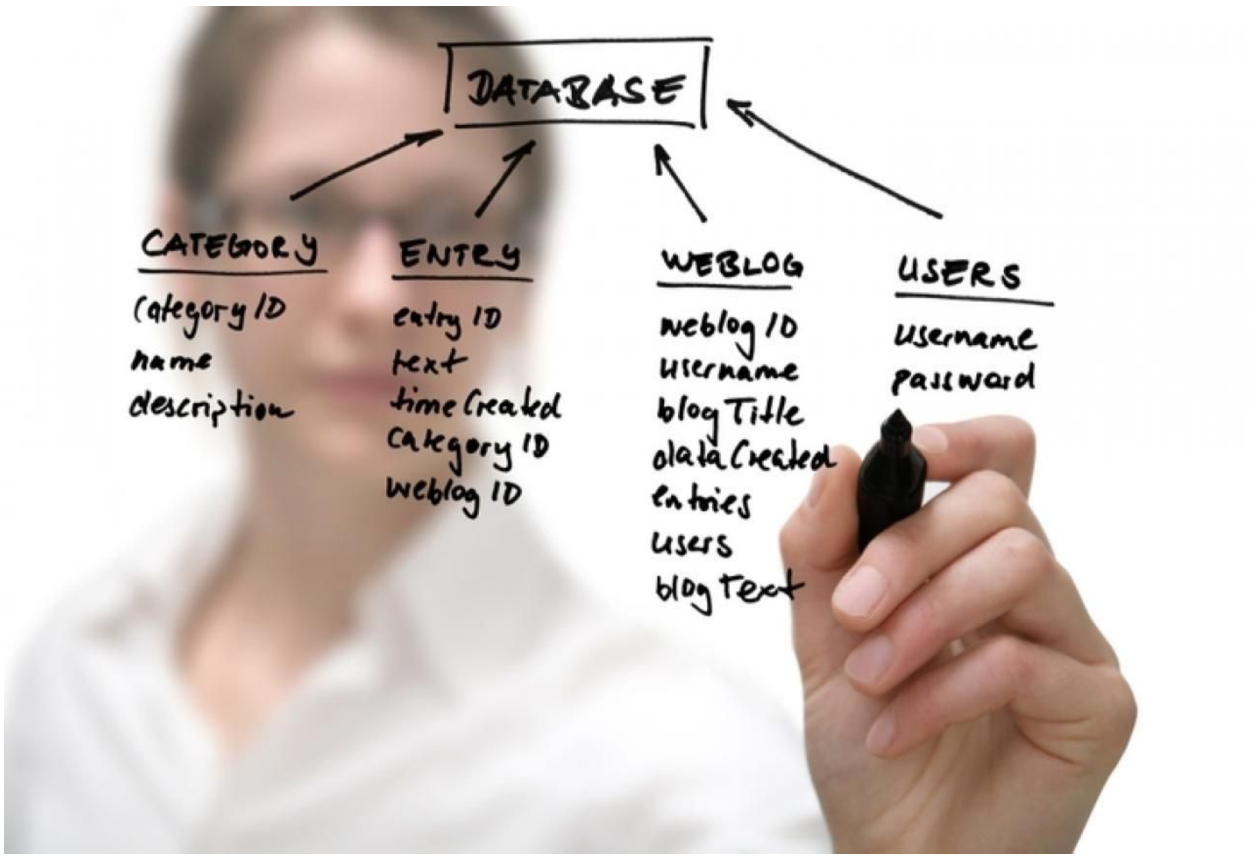
Programming II

JDBC



Team members

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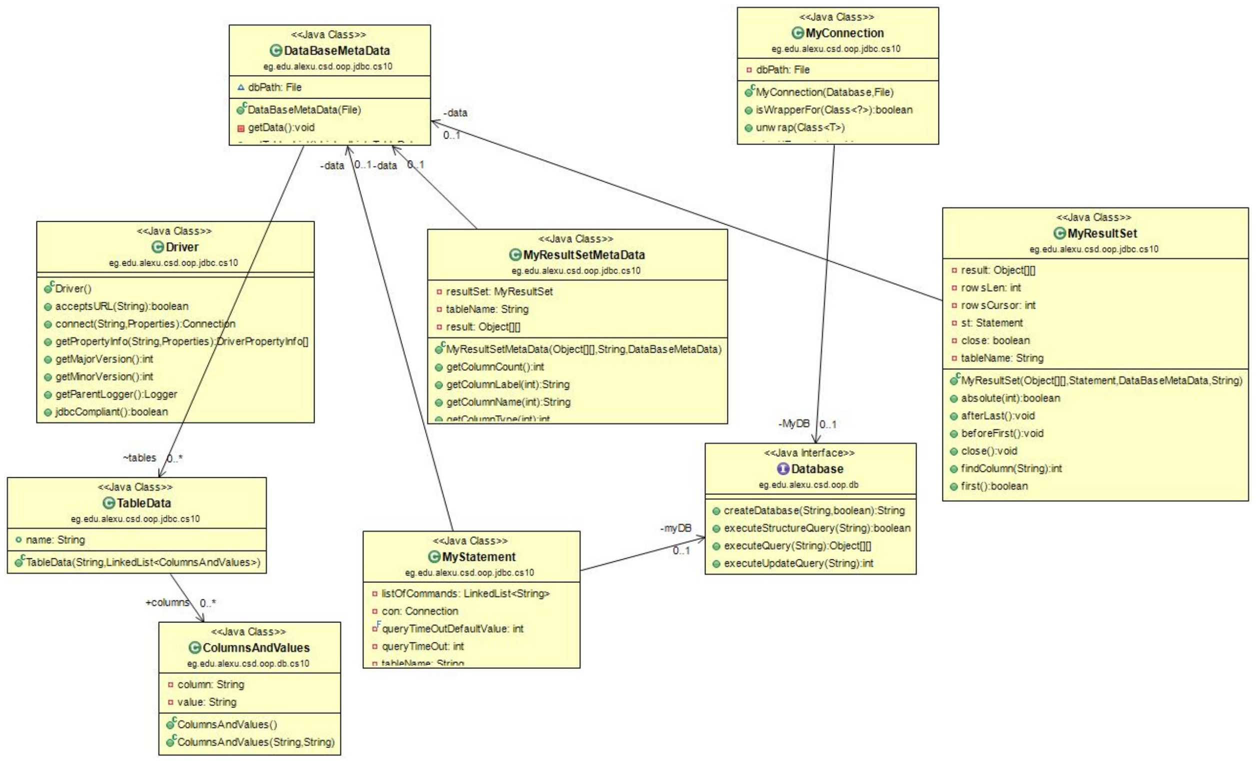
Ahmed hesham (10)

Abdelrahman Omran (37)

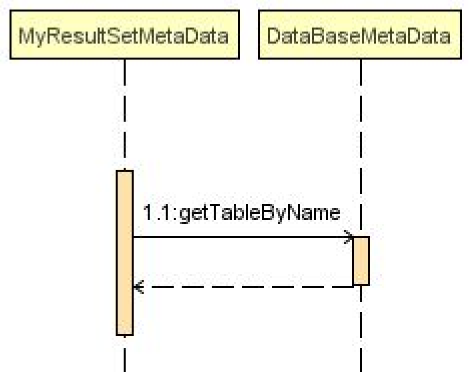
Introduction

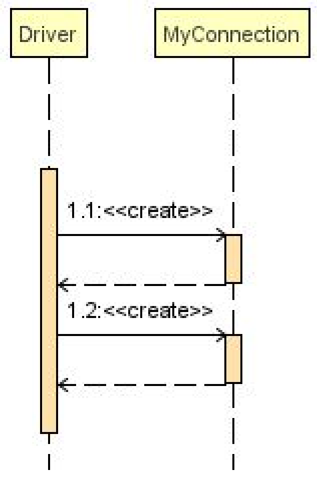
Java Database Connectivity (JDBC) provides Java developers with a standard API that is used to access databases, regardless of the driver and database product. JDBC presents a uniform interface to databases - change vendors and your applications only need to change their driver.

