

CS34800 - PSO Exercise – Week 6 Part 2

Compiling the sql procedures:

Scripts/answers.sql contains the format of a procedure in MySQL. You will need to come up with the code that will perform the functionality of the question. You can use the same format for questions 2 and 3 **but remember to change the name of the procedure**. MySQL will not allow you to create 2 procedures of the same name unless the procedure is dropped with the help of :

drop procedure <procedurename>

Assuming you are running MySQL in the directory of the scripts, run:

```
mysql > source answers.sql
```

where answers.sql is the file with your procedures stored.

```

[nathank@lpvinslogin03 ~/PSO]$ cd
[nathank@lpvinslogin03 ~]$ cd PSO
[nathank@lpvinslogin03 ~/PSO]$ pwd
/home/campus/nathank/PSO
[nathank@lpvinslogin03 ~/PSO]$ ls
data.sql  drop.sql  q1.sql  q2.sql  q3.sql  table.sql
[nathank@lpvinslogin03 ~/PSO]$ mysql -h mydb.itap.purdue.edu -u nathank -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 6405360
Server version: 5.5.62-log MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> source q1.sql;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
ERROR 1304 (42000): PROCEDURE students_in_class already exists
+-----+
| stu_name |
+-----+
| A.Smith  |
+-----+
1 row in set (0.00 sec)

+-----+
| stu_name |
+-----+
| Banks    |
+-----+
1 row in set (0.00 sec)

+-----+
| stu_name |
+-----+
| Cho      |
+-----+
1 row in set (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

mysql>

```

As you can see mysql was started inside the directory where the sql files are stored.

If you are running MySQL in a different directory, then follow the approach in the 2nd picture.

```
[nathank@lpvinslogin03 ~]$ ls
1  cs.data  IT_Services_For_Students.url  My Documents  My Videos  Project 2  PSO  pu.data
[nathank@lpvinslogin03 ~]$ mysql -h mydb.itap.purdue.edu -u nathank -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 6405439
Server version: 5.5.62-log MySQL Community Server (GPL)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> source PSO/q1.sql;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
ERROR 1304 (42000): PROCEDURE students_in_class already exists
+-----+
| stu_name |
+-----+
| A.Smith  |
+-----+
1 row in set (0.00 sec)

+-----+
| stu_name |
+-----+
| Banks    |
+-----+
1 row in set (0.00 sec)

+-----+
| stu_name |
+-----+
| Cho      |
+-----+
1 row in set (0.00 sec)

Query OK, 0 rows affected, 1 warning (0.00 sec)

mysql> █
```

As you can see /PSO contains the executable SQL files. **Please remember that to access maven.itap.purdue.edu you will use your career account pwd and for mysql you will use the password that you created in:**

<https://www.purdue.edu/apps/ics/a/MySQLAccount>

You will also use JDBC to connect a Java program to the MySQL instance.

Why JAVA in the First Place?

The reason why we use Java is because SQL is not a Turing complete language, therefore it cannot perform all the capabilities of a modern programming language. To bridge this gap (ODBC) is used. For java (JDBC) was developed because ODBC is a C interface which can be used only on Windows Platform, while JDBC can be used on any OS.

Compiling and Running Java Program

Assuming the file name of the java file is StudentDB, run the following:

- Compile using `javac -cp .:mysql-connector-java-8.0.17.jar StudentDB.java`
- Run using `"java -cp .:mysql-connector-java-8.0.17.jar StudentDB "`

The `-cp` flag is the classpath flag that specifies the list of directories, JAR files and ZIP Archives to search for.

The `.:mysql-connector-java-8.0.17.jar` is the connector to connect the java file to mysql.

Please make sure you run these commands in maven.itap.purdue.edu to communicate with the mysql server.

```
[nathank@lpvinslogin03 ~]$ ls
1  cs.data  IT_Services_For_Students.url  My Documents  My Videos  Project2  PSO  pu.data
[nathank@lpvinslogin03 ~]$ cd Project2/
[nathank@lpvinslogin03 ~/Project2]$ ls
Answers      Answers.class  answers.sql      expected_java.txt  log      mysql-connector-java-8.0.17.jar  response.txt  test.sh
answers2.sql  Answers.java   CS348_Fall2019_Proj2.pdf  expected_sql.txt   log_java  response_java.txt               scripts       t.lis
[nathank@lpvinslogin03 ~/Project2]$ javac -cp .:mysql-connector-java-8.0.17.jar Answers.java
[nathank@lpvinslogin03 ~/Project2]$ java -cp .:mysql-connector-java-8.0.17.jar Answers
Name is : Justin
Number of Patients : 4

Patient SSN is : 486517895
Patient Name : Rebecca
Patient Address : 5501 Yeager St
Patient Phone : 843-168-7844
Physician Name : Jason
Physician Position : Pediatrician
Nurse name : 103
Nurse Position : Nurse
[nathank@lpvinslogin03 ~/Project2]$
```

As you can see, the command is executed in the same directory as the jar file and the java file. Running the command outside the java file outside the directory leads to complications in loading the class.