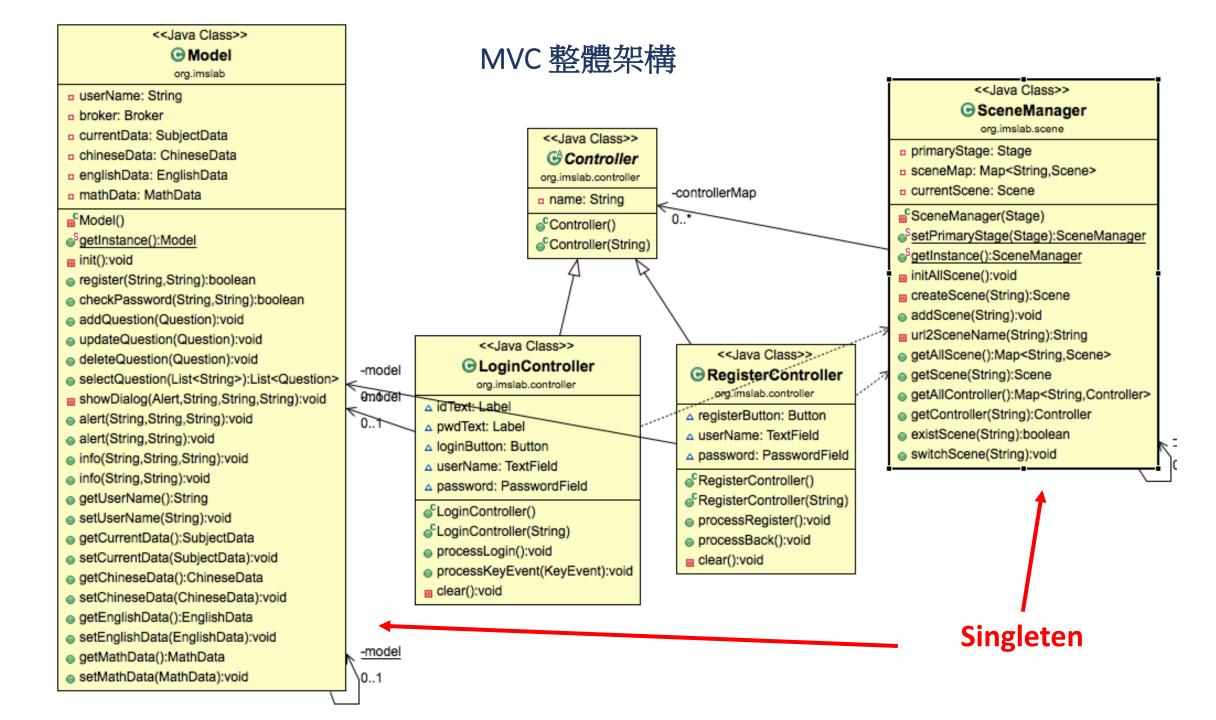
Exam Generator

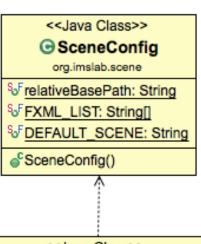
P78061502 蔡昀展 P76051292 方彥婷

MVC



[SceneManager]

Controller & View



<<Java Class>> SceneManager org.imslab.scene

- primaryStage: Stage
- sceneMap: Map<String,Scene>
- controllerMap: Map<String,Controller>
- p currentScene: Scene
- SetPrimaryStage(Stage):SceneManager
- initAllScene():void
- createScene(String):Scene
- addScene(String):void
- url2SceneName(String):String
- getAllScene():Map<String,Scene>
- getScene(String):Scene
- getAllController():Map<String,Controller>