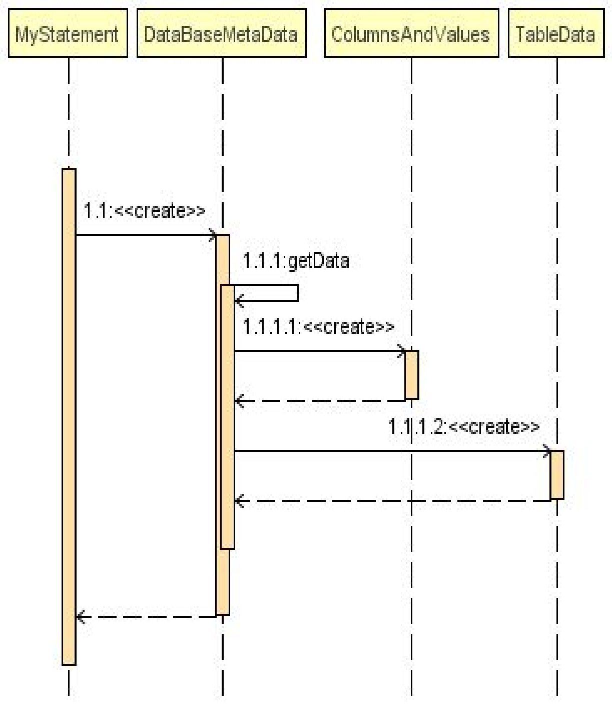
Uml diagram

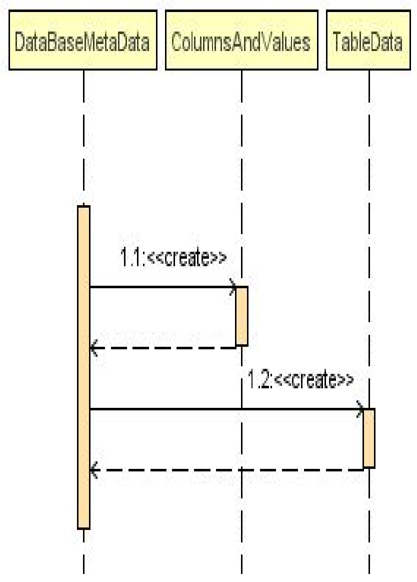


Sequence diagram

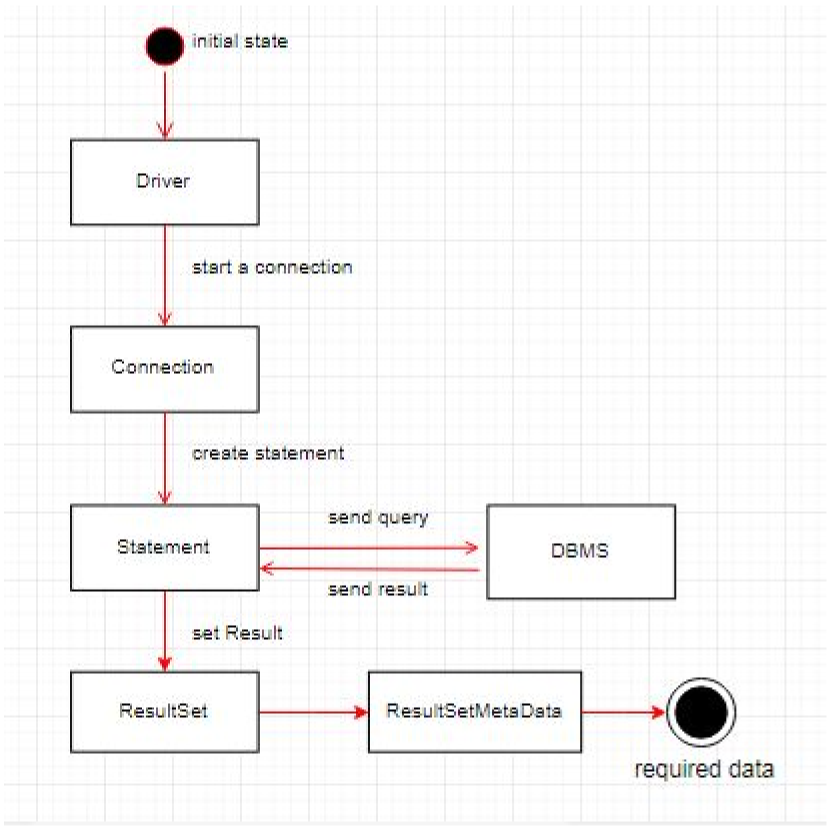




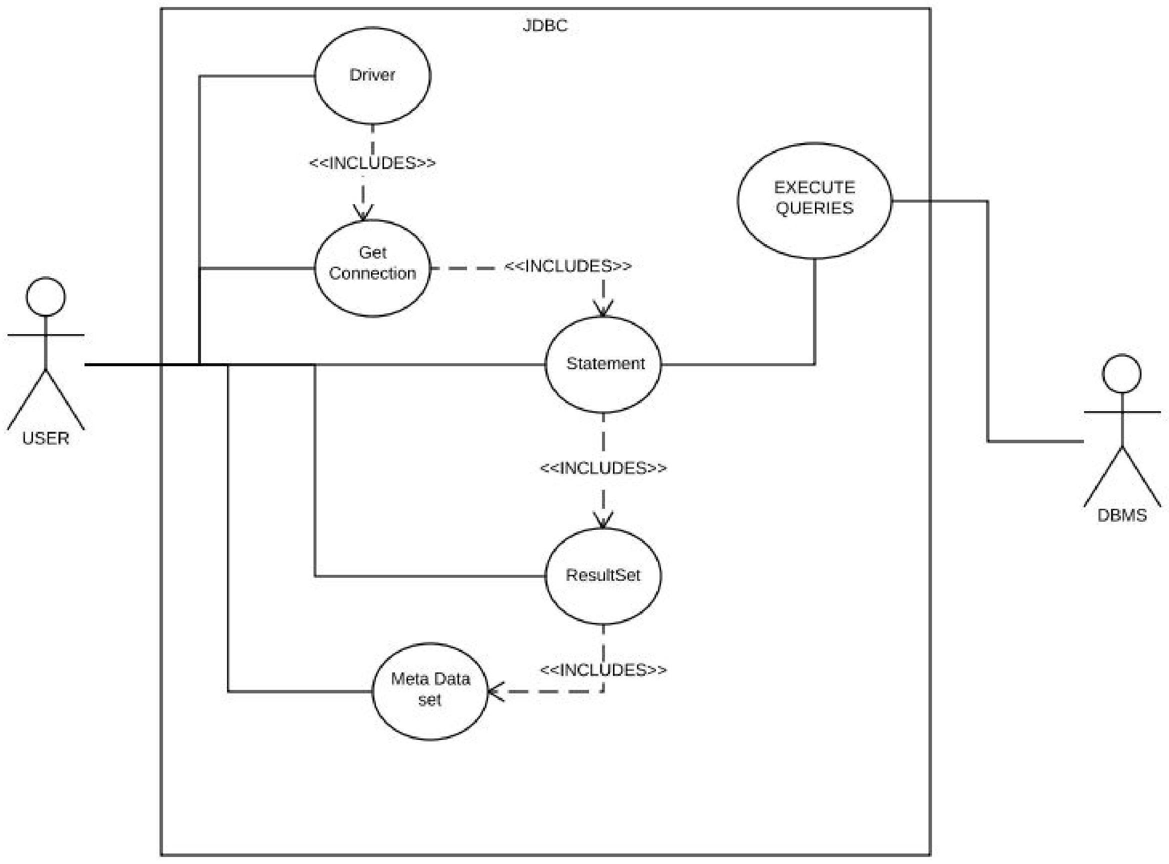




State diagram



Use case



Division of labor

Mohamed sharaf & Ahmed hesham

Testing the DBMS and make sure it is working properly and fixing the old bugs

Abdelrahman & Mazen Elmesery

Implementing the JDBC and connect it to the DBMS following piazza discussions

Testing the JDBC and make sure it is working fine .

Design description

