제 32회 Open Technet

올챙이로 살펴보는 ECLIPSE개발

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hangum@gmail.com

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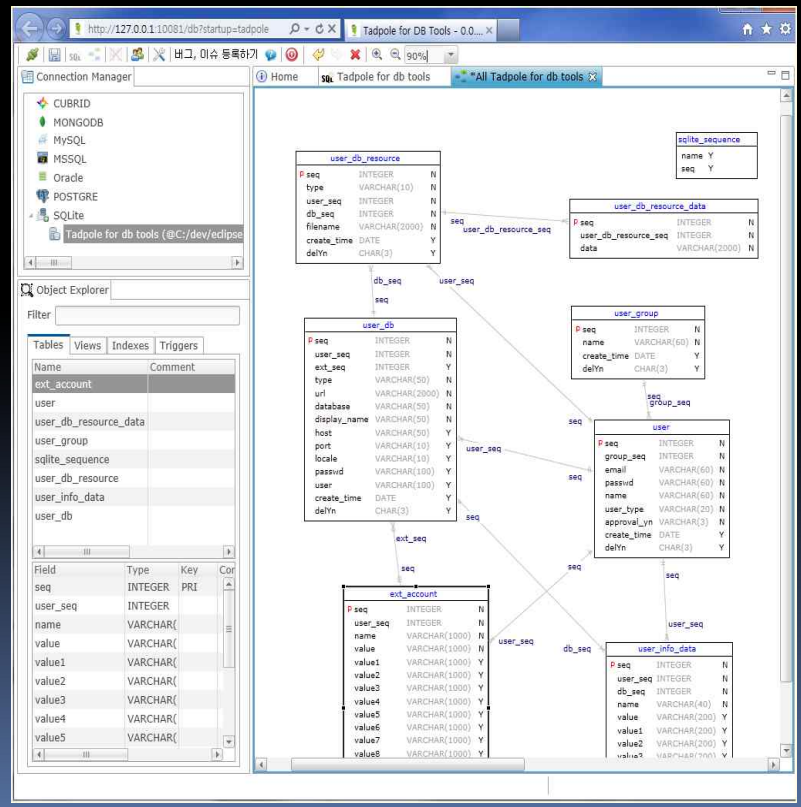
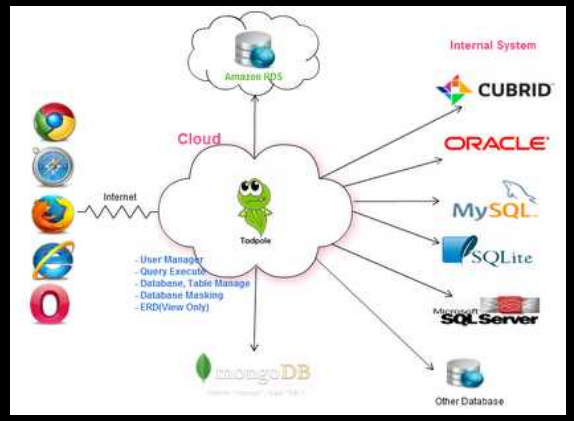
- 올챙이는?
- Eclipse Overview
- Eclipse Infrastructure
- Plug-in Structure
- Tadpole 개발

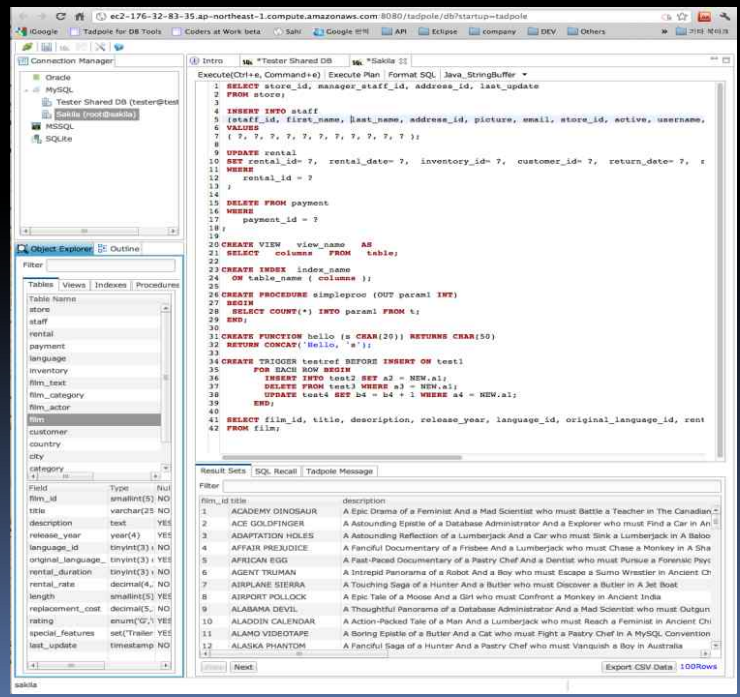


올챙이는?

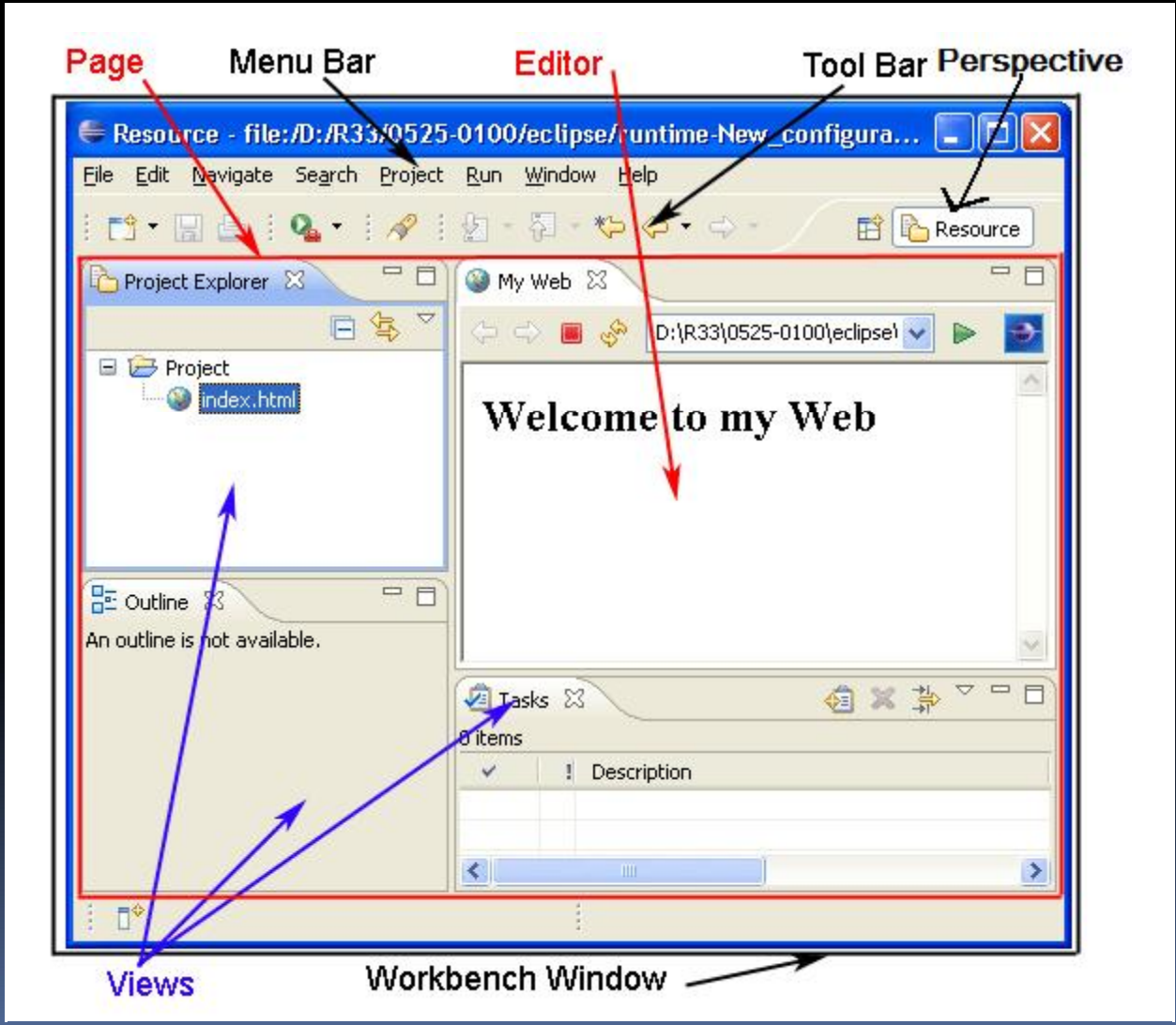


- 배경
- 웹 브라우저에서 DB 개발 및 관리 솔루션
- RDB : CUBRID, MySQL, MSSQL, Oracle, SQLite, Postgre
- NoSQL : MongoDB

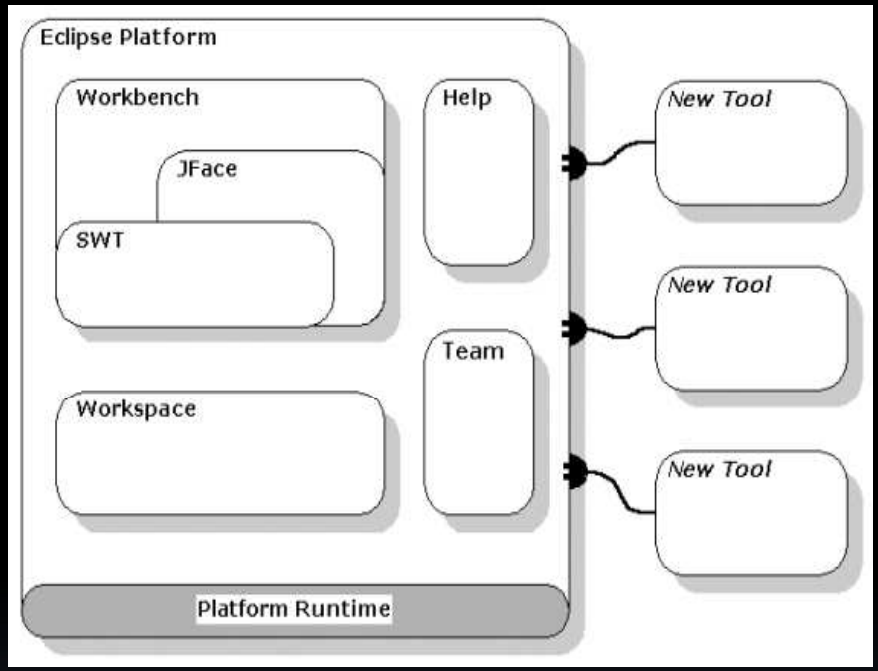
- Main page
  - http://goo.gl/eu7PQ
- 데모 사이트
  - http://goo.gl/p3DMA
- 현재
  - 0.0.8 SR3 배포 중

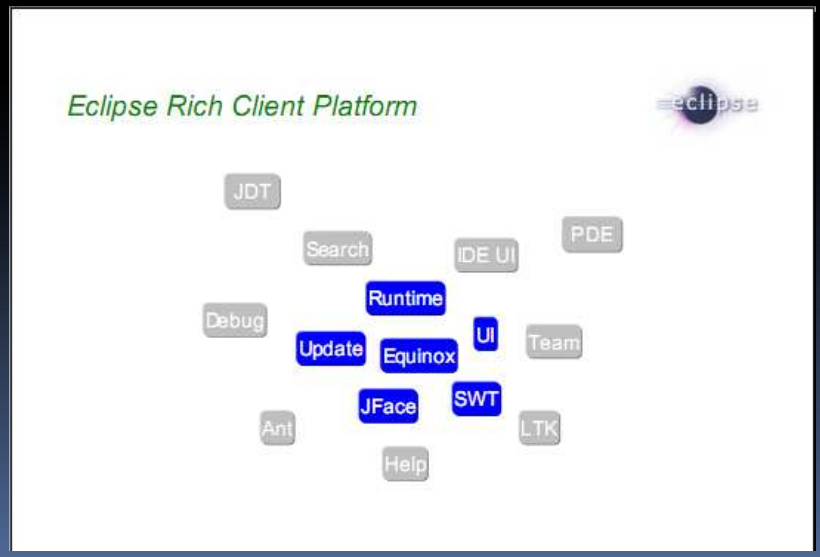


Eclipse Overview

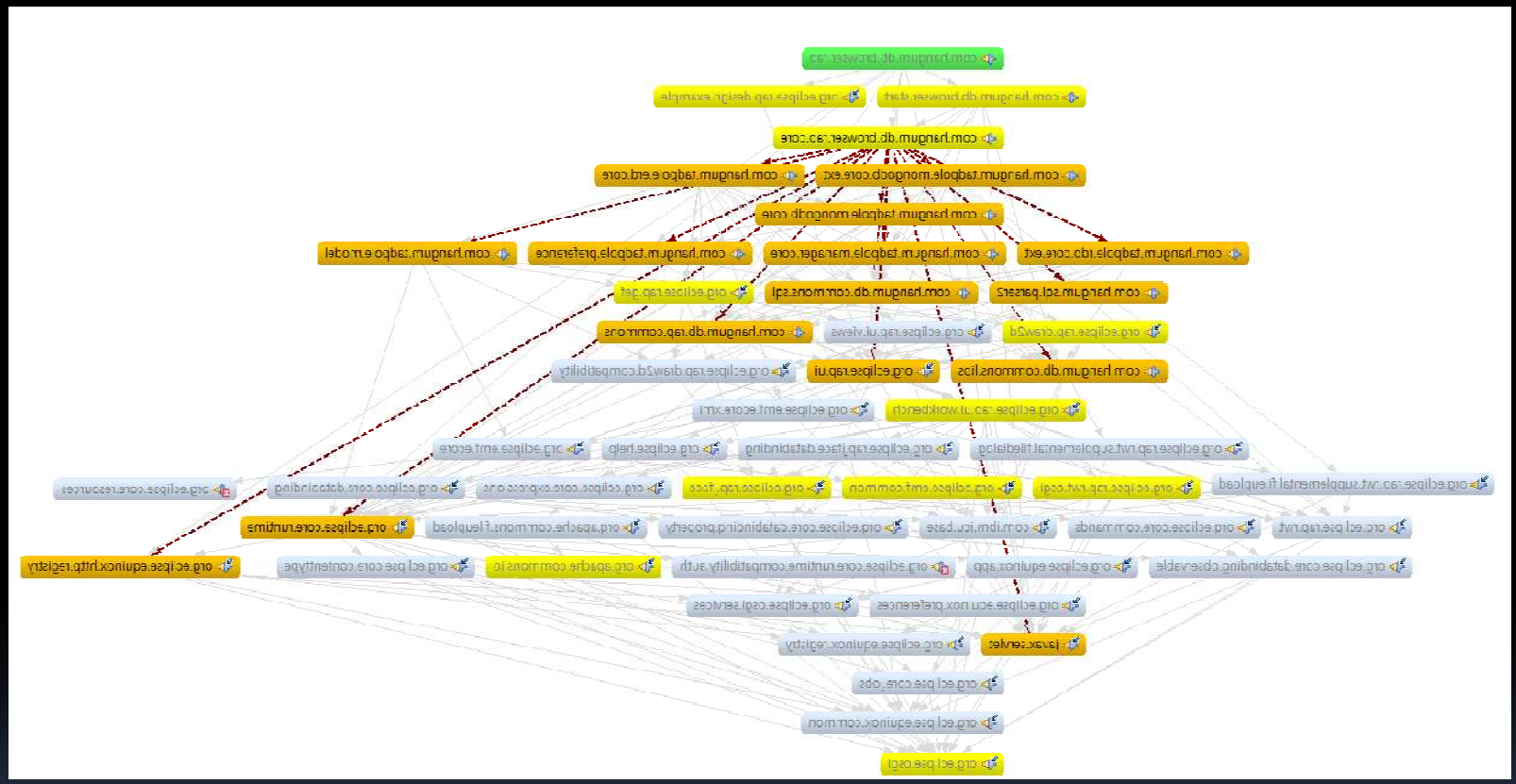


Eclipse Overview





Eclipse Infrastructure



Plug-in Loader | Java Class Library

JVM(Java Virtual Machine)

OS

Plug-in structure

com.hangum.db.browser.rap.core

META-INF

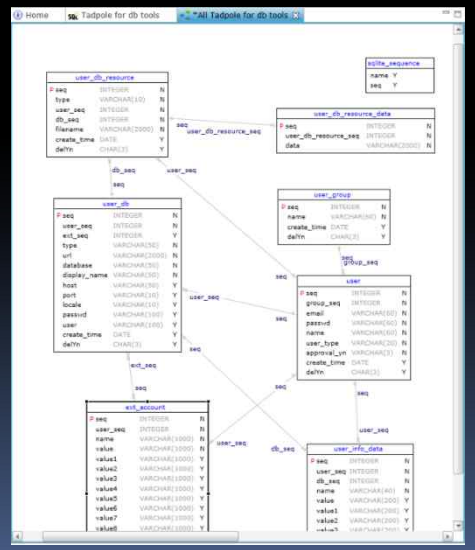
```
Require-Bundle: org.eclipse.rap.ui;bundle-version="1.3.2",
 org.eclipse.core.runtime,
 com.hangum.db.commons.libs;bundle-version="1.0.0",
 com.hangum.db.commons.sql;bundle-version="1.0.0",
 com.hangum.db.rap.commons;bundle-version="1.0.0",
 com.hangum.tadpole.erd.core;bundle-version="1.0.0",
Bundle-RequiredExecutionEnvironment: JavaSE-1.6
Bundle-ActivationPolicy: lazy
Export-Package: com.hangum.db.browser.rap.core,
 com.hangum.db.browser.rap.core.actions.global,
 com.hangum.db.browser.rap.core.dialog.dbconnect,
 com.hangum.db.browser.rap.core.editors.intro,
```

org.eclipse.rap.ui (1.5.0.20120612-1458)

com.hangum.tadpole.manager.core (1.0.0.qualifier)

plugin.xml

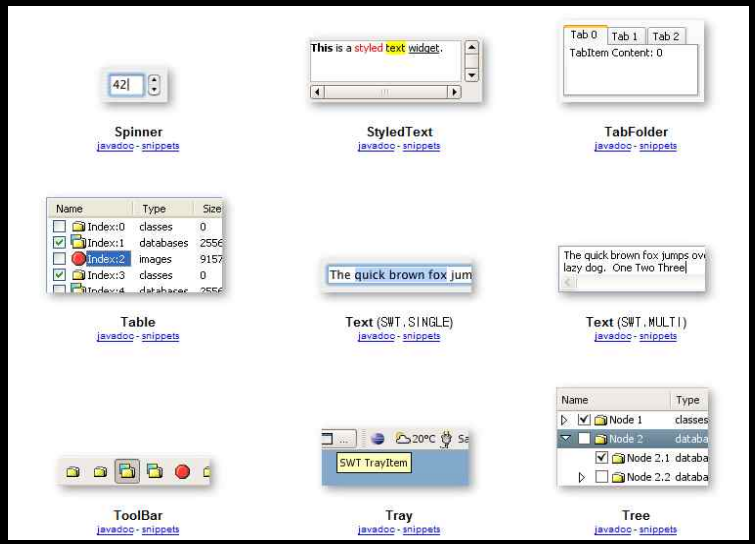
```
<plugin>
   <extension
         point="org.eclipse.ui.views">
      <category
            id="com.hangum.db.browser.rap.core.category.info"
            name="%category.name">
      </category>
      <view
            category="com.hangum.db.browser.rap.core.category.info"
            class="com.hangum.db.browser.rap.core.viewers.connections.ManagerViewer"
            icon="resources/icons/database_table.png"
            id="com.hangum.db.browser.rap.core.view.connection.manager"
            name="%view.name"
            restorable="true">
      </view>
```

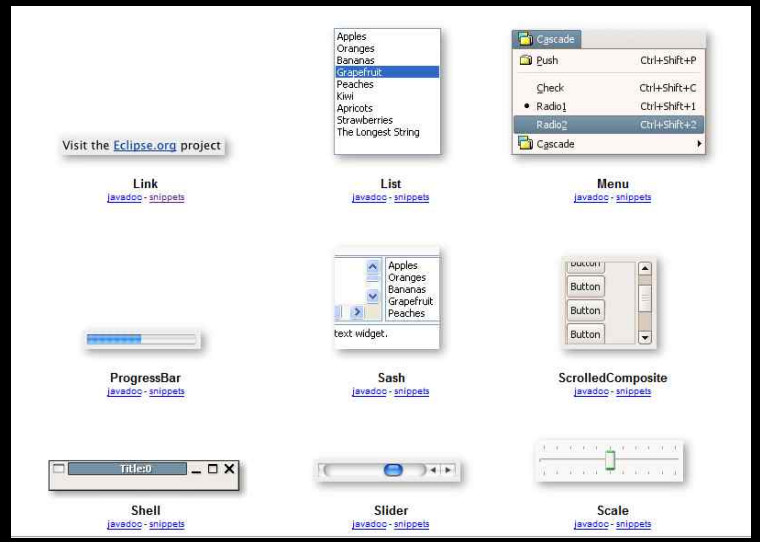


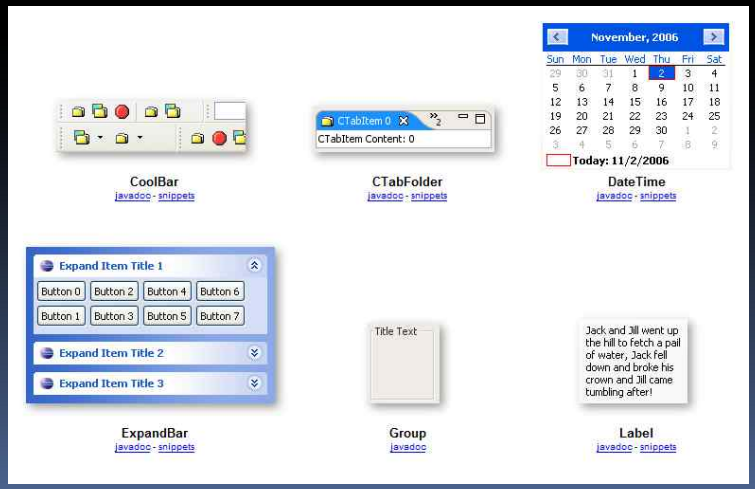
src

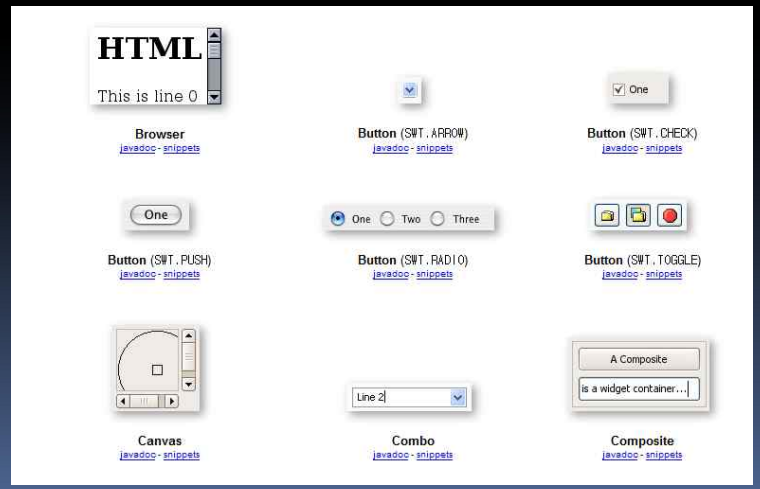
resources

SWT/JFace


Spinner
javadoc - snippets
StyledText
javadoc - snippets
TabFolder
javadoc - snippets
Table
javadoc - snippets
Text (SWT.SINGLE)
javadoc - snippets
Text (SWT.MULTI)
javadoc - snippets
ToolBar
javadoc - snippets
Tray
javadoc - snippets
Tree
javadoc - snippets