-sceneManager

- getController(String):Controller
- existScene(String):boolean
- switchScene(String):void

```
package org.imslab.scene;
   public class SceneConfig {

▼ 

R

→ org.imslab.scene

                                                                          SceneConfig.java
        public static final String relativeBasePath = "ui/";
                                                                           SceneManager.java
                                                                       ▼ R > org.imslab.scene.ui
 7<sub>0</sub>
        public static final String[] FXML_LIST = {
                                                                           AddProblem.fxml
                 "Login.fxml",
                                                                            background.png
                 "Generator.fxml".
                                                                           DeleteProblem.fxml
                 "Register.fxml".
10
                 "ModifyDB.fxml".
                                                                           > Detail.fxml
12
                 "AddProblem.fxml".
                                                                           EditProblem.fxml
                 "EditProblem.fxml",

    Senerator.fxml

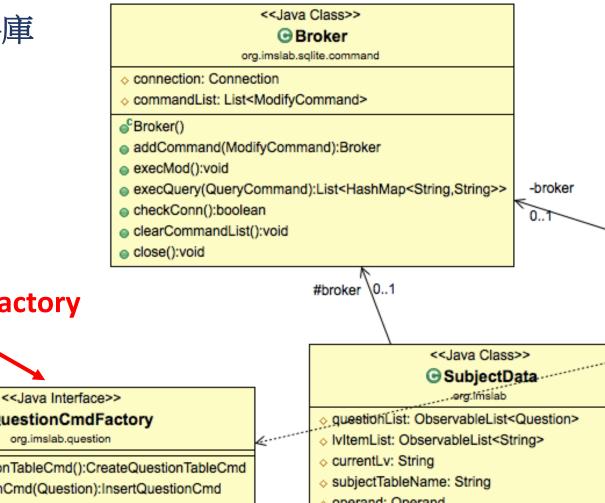
                 "DeleteProblem.fxml".
14
                                                                            Login.css
15
                 "Detail.fxml"
                                                                           > Login.fxml
        };
16
                                                                           ModifyDB.fxml
17
                                                                           Register.fxml
        public static final String DEFAULT_SCENE = "Login";
18
19
20
```

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

[Model]

Controller & Model

後端資料庫



QuestionCmdFactory

Abstract Factory

org.imslab.guestion

- getCreateQuestionTableCmd():CreateQuestionTableCmd
- getInsertQuestionCmd(Question):InsertQuestionCmd
- getSelectQuestionCmd(List<String>):SelectQuestionCmd
- getUpdateQuestionCmd(Question):UpdateQuestionCmd
- getDeleteQuestionCmd(Question):DeleteQuestionCmd
- SgetFactoryByTableName(String):QuestionCmdFactory

operand: Operand #factory CSubjectData() 0..1 SubjectData(QuestionCmdFactory,String,Operand) initRelativeUI():void resetUI():void

getNextAutoIncrementId():String

getSelectQuestion():Question

getSelectIndex():int

<<Java Class>> Model

org.imslab

userName: String

chineseData: ChineseData englishData: EnglishData

mathData: MathData

Model()

- getInstance():Model
- init():void
- register(String,String):boolean
- checkPassword(String,String):boolean
- addQuestion(Question):void
- updateQuestion(Question):void
- deleteQuestion(Question):void
- selectQuestion(List<String>):List<Question>
- showDialog(Alert,String,String,String):void
- alert(String,String,String):void
- alert(String,String):void
- info(String,String,String):void
- info(String,String):void

-cyrfent@ateserName():String

- setUserName(String):void
- getCurrentData():SubjectData
- setCurrentData(SubjectData):void
- getChineseData():ChineseData
- setChineseData(ChineseData):void
- getEnglishData():EnglishData
- setEnglishData(EnglishData):void
- getMathData():MathData
- setMathData(MathData):void

