Contract Management System

Util Class
——Database Operation

Contents

- Function
- Design
- Implementation

Copyright Declaration

Function

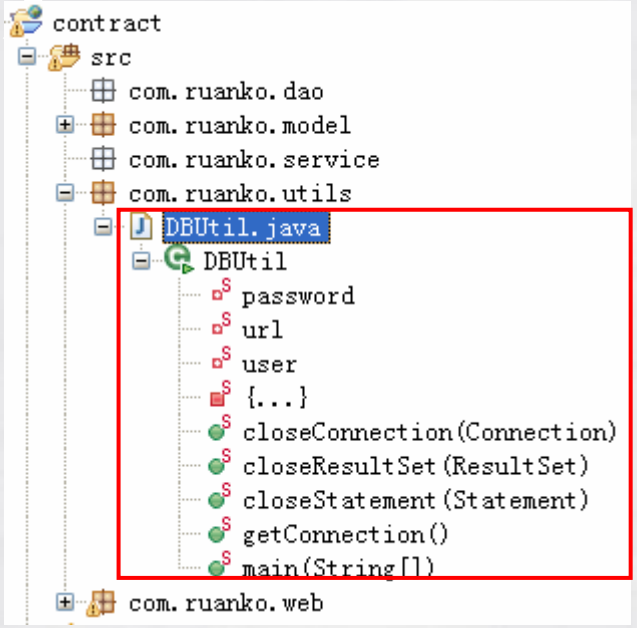
We've created contractdb in MySQL for Contract Management System as database. Now we write code for database operations.

In database programming, you need to implement some common database operations such as connecting, closing, etc. A uniform management over database connectivity is necessary.

Database connection string:

"jdbc:mysql://127.0.0.1:3306/contractdb?useUnicode=true&" +
"characterEncoding=utf8";

Create a DBUtil class in project contract, providing the function and method to connect and close database.



