Linux ug150.eecg 3.2.0-4-amd64 #1 SMP Debian 3.2.54-2 x86_64 GNU/Linux

gcc (Debian 4.7.2-5) 4.7.2   subversion 202 server.c

Bug Description: Column names and types are stored under the wrong table.
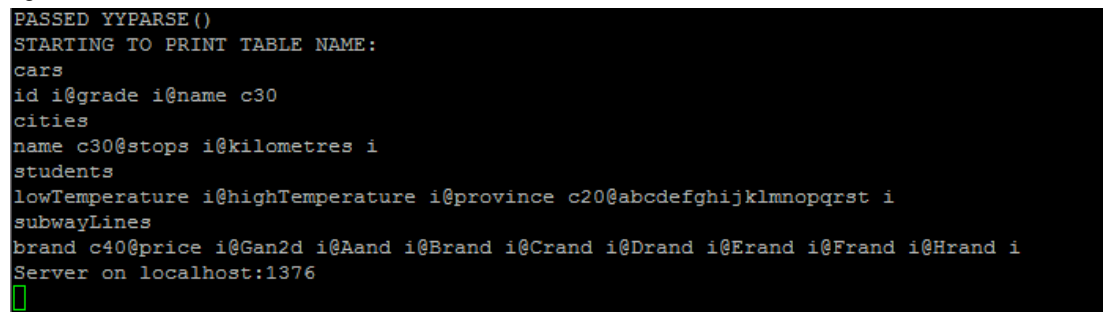
Severity: Major

Steps to Reproduce:

1. Open terminal
2. Navigate to src folder in Milestone3 by typing: *cd ~/ece297orange/Milestone3/storage/src*
3. Revert back to version 202 by typing: *svn update -r 202*
4. Produce executable program by typing in the terminal: *make*
5. Run server with g5 config file by typing in the terminal: *./server g5.conf*

Actual Behavior:

After parsing, the results shown in figure one shows wrong columns being in stored in each table. For instance, the column data for the students' table is stored in cars.

Figure 1 - Printscreen of error


```
PASSED YYPARSE()
STARTING TO PRINT TABLE NAME:
cars
id i@grade i@name c30
cities
name c30@stops i@kilometres i
students
lowTemperature i@highTemperature i@province c20@abcdefghijklmnopqrst i
subwayLines
brand c40@price i@Gan2d i@Aand i@Brand i@Crand i@Drand i@Erand i@Frand i@Hrand i
Server on localhost:1376
```

Expected Behavior:

Columns should be stored under their corresponding tables. For instance, in the table cars, the following columns should be stored under it: brand, price, Gan2d, Aand, Brand, Crand, Drand, Erand, Frand, Hrand. In the terminal it should read:

"cars

brand c40@price i@Gan2d i@Aand i@Brand i@Crand i@Drand i@Erand i@Frand i@Hrand i"

Steps to Fix:

This bug is because Milestone 2 code sorted the tables without adjusting columns; it can be fixed by removing the sorting function which is not used for anything anyways.

1. Open up server.c for editing by typing in the terminal: *nano server.c*
2. Go to line 110 by typing in the editing program: *ctrl+w, ctrl+t, 110, enter*
3. Comment out the sorting function by typing "//" in front of "sortTable();"
4. Save the corrections and exit by pressing: *ctrl+x, y, enter*
5. Run server.c again to see the expected result by typing in the terminal: *./server g5.conf*

Bug Name: Incorrect checking for missing commas with storage_set() function.

Versions: Linux ug150.eecg 3.2.0-4-amd64 #1 SMP Debian 3.2.54-2 x86_64 GNU/Linux

gcc (Debian 4.7.2-5) 4.7.2   subversion 239 utils.c

Bug Description: Storage_set calls were being passed without any commas to separate columns and our server incorrectly allowed these calls to pass without fail.

Severity: Major

Steps to Reproduce:

1. Open Terminal
2. Navigate to src in Milestone3 directory by using: *cd ~/ece297orange/Milestone3/storage/src*
3. Revert back to version 239 by using: *svn update -r 239*
4. Produce executable by typing in terminal: *make*
5. Run server with conf-complextables.conf by tpying: *./server conf-complextables.conf*
6. Run client, connect to server and authenticate using the parameters inside the conf file.
7. Do Storage_set with Key being "somekey3" (this name can be anything), Table being "threecols", value being "col1 24 col2 43 col3 few".

Actual Behavior:

Following the steps above, the server should respond with success for storage_set and subsequent get calls for the key used above would succeed giving the value inputted above. This is shown in figure 2 below.

Figure 2 - Printscreen of comma error

```
--------------------
Please enter your selection: 4
Please input the key: somekeys3
Please input the table: threecols
Please input the value: col1 24 col2 43 col3 few
Success: Key value pair inserted in storage_set()
storage_set: successful.
--------------------
```

Expected Behavior:

The value giving in the above steps should cause the set function to fail. This is because the different columns must be comma-separated; but in the above example, it is clearly not. This problem arises from a partially incorrect parser function which if was working correctly should cause the server to return with storage_set failed.

Steps to Fix:

1. This bug is fixed in the newest revision which makes changes in utils.c between lines 1304-1407
2. Get the latest revision by going to the svn directory and typing: *cd ~ece297orange, svn update*
3. If the exact changes are desired, the changelog for utils.c for that particular revision is included at https://code.google.com/p/ece297orange/source/detail?r=240