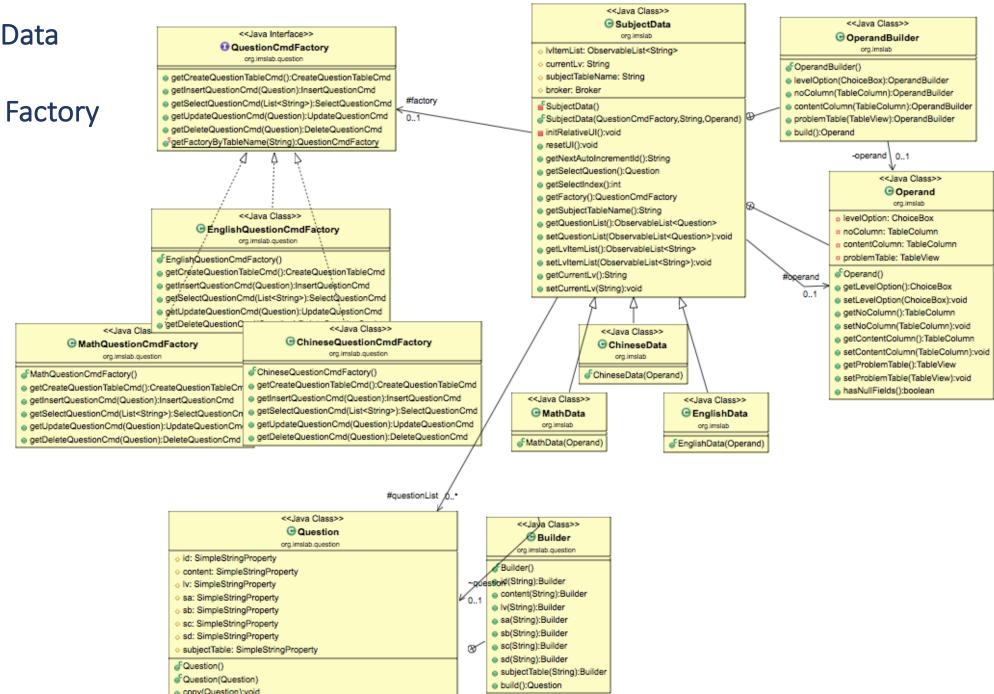
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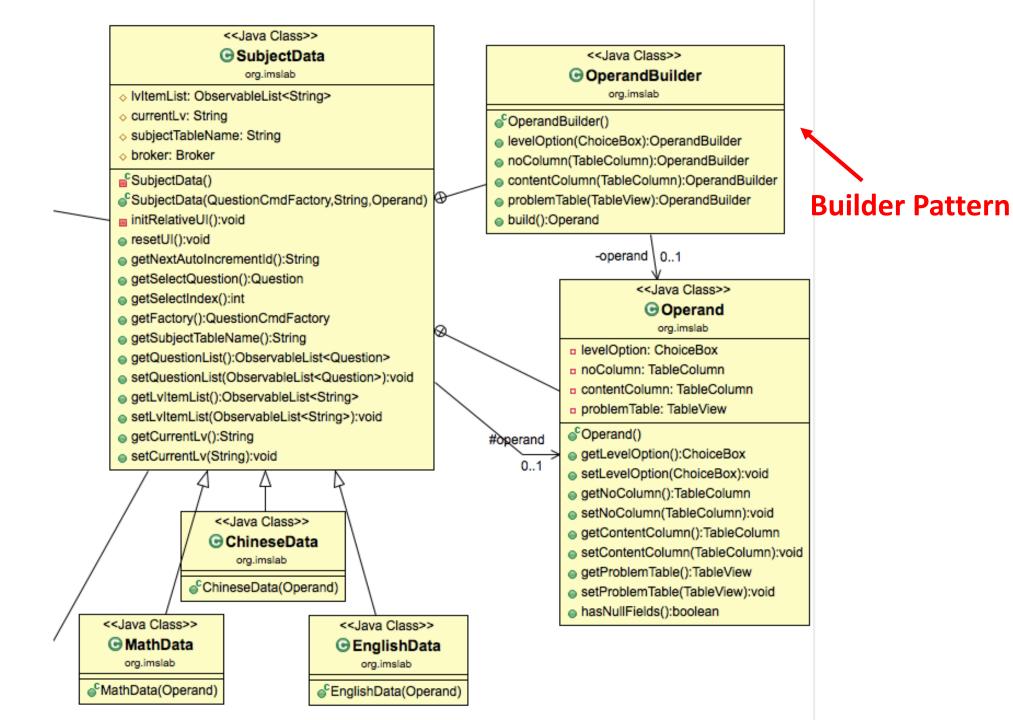
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