Driver : checks the url and make the path in the info list and establishe a connection with the DBMS

MyConnection: creates a statement with an instance from Database class and the path

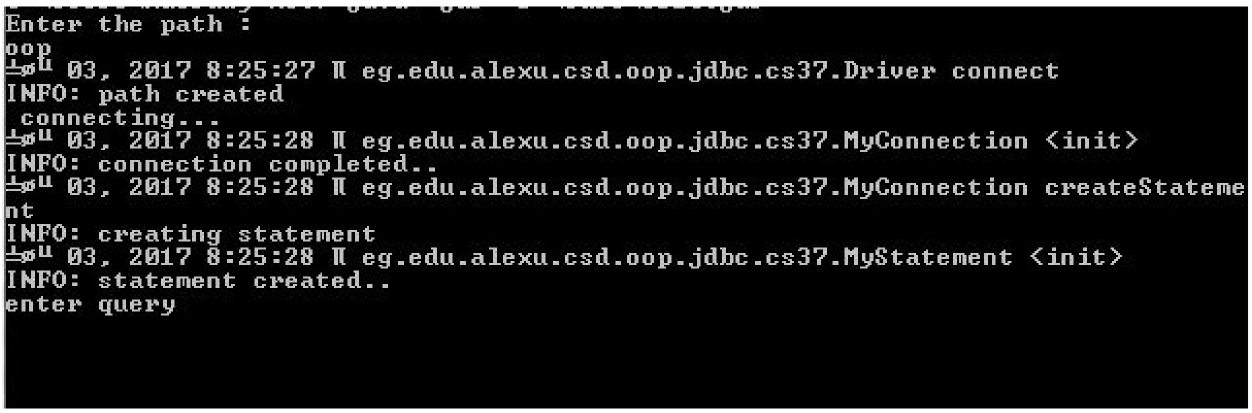
MyStatement : it is responsible for validating the coming queries then executing them and set the result in a ResultSet (The SELECT query).

MyResultSet : it is responsible for applying different operations on the result data like getting the index of column by label , iterating over the rows , etc..