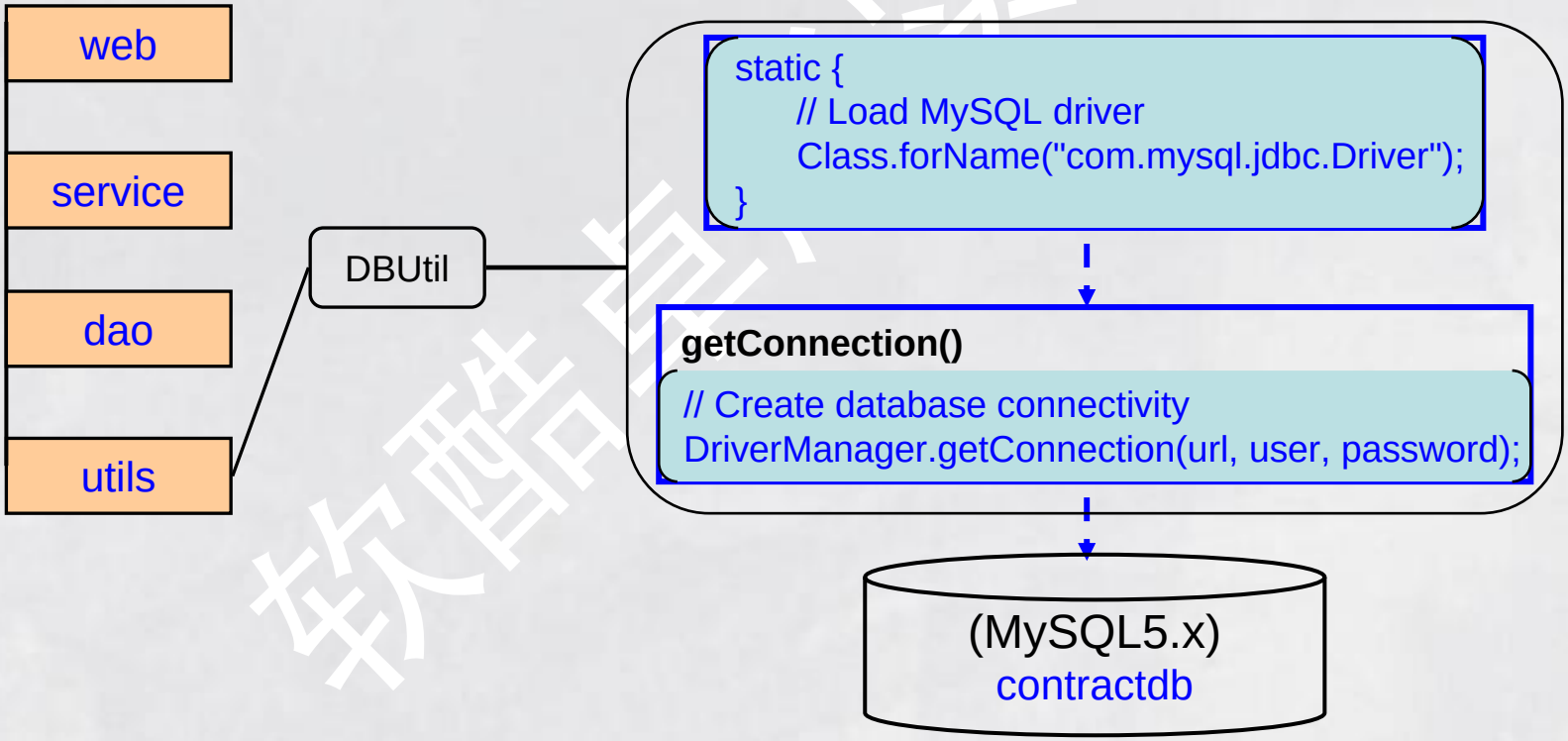
Design

1. Introduction

You need to establish connection with database first, before close it after operation to release resource in JDBC database operation.

In this project, we use MySQL. To connect it, load MySQL driver first. The JAR driver package is mysql-connector-java-5.1.x.jar.

Create a tool class DBUtil in com.ruanko.utils, to manage the connecting and closing operations of database.



2. Tool class design DBUtil

Data members are used in DBUtil class to represent the parameter of database connectivity, and public methods are also provided to fulfill the operation of connecting and closing.

(1) Data members

Data members below are private, static strings in the declaration.

url: database connection string. It means JDBC URL and is used by JDBC to identify database.

User: database account, the valid user to visit database.

Password: database password, password for valid user account.

In this project, database server is MySQL and the IP address is 127.0.0.1. For project database, it is contractdb. Coding utf8 is generally applied.

url format: jdbc:mysql://127.0.0.1:3306/contractdb?useUnicode=true&" +
"characterEncoding=utf8;

In this project, the user is root, and the password is also set root.

(2) Load driver

Class.forName("driver class") is used to load driver in class. The statement is located in the static code of static{…}, so that driver is loaded same time as class is loaded.

Design

(3) Create database connection

Method: public static Connection **getConnection**()

Function: create database connection and return the connection object.

Description: To define it as static enables external class to call the method simply in form of "class name.method name". Example, DBUtil.getConnection().

(4) Close database operation object

Call the close() method of imported object in closeXxx() to fulfill close operation, and set the object as null at the same time.

Verification: the object values other than null, nor is it closed.

Method 1: public static void closeConnection(Connection conn)

Function: close database Connection object.

Method 2: public static void closeStatement(Statement st)

Function: close Statement object

Method 3: public static void closeResultSet(ResultSet rs)

Function: close ResultSet object

Implementation

Iterative development on the basis of Exception Handling.

First, import MySQL driver package into the project. And then create DBUtil class. JDBC is applied in the programming of database connection. The last step is to test database connection.

Step 1, download and import MySQL driver package.

Step 2, create DBUtil class.

Step 3, create class data member.

Step 4, create database connection.

Step 5, close database connection.

Step 6, test.

www.ruanko.com

Thanks

Database Operation