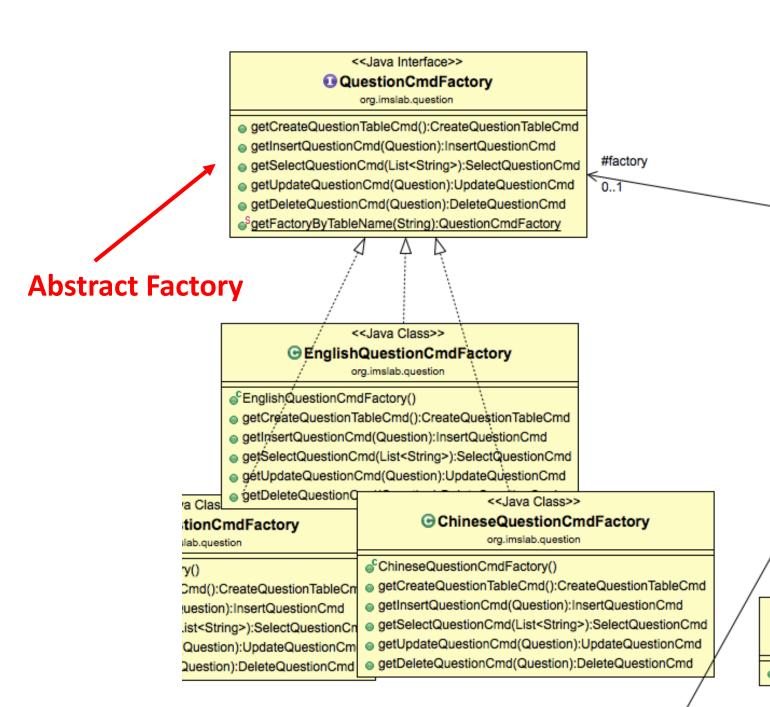
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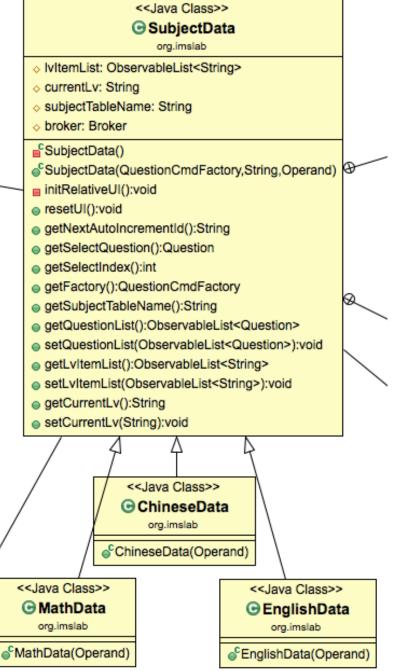
Question