MyResultSetMetaData : it is used for getting some data from the result such as getting the number of columns, the columns labels and names , the columns types, the table name,

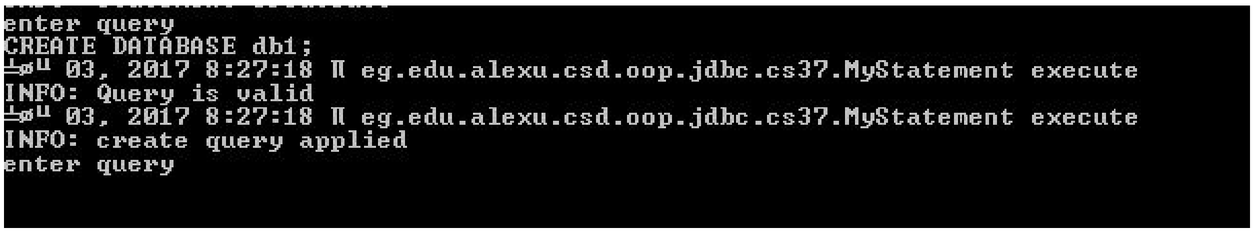
User interface

Establishing a connection between the user and DBMS



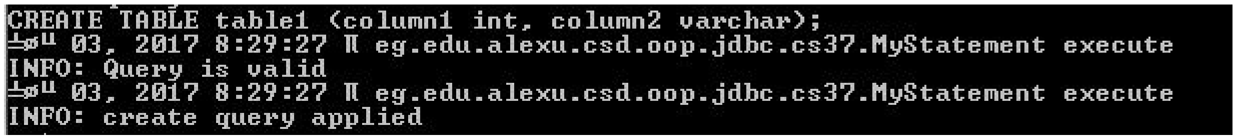
```
Enter the path :
oop
╧ø╙ 03, 2017 8:25:27 ╥ eg.edu.alexu.csd.oop.jdbc.cs37.Driver connect
INFO: path created
 connecting...
╧ø╙ 03, 2017 8:25:28 ╥ eg.edu.alexu.csd.oop.jdbc.cs37.MyConnection <init>
INFO: connection completed..
╧ø╙ 03, 2017 8:25:28 ╥ eg.edu.alexu.csd.oop.jdbc.cs37.MyConnection createStateme
nt
INFO: creating statement
╧ø╙ 03, 2017 8:25:28 ╥ eg.edu.alexu.csd.oop.jdbc.cs37.MyStatement <init>
INFO: statement created..
enter query
```

Creating database



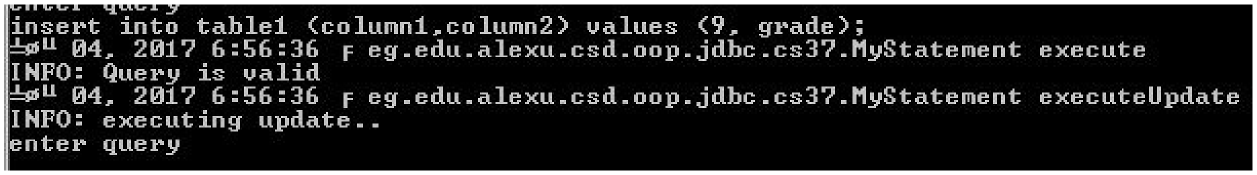
```
enter query
CREATE DATABASE db1;
╧ø╨ 03, 2017 8:27:18 π eg.edu.alexu.csd.oop.jdbc.cs37.MyStatement execute
INFO: Query is valid
╧ø╨ 03, 2017 8:27:18 π eg.edu.alexu.csd.oop.jdbc.cs37.MyStatement execute
INFO: create query applied
enter query
```

Creating table



```
CREATE TABLE table1 (column1 int, column2 varchar);
╧ø╨ 03, 2017 8:29:27 π eg.edu.alexu.csd.oop.jdbc.cs37.MyStatement execute
INFO: Query is valid
╧ø╨ 03, 2017 8:29:27 π eg.edu.alexu.csd.oop.jdbc.cs37.MyStatement execute
INFO: create query applied
```

Update table



```
enter query
insert into table1 (column1,column2) values (9, grade);
╧ø╨ 04, 2017 6:56:36 ╒ eg.edu.alexu.csd.oop.jdbc.cs37.MyStatement execute
INFO: Query is valid
╧ø╨ 04, 2017 6:56:36 ╒ eg.edu.alexu.csd.oop.jdbc.cs37.MyStatement executeUpdate
INFO: executing update..
enter query
```