

Alexandria University, Faculty of Engineering

CSED 21

Programming 2 – OOP and Design Patterns

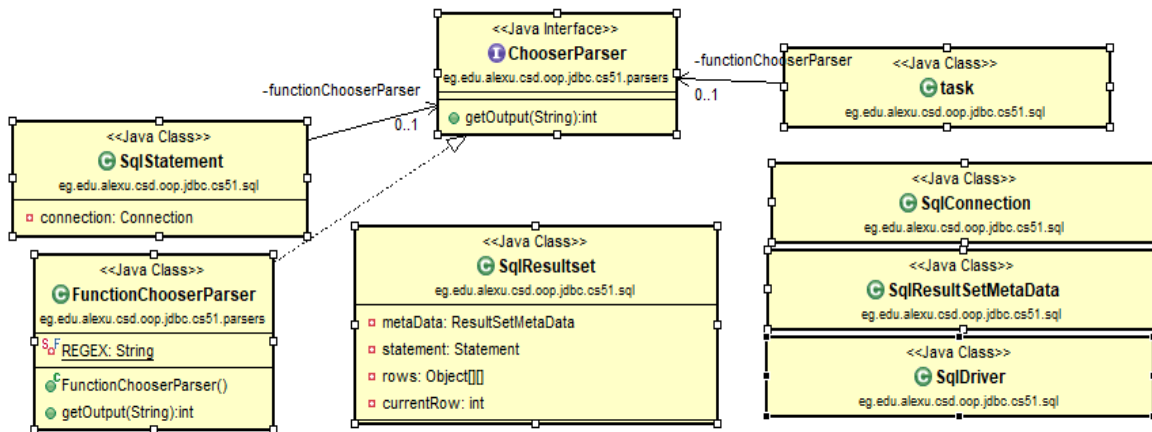
Assignment 4 - JDBC

Names:

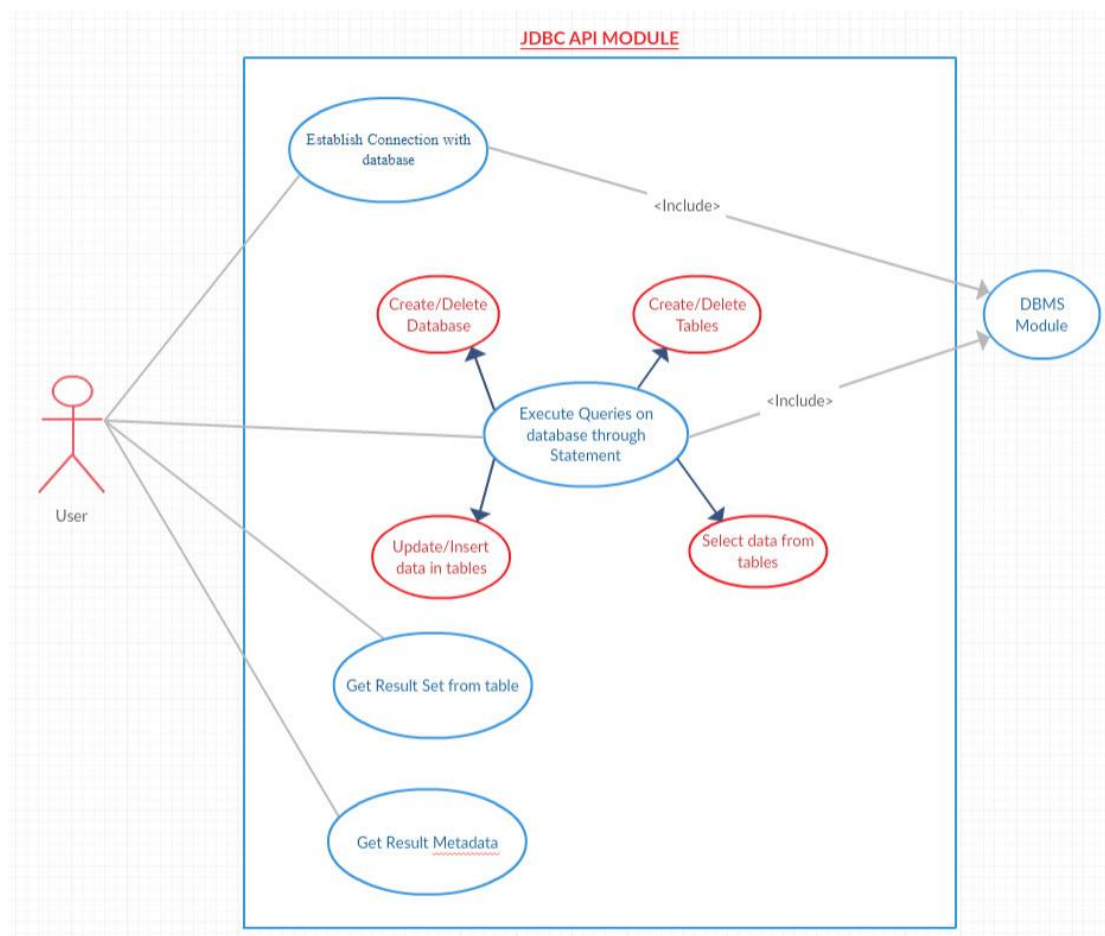
- 1) Mohamed mostafa ahmed Hassan elnashar (44).
- 2) Tarek Mohamed kamal (21).
- 3) Mostafa Nabil Mohamed(51).
- 4) Mohamed Salah Mahmoud (41).

1) UML:

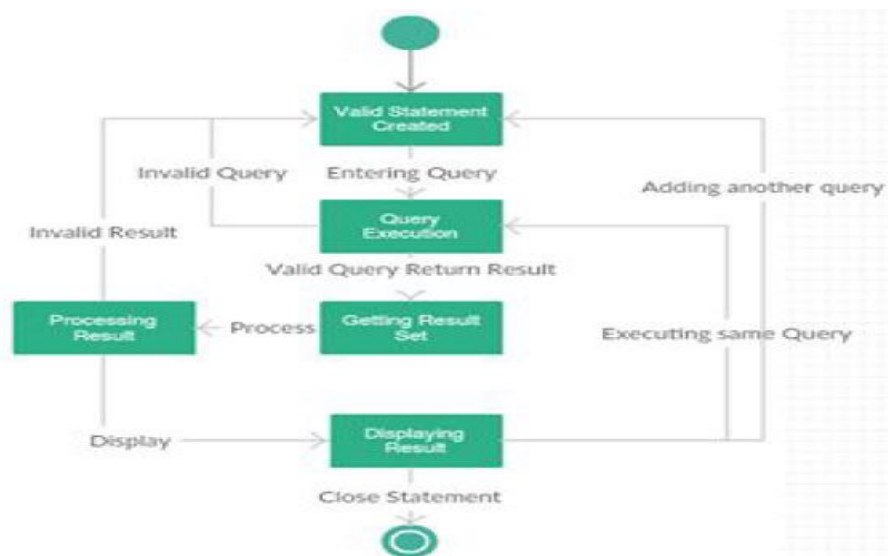
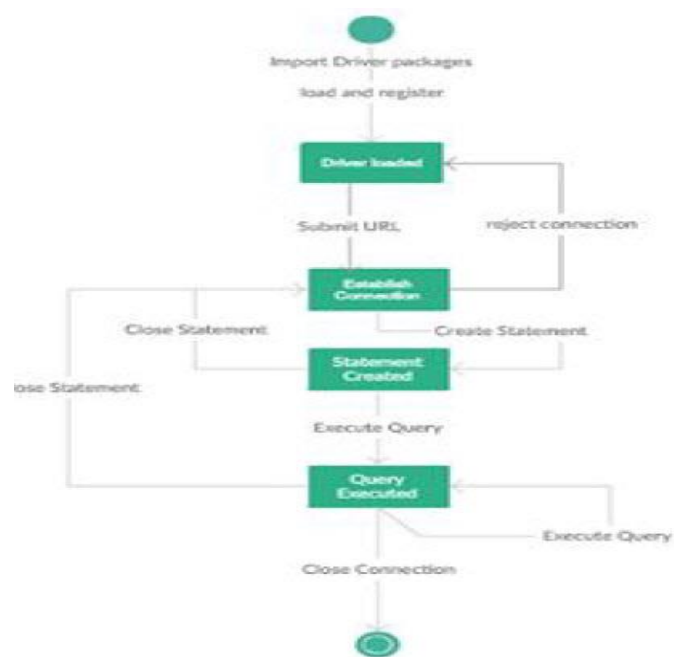
- class diagram