SubjectData & Command Factory

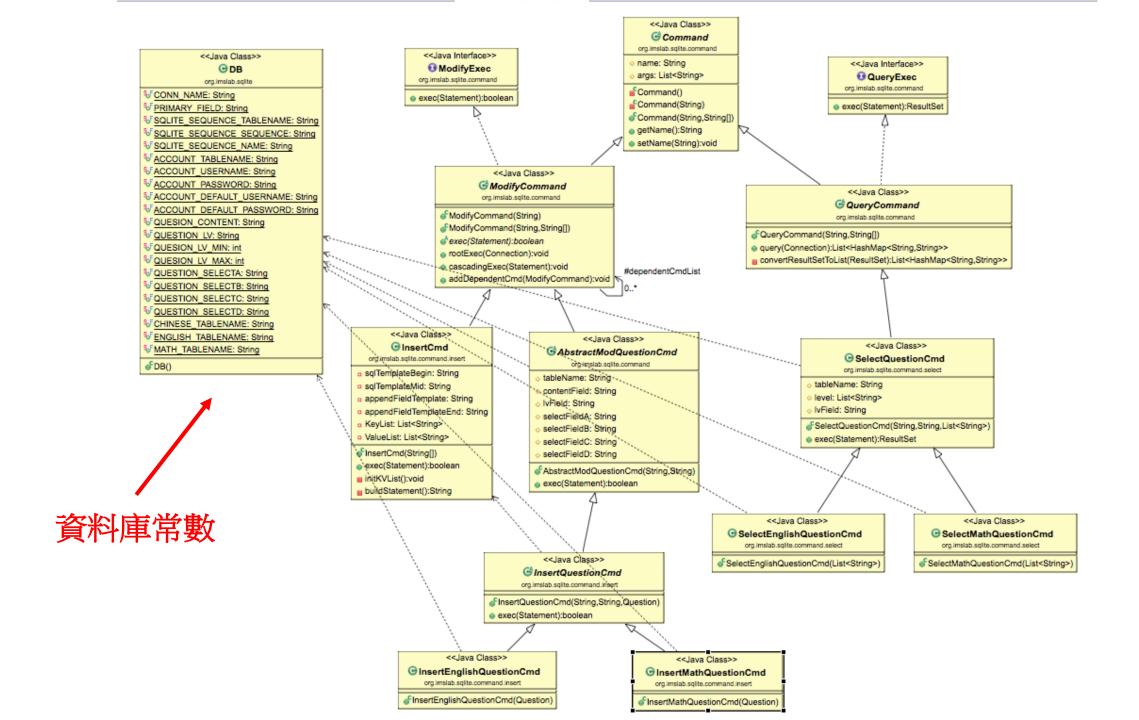


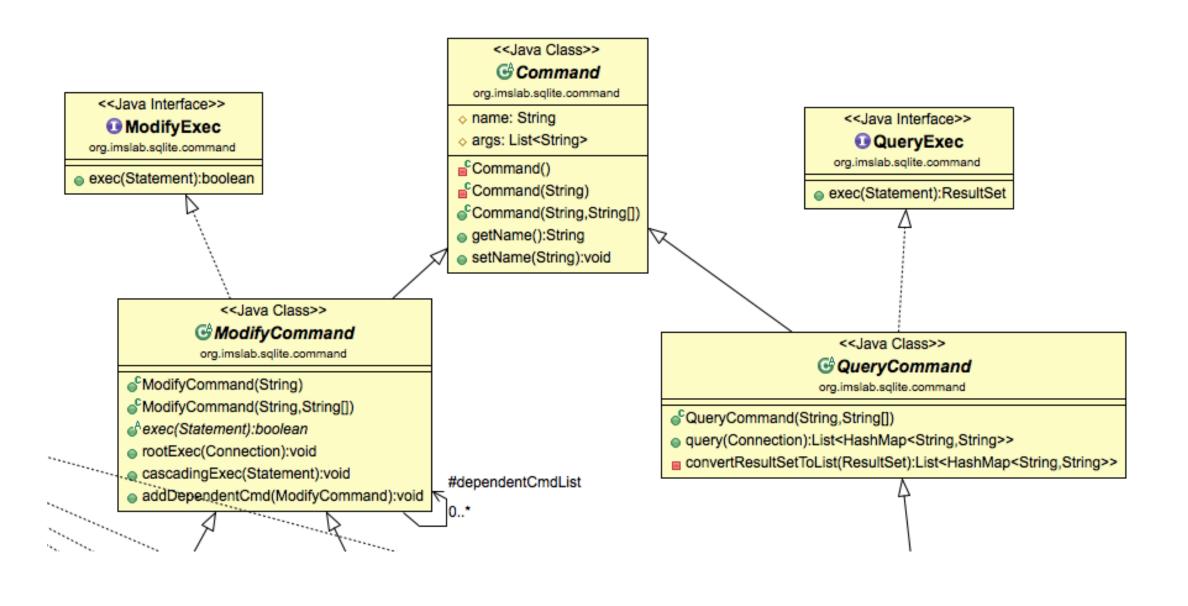


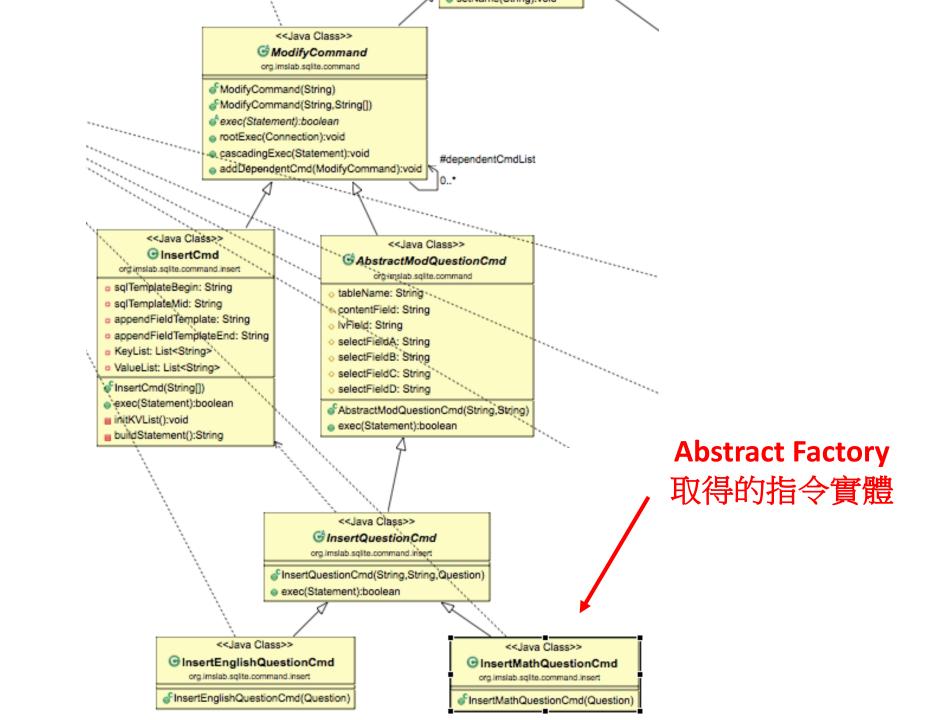


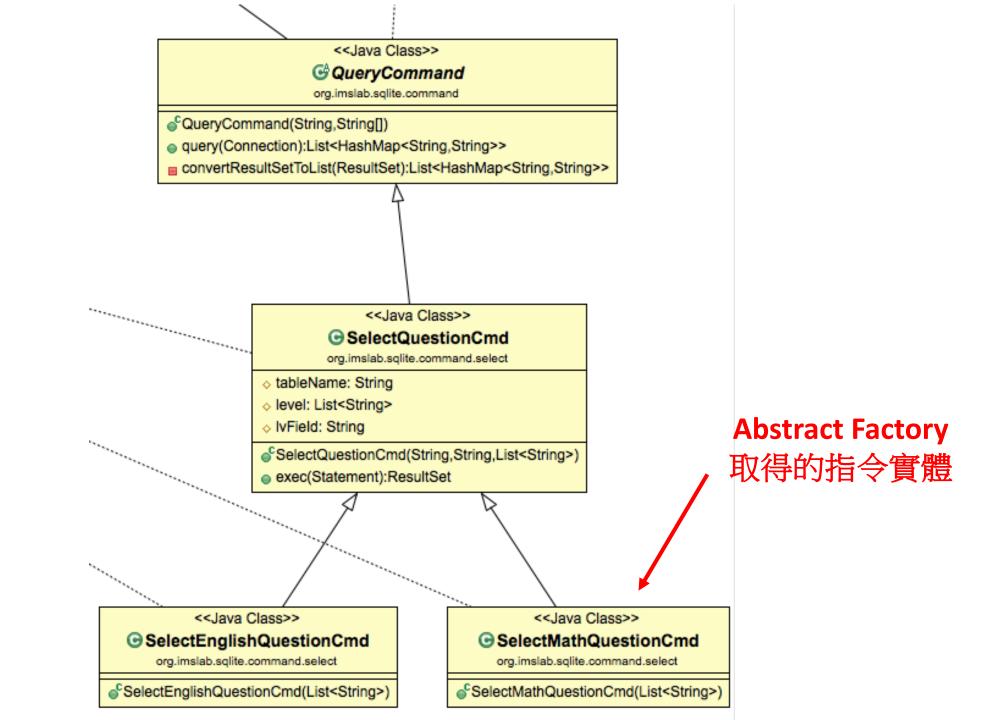


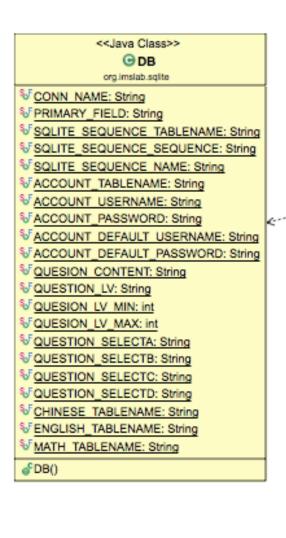
Command Pattern

