

README

This application used MySQL for database design and Java for programming. There are some preparations need to be done before running this application.

1. Software

This application was developed by *Eclipse IDE for Java Developers*, and the version is *2020-09 (4.17.0)*.



2. Library

A standard JRE System Library will serve, and it should contain *java.sql*.

- > java.se - C:\Program Files\Java\jdk-13.0.1\lib\jrt-fs.jar
- > java.security.jgss - C:\Program Files\Java\jdk-13.0.1\lib\jrt-fs.jar
- > java.security.sasl - C:\Program Files\Java\jdk-13.0.1\lib\jrt-fs.jar
- > java.sql - C:\Program Files\Java\jdk-13.0.1\lib\jrt-fs.jar
- > java.sql.rowset - C:\Program Files\Java\jdk-13.0.1\lib\jrt-fs.jar
- > java.transaction.xa - C:\Program Files\Java\jdk-13.0.1\lib\jrt-fs.jar



3. Plugins

The front-end is based on *Swing* and *WindowBuilder*. Follow the links below:

<https://www.eclipse.org/windowbuilder/download.php>

Open the link and you will find a web page containing the *Update Sites* table below. Copy the link in the red rectangular and paste it into Eclipse *Install New Software* window (in the navbar, click help and then click install new software). If you need more detailed information or instructions on this installation, click the link in the red rectangular and you will get what you want.

Update Sites

Download and Install			
Version	Update Site	Zippped Update Site	Marketplace
Latest (1.9.4)	link	link	 Install
Last Good Build	link	link	 Install
1.9.4 (Permanent)	link	link	
1.9.3 (Permanent)	link	link	
1.9.2 (Permanent)	link	link	
1.9.1 (Permanent)	link	link	
1.9.0 (Permanent)	link	link	
Archives	link		

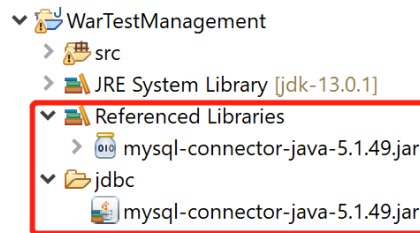
When Eclipse identify that installation link, it prompts you to select plugins. It is suggested to select all of them. When the installation finishes, restart Eclipse and check the installation details. Make sure you have those plugins in the red rectangular below installed.

> Mylyn WikiText	3.0.38.202008172112	org.eclipse.mylyn.wikitext.feature.feature.group	Eclipse Mylyn
> Mylyn WikiText Editors	3.0.38.202008172112	org.eclipse.mylyn.wikitext.editors.feature.feature.g...	Eclipse Mylyn
> Oomph Setup	1.18.0.v20200901-1012	org.eclipse.oomph.setup.feature.group	Eclipse Oomph Project
> POM Editor using LemMinX language server (includes Incubating compo	1.16.2.20200902-0711	org.eclipse.m2e.lemminx.feature.feature.group	Eclipse.org - m2e
> Swing Designer	1.9.4.202009181620	org.eclipse.wb.swing.feature.feature.group	Eclipse WindowBuilder
> Swing Designer Documentation	1.9.4.202009181620	org.eclipse.wb.swing.doc.user.feature.feature.group	Eclipse WindowBuilder
> SWT Designer	1.9.4.202009181620	org.eclipse.wb.rcp.feature.feature.group	Eclipse WindowBuilder
> SWT Designer Core	1.9.4.202009181620	org.eclipse.wb.swt.feature.feature.group	Eclipse WindowBuilder
> SWT Designer Documentation	1.9.4.202009181620	org.eclipse.wb.rcp.doc.user.feature.feature.group	Eclipse WindowBuilder
> SWT Designer SWT_AWT Support	1.9.4.202009181620	org.eclipse.wb.rcp.SWT_AWT_support.feature.group	Eclipse WindowBuilder
> SWT Designer SWT Support (requires Eclipse WTP/WST)	1.9.4.202009181620	org.eclipse.wb.swt.feature.feature.group	Eclipse WindowBuilder
> Tip of the Day UI Feature	0.2.1100.v20200724-0938	org.eclipse.tips.feature.feature.group	Eclipse.org
> Wild Web Developer XML tools	0.10.2.202007231627	org.eclipse.wildwebdeveloper.xml.feature.feature.g...	Eclipse Wild Web Developer
> WindowBuilder Core	1.9.4.202009181620	org.eclipse.wb.core.feature.feature.group	Eclipse WindowBuilder
> WindowBuilder Core Documentation	1.9.4.202009181620	org.eclipse.wb.doc.user.feature.feature.group	Eclipse WindowBuilder
> WindowBuilder Core UI	1.9.4.202009181620	org.eclipse.wb.core.ui.feature.feature.group	Eclipse WindowBuilder
> WindowBuilder GroupLayout Support	1.9.4.202009181620	org.eclipse.wb.layout.group.feature.feature.group	Eclipse WindowBuilder
> WindowBuilder Java Core	1.9.4.202009181620	org.eclipse.wb.core.java.feature.feature.group	Eclipse WindowBuilder
> WindowBuilder XML Core (requires Eclipse WTP/WST)	1.9.4.202009181620	org.eclipse.wb.core.xml.feature.feature.group	Eclipse WindowBuilder

Editors and tools for working with HTML, CSS, XHTML, in combination, and more.

4. JDBC

Create a folder called jdbc and add mysql-connector-java into it. Remember to add path.

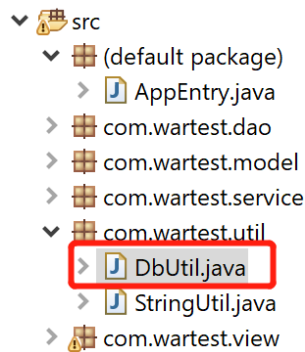


5. Run Application

Create a Java Project. Copy those packages and .java files into the src folder.

/ Important **/** Open the file:

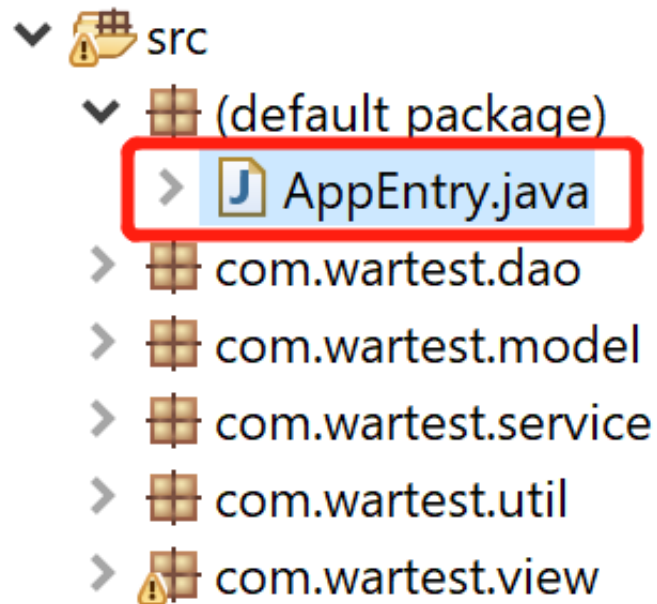
com/wartest/util/DbUtil.java



and **change the username and the password** that serve your own database.

```
1 package com.wartest.util;
2
3 import java.sql.DriverManager;
4
5
6 /**
7  * Database Util Class
8  * @author AlexanderLiu
9  */
10
11 public class DbUtil {
12
13     private String dbUrl = "jdbc:mysql://localhost:3306/totalwar_test?autoReconnect=true&useSSL=false"; // Database connecting ad
14     private String dbUserName = "****"; // UserName
15     private String dbPassword = "****"; // and Password of Database
16     private String jdbcName = "com.mysql.jdbc.Driver"; // Driver name
17
18     /**
19      * Obtain database connection
20      * @return
21      * @throws Exception
22      */
23     public Connection getCon() throws Exception {
24         Class.forName(jdbcName);
25         Connection con = DriverManager.getConnection(dbUrl, dbUserName, dbPassword);
26         return con;
27     }
28
29     /**
30      * Close database connection
31      * @param con
32      * @throws Exception
33      */
34     public void closeCon(Connection con) throws Exception {
35         if (con != null) con.close();
36     }
37 }
```

There is only one java file in the default package: AppEntry.java, which is the only entrance of the whole project. Run this file and the application starts.



When you can see the Log In form below, it means the application works well so far.

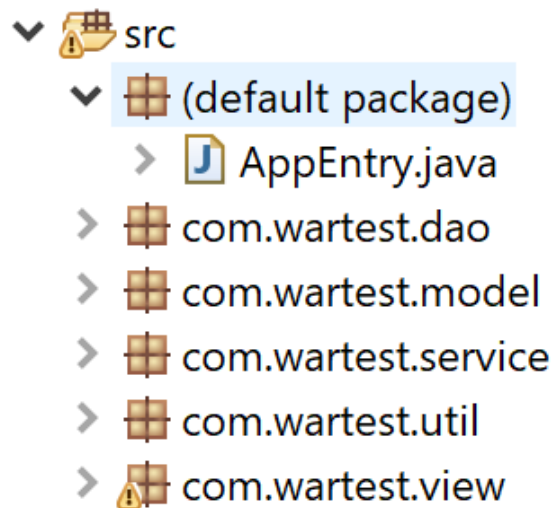
User Login

Total War II War Drill System

Username

Password

6. Source Files Explanation



1) AppEntry.java, the only entrance of the whole project.

2) util. It contains two files. DbUtil.java is used for the connection works; StringUtil.java is used to integrate the methods related to String operations.

3) model. It contains all the objects corresponding to the entities of the database. Those objects are used for simplifying the process of front-back-database interactions. Passing objects among files are simpler and neater than passing scattered information.

4) dao. The data accessing layer. The files in this package are used for direct interactions with the database. For example, TroopDao.java contains all SQL Statements, PreparedStatements, Procedure Callings, and their execution methods for Troop entity.

5) service. The business logic (service) layer. The files in this package are used to implement all the business logic related to the user operations, like click SUBMIT button to submit an update, or generate all troops that formed by the user who currently logged in on the front-end windows.

6) view. The front-end layer. It contains all JFrames and JInterFrames. Those files form up the whole UI. They implement all the dynamic logic and user operation responses by calling methods from the service layer.