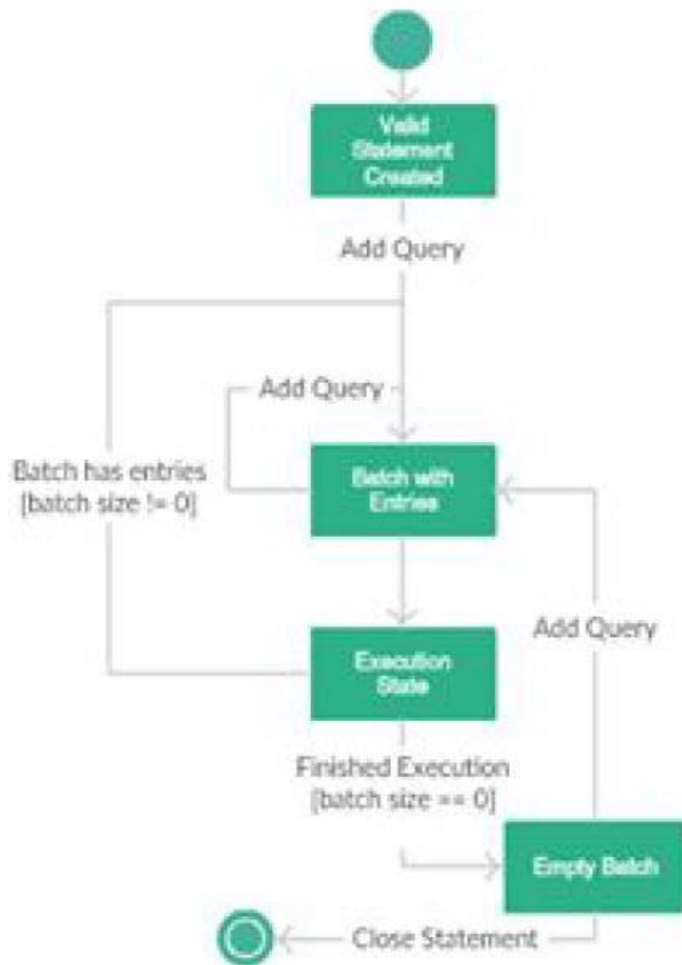


- use case



-state diagram





2) Design Description and Decisions:

- When user execute query The outer parser parses the beginning of the query and sends it to the appropriate function in the dbms.
- The driver create connection that make the communication with the required database.
- The Connection creates statement for the user to interact with the connected database and execute queries on it.
- Batch is used to hold queries to be executed at a time.
- Result set is used to store data that was fetched from the table.
- Result metadata store the metadata of the fetched data.

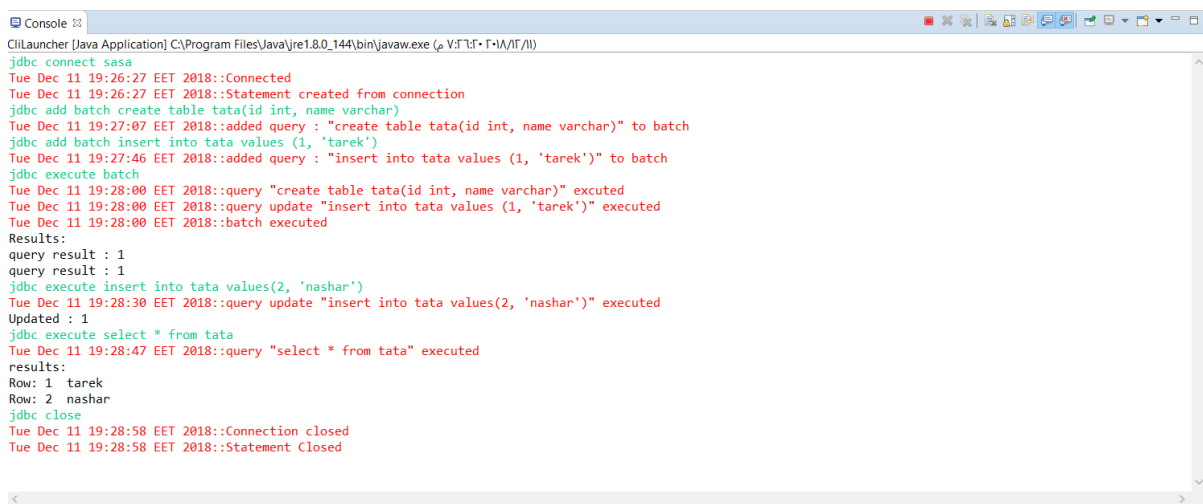
3) User Guide:

- These queries are used to communicate with jdbc.

```
jdbc help
Commands:
connect <path to database>
execute <query>
add batch <query>
clear batch
execute batch
set query timeout <time in seconds>
close
query timeout
```

- User can get this queries anytime using "jdbc help".
- Use w3school.com to know more about SQL queries.

4) Snapshots:



```
Console
C:\Program Files\Java\jre1.8.0_144\bin\javaw.exe (µ V:ΓΓΓ•Γ•ΛΛ/Π/Π)

jdbc connect sasa
Tue Dec 11 19:26:27 EET 2018::Connected
Tue Dec 11 19:26:27 EET 2018::Statement created from connection
jdbc add batch create table tata(id int, name varchar)
Tue Dec 11 19:27:07 EET 2018::added query : "create table tata(id int, name varchar)" to batch
jdbc add batch insert into tata values (1, 'tarek')
Tue Dec 11 19:27:46 EET 2018::added query : "insert into tata values (1, 'tarek')" to batch
jdbc execute batch
Tue Dec 11 19:28:00 EET 2018::query "create table tata(id int, name varchar)" excuted
Tue Dec 11 19:28:00 EET 2018::query update "insert into tata values (1, 'tarek')" executed
Tue Dec 11 19:28:00 EET 2018::batch executed
Results:
query result : 1
query result : 1
jdbc execute insert into tata values(2, 'nashar')
Tue Dec 11 19:28:30 EET 2018::query update "insert into tata values(2, 'nashar')" executed
Updated : 1
jdbc execute select * from tata
Tue Dec 11 19:28:47 EET 2018::query "select * from tata" executed
results:
Row: 1 tarek
Row: 2 nashar
jdbc close
Tue Dec 11 19:28:58 EET 2018::Connection closed
Tue Dec 11 19:28:58 EET 2018::Statement Closed
```