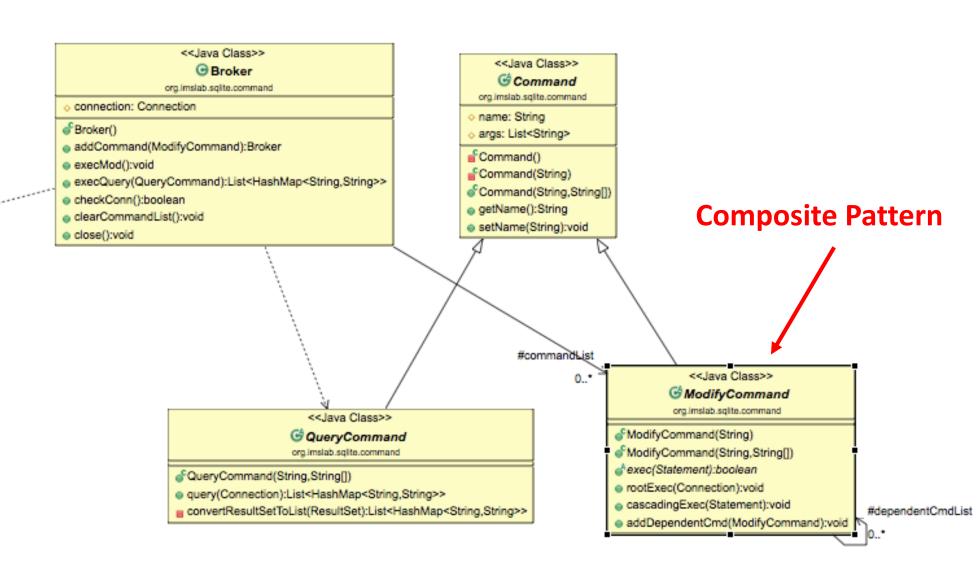




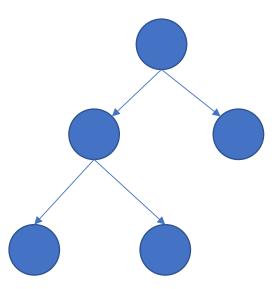








```
public void rootExec(Connection conn) throws Exception {
36⊜
            // check whether the connection is null?
37
            if(conn==null)
38
                throw new Exception("Null Connection");
39
40
            Statement statement = conn.createStatement();
41
            if (exec(statement))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



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

Thanks for listening ~