

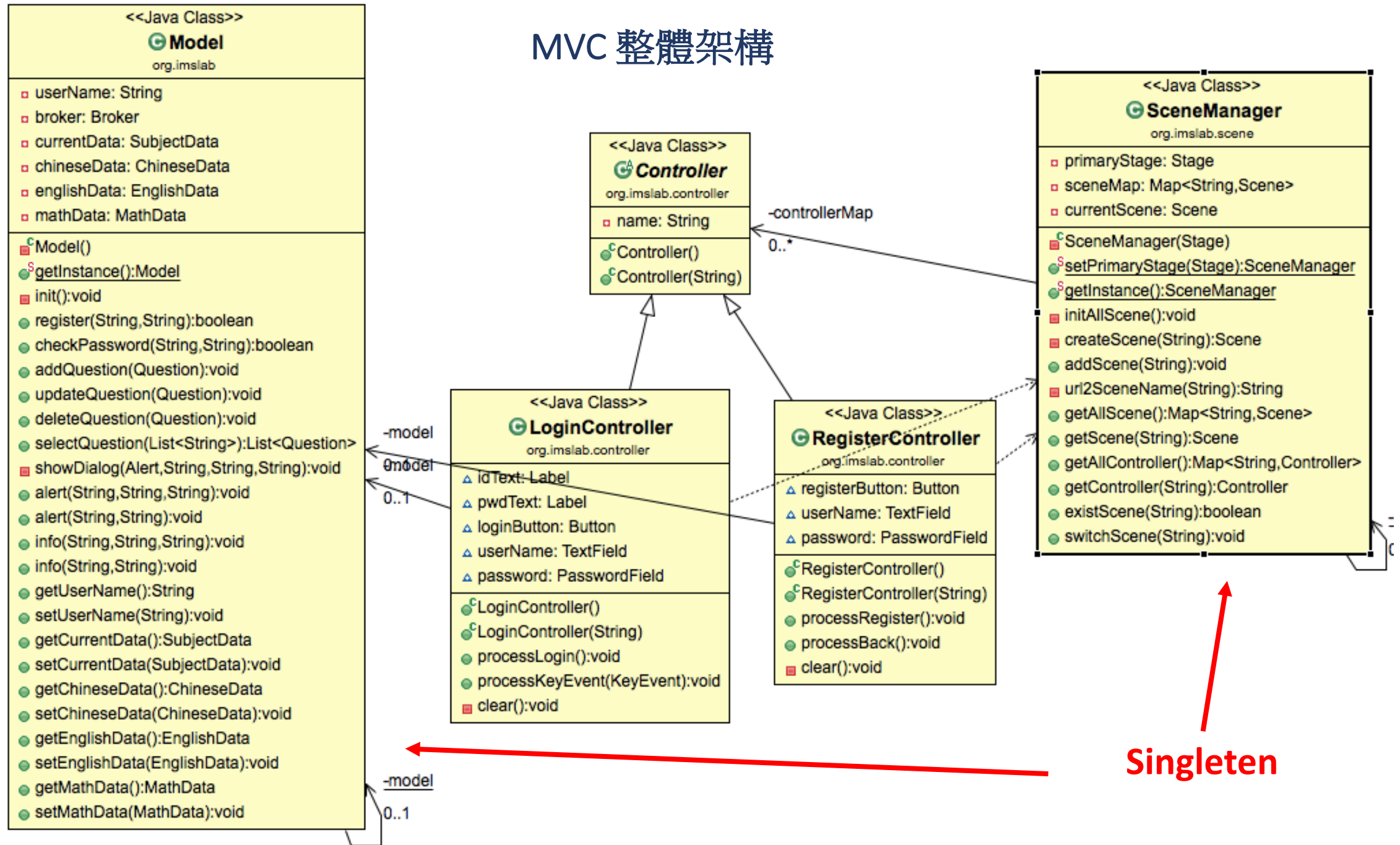
Exam Generator

P78061502 蔡昀展

P76051292 方彥婷

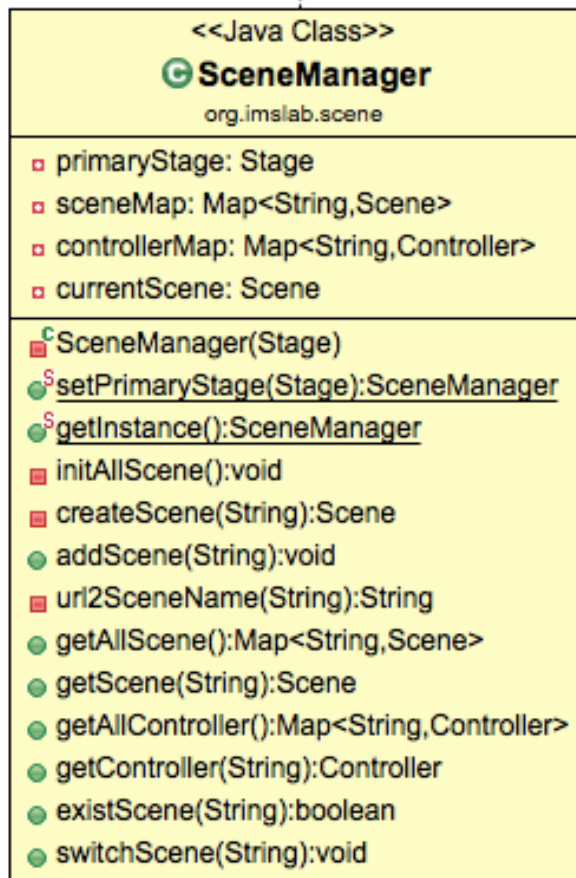
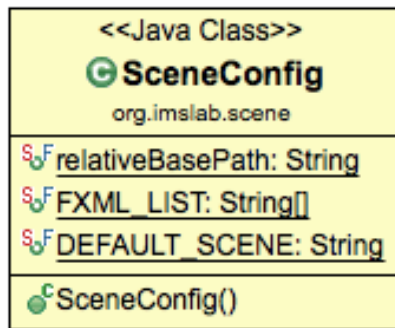
MVC

MVC 整體架構



[SceneManager]

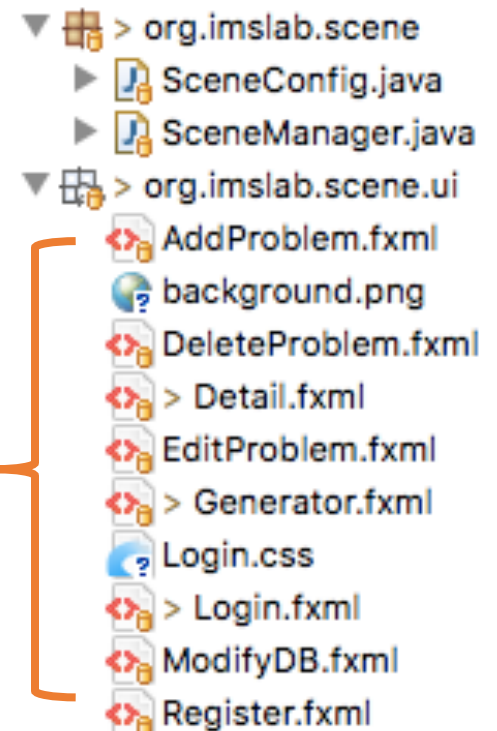
Controller & View



```

1 package org.imslab.scene;
2
3 public class SceneConfig {
4
5     public static final String relativeBasePath = "ui/";
6
7     public static final String[] FXML_LIST = {
8         "Login.fxml",
9         "Generator.fxml",
10        "Register.fxml",
11        "ModifyDB.fxml",
12        "AddProblem.fxml",
13        "EditProblem.fxml",
14        "DeleteProblem.fxml",
15        "Detail.fxml"
16    };
17
18     public static final String DEFAULT_SCENE = "Login";
19 }
20

```



```

@FXML
public void processBack() {
    SceneManager.getInstance().switchScene("Generator");
}

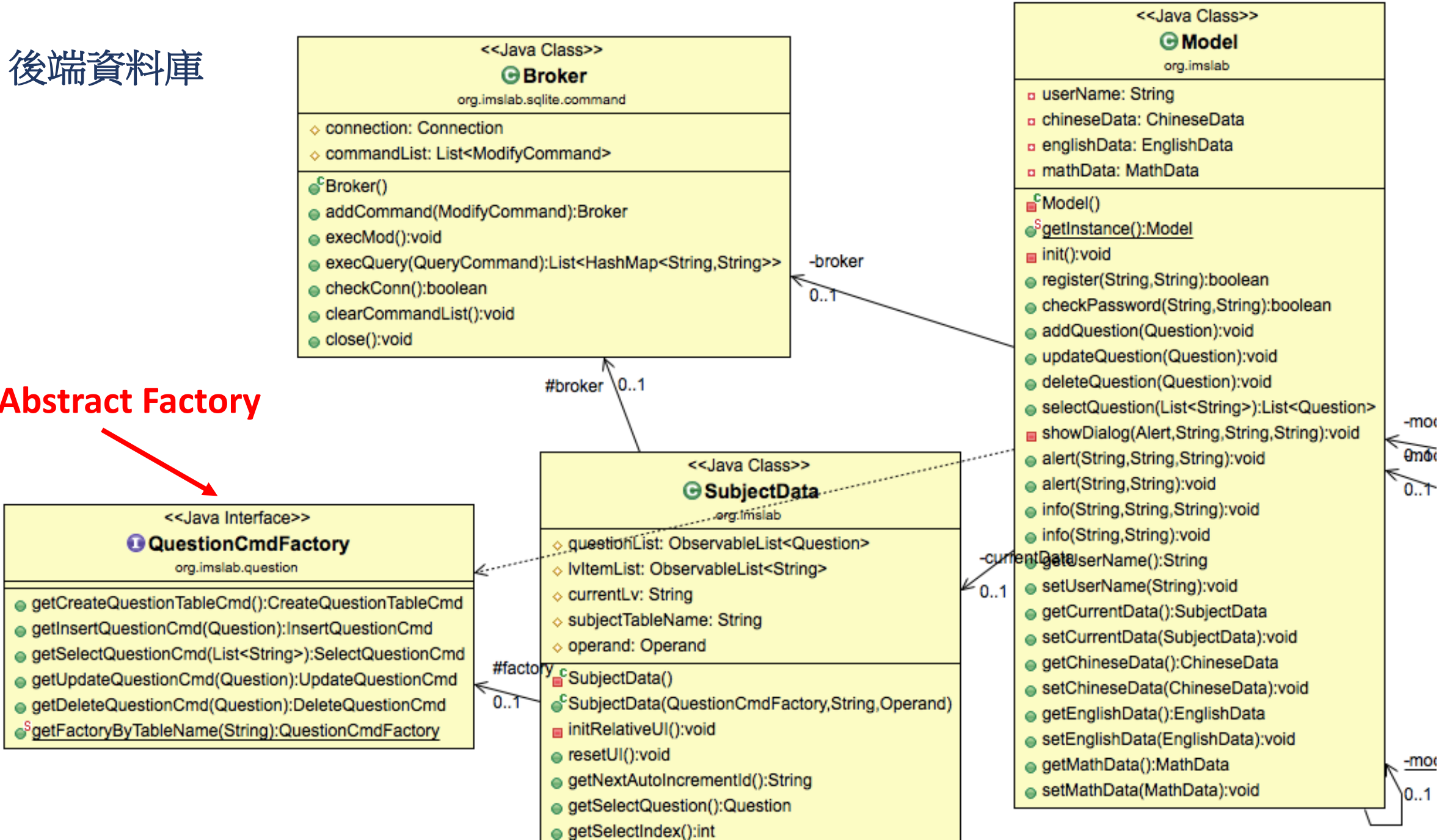
```

[Model]

Controller & Model

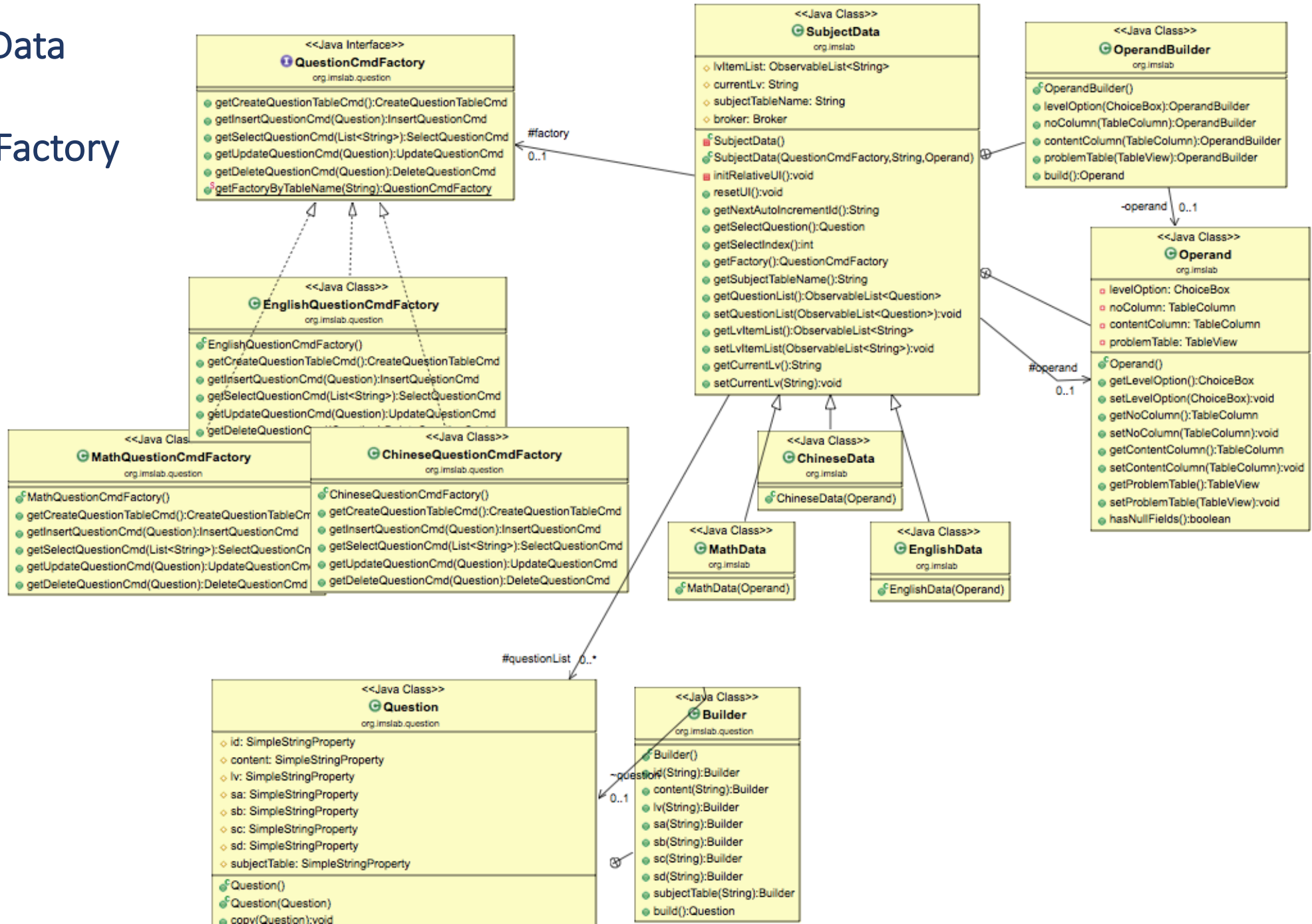
後端資料庫

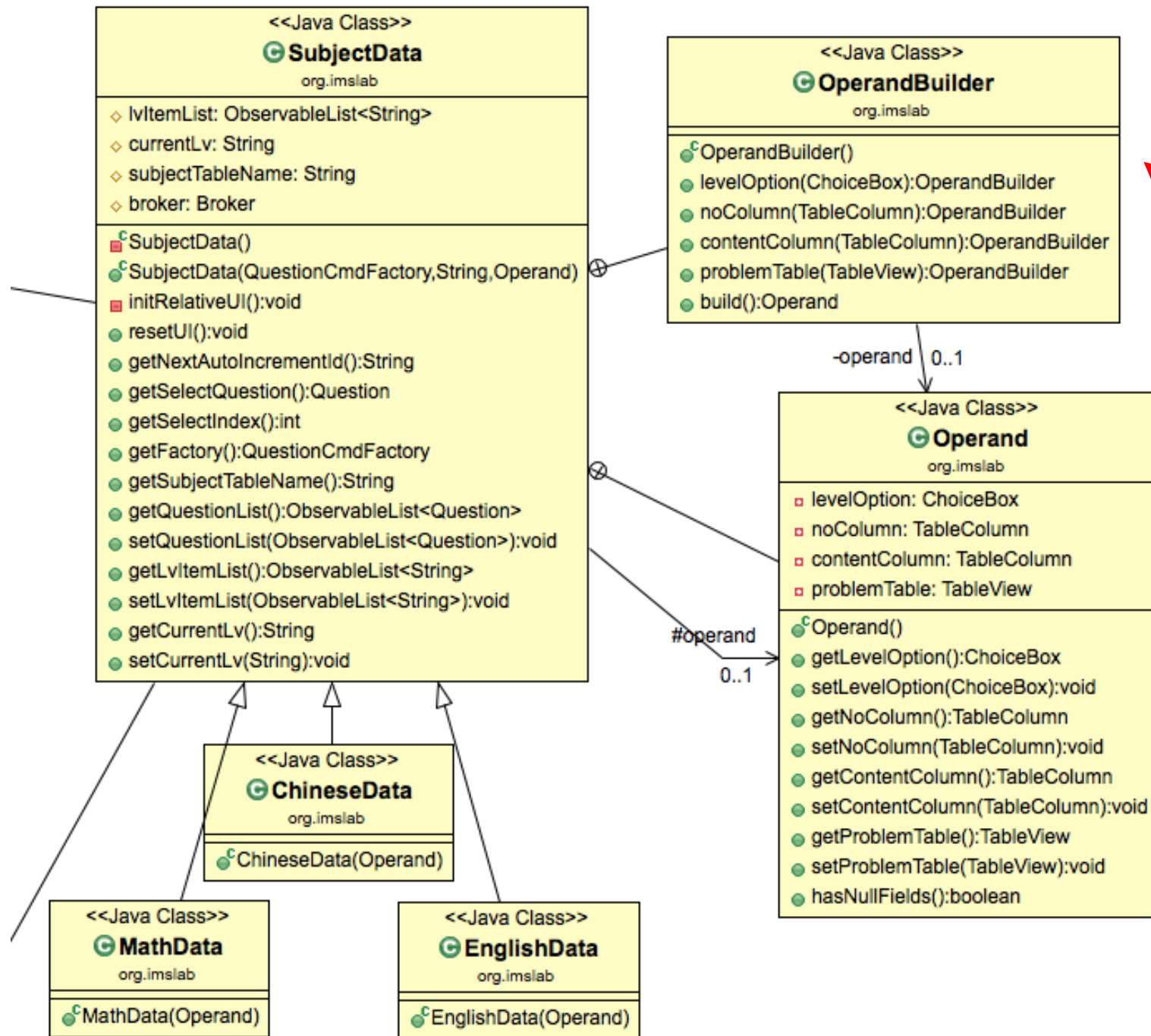
Abstract Factory



Question

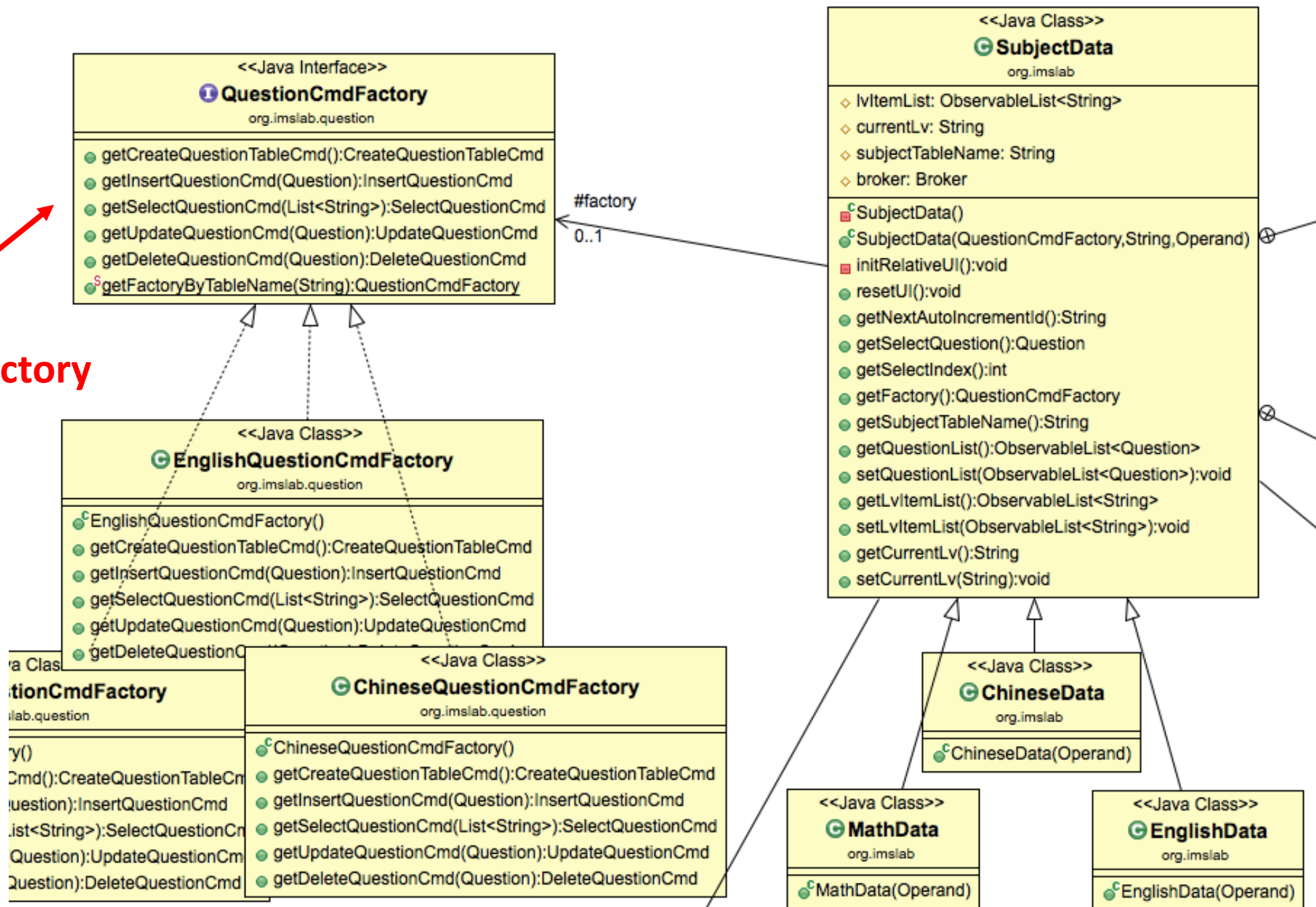
SubjectData & Command Factory



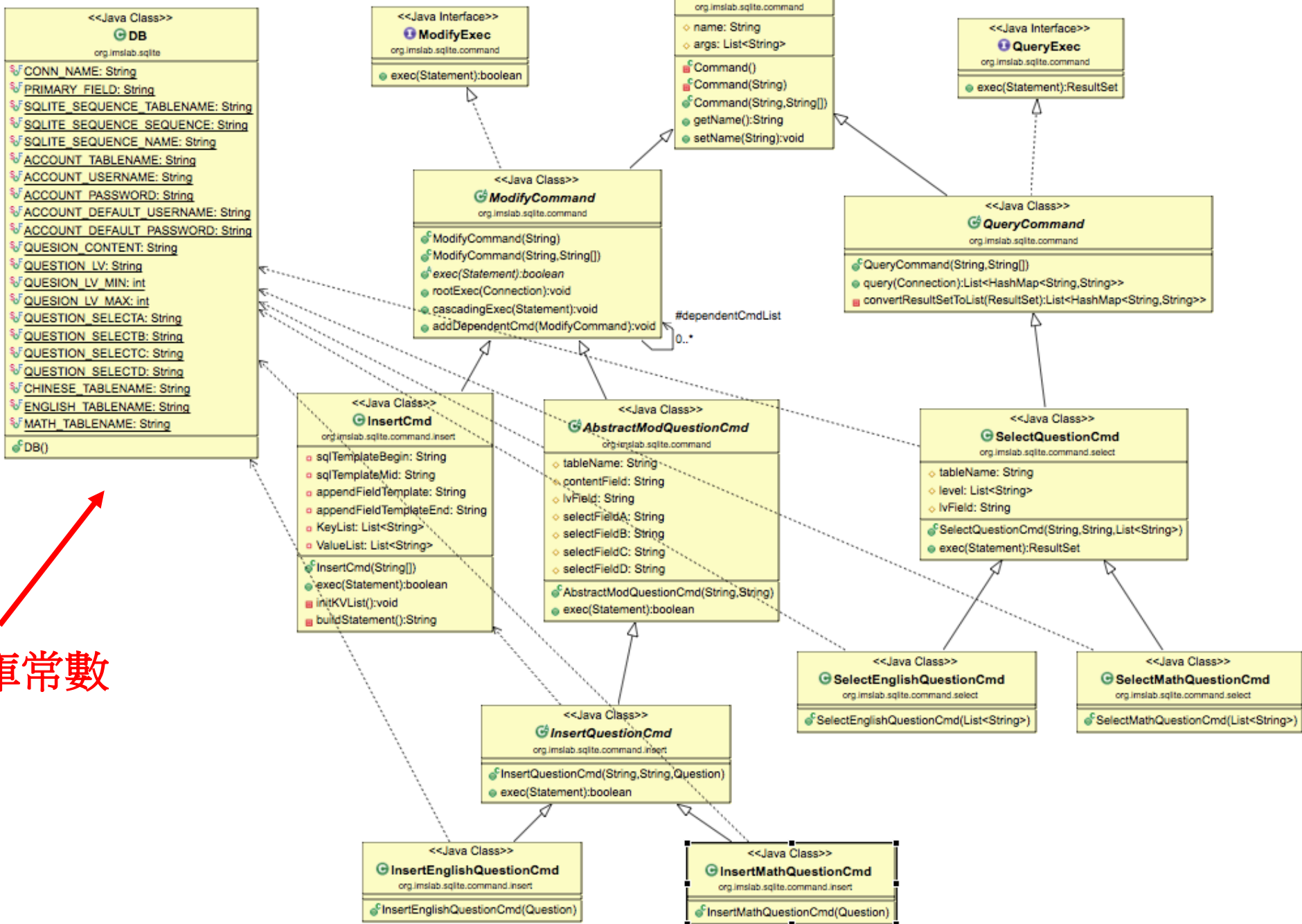


Builder Pattern

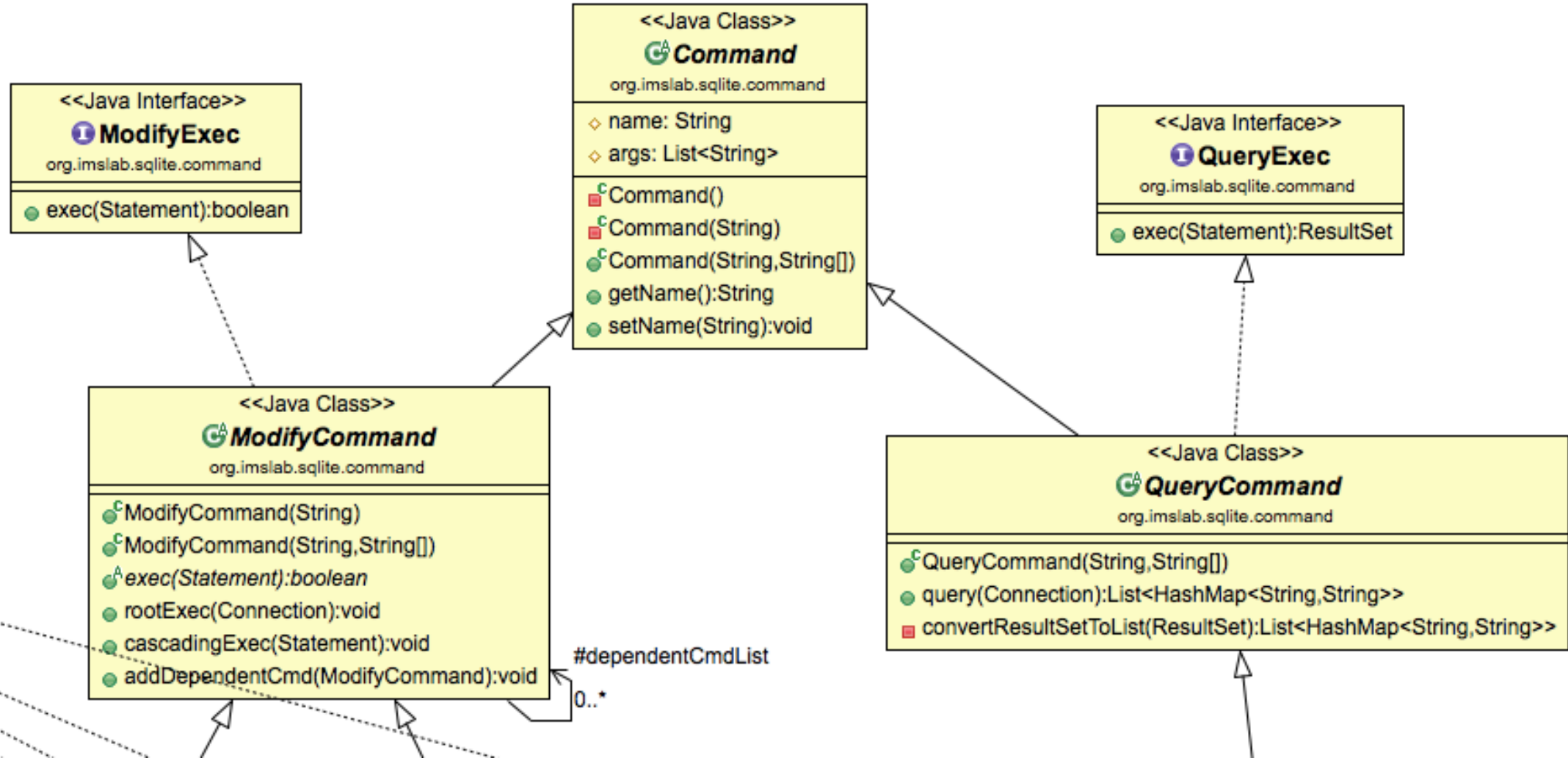
Abstract Factory

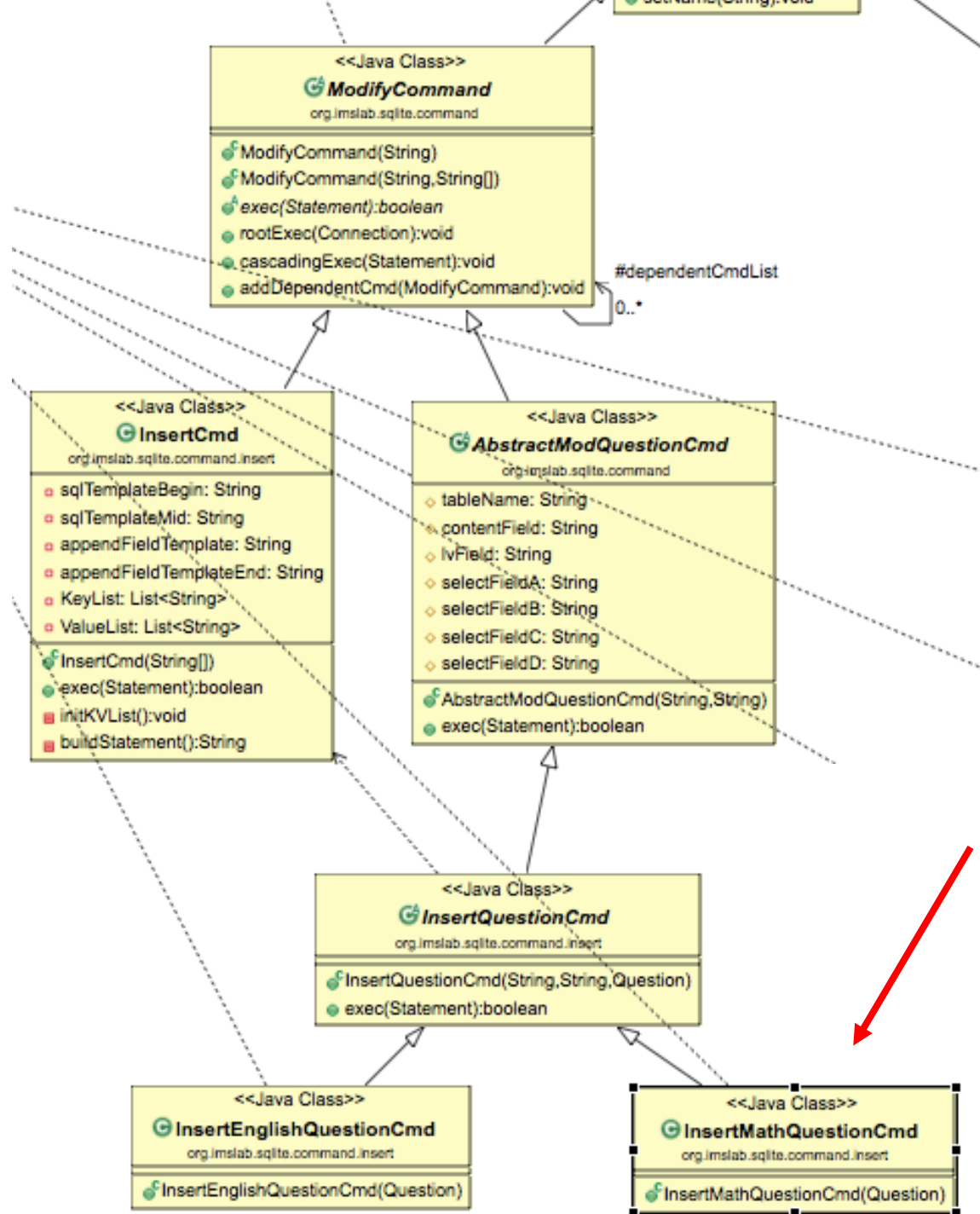


Command Pattern

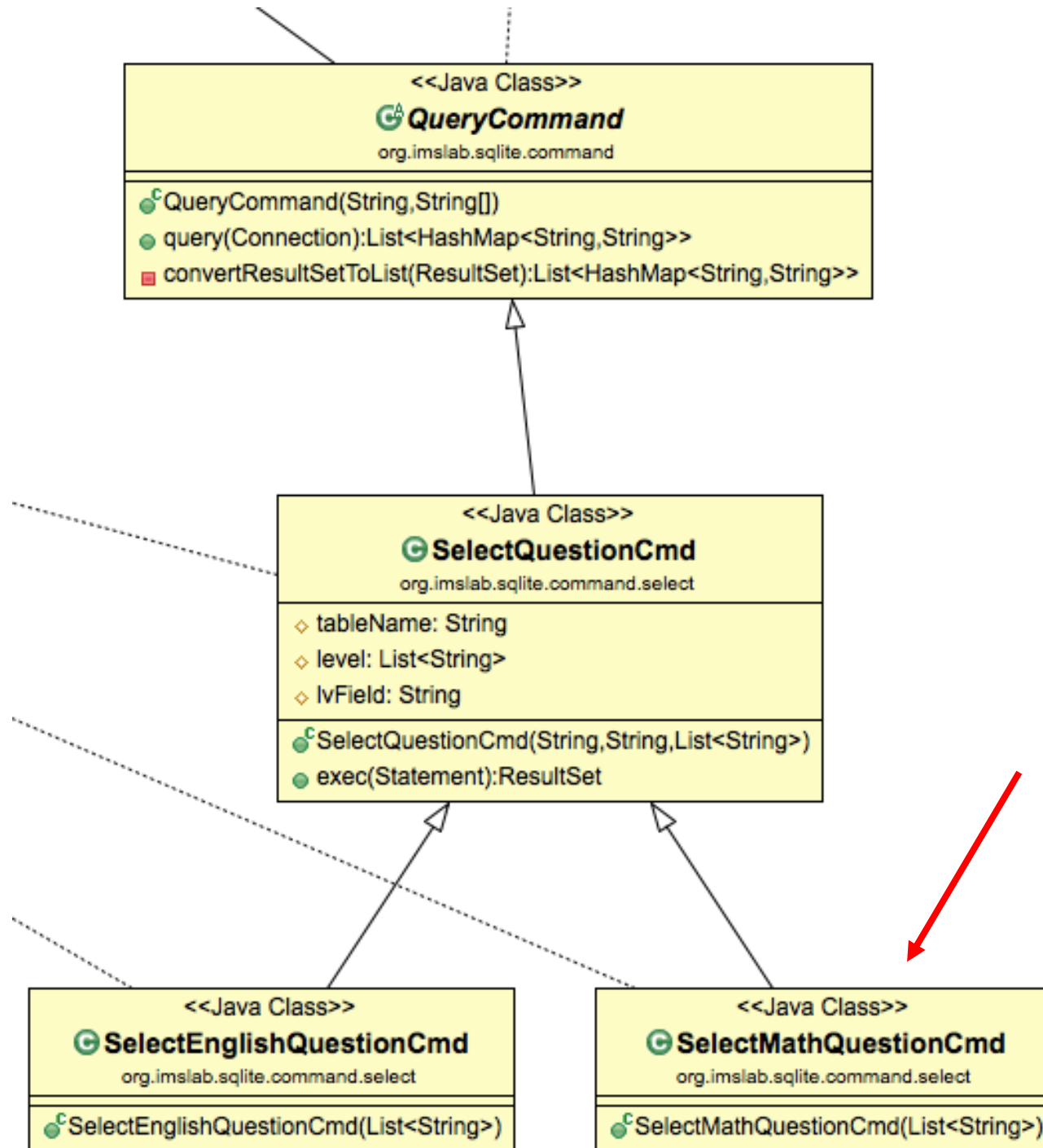


資料庫常數

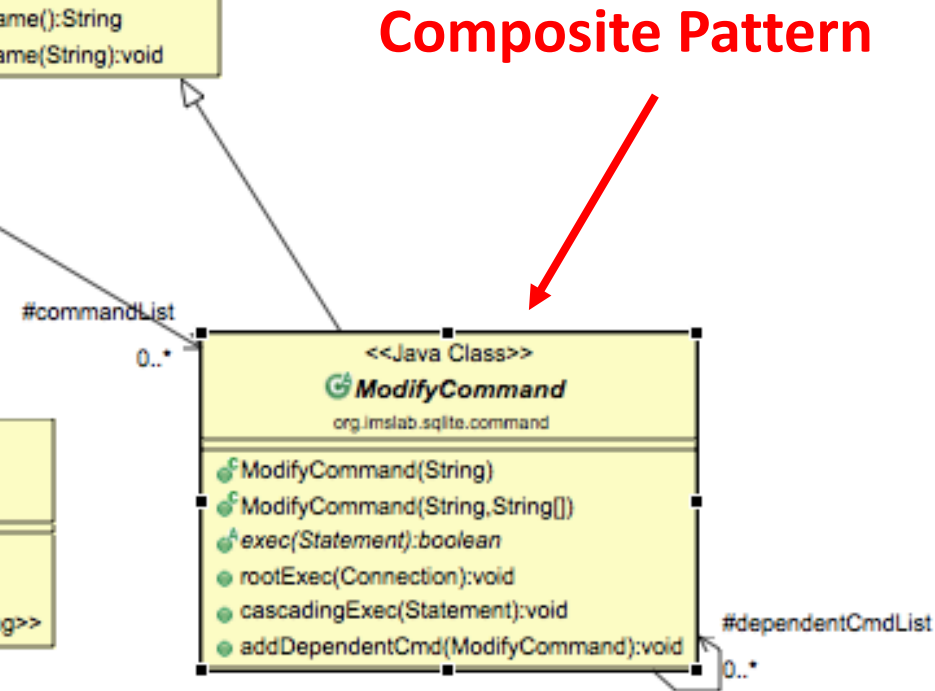
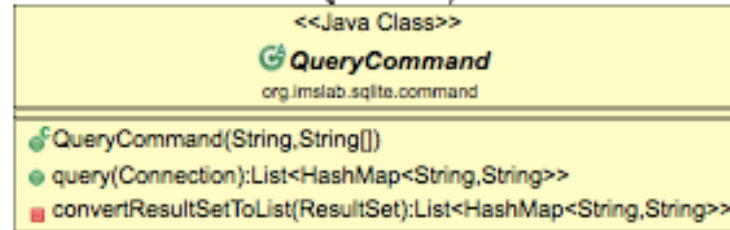
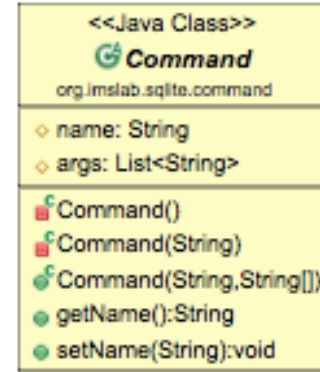
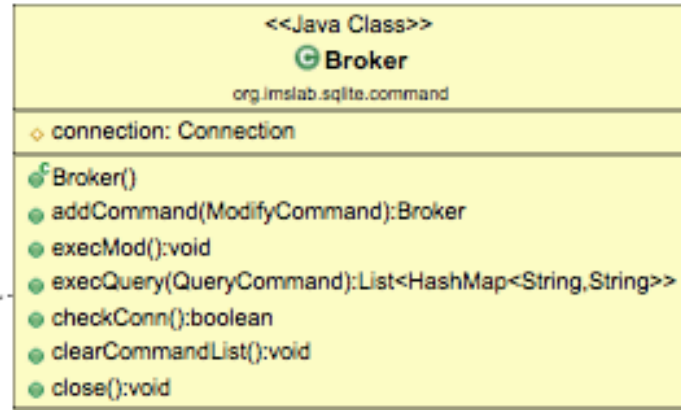
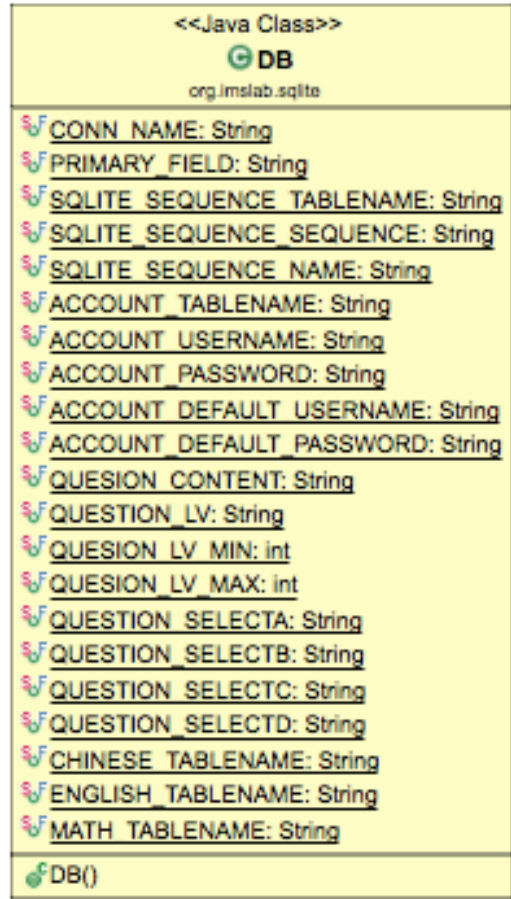




Abstract Factory
取得的指令實體



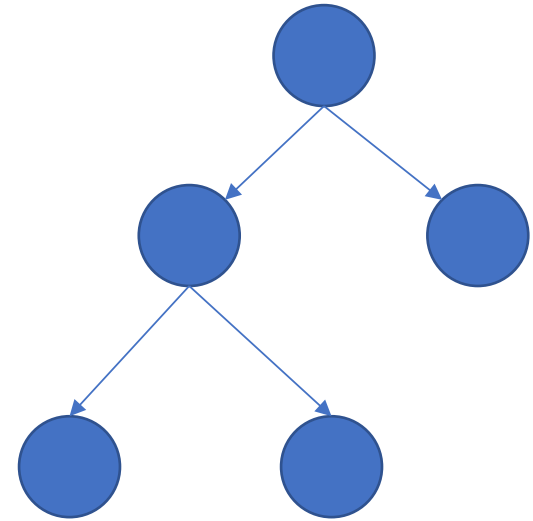
Abstract Factory
取得的指令實體



```

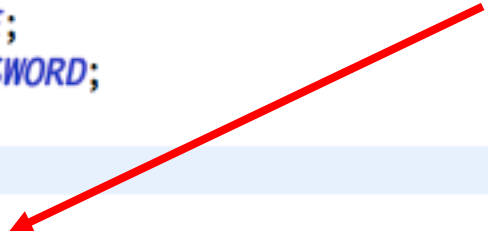
36 public void rootExec(Connection conn) throws Exception {
37     // check whether the connection is null?
38     if(conn==null)
39         throw new Exception("Null Connection");
40
41     Statement statement = conn.createStatement();
42     if (exec(statement)) {
43         // Reuse the statement object to faster the program.
44         cascadingExec(statement);
45     }
46
47     // close statement by root
48     statement.close();
49 }
50
51 /**
52  * Execute composite commands by dfs.
53  * @param statement
54  */
55 public void cascadingExec(Statement statement) throws Exception {
56     for (ModifyCommand command : dependentCmdList) {
57         command.exec(statement);
58         command.cascadingExec(statement);
59     }
60 }

```



Composite Pattern

```
8 public class CreateAccountTableCmd extends ModifyCommand {
9
10     public static String tableName = DB.ACCOUNT_TABLENAME;
11     public static String nameField = DB.ACCOUNT_USERNAME;
12     public static String passwordField = DB.ACCOUNT_PASSWORD;
13
14     public CreateAccountTableCmd() {
15         super("CreateAccountTable");
16         addDependentCmd(new CreateTableCmd(tableName, nameField, passwordField));
17     }
18
19     @Override
20     public boolean exec(Statement statement) throws Exception {
21         // use dependent command
22         return true;
23     }
24
25 }
26
```



Thanks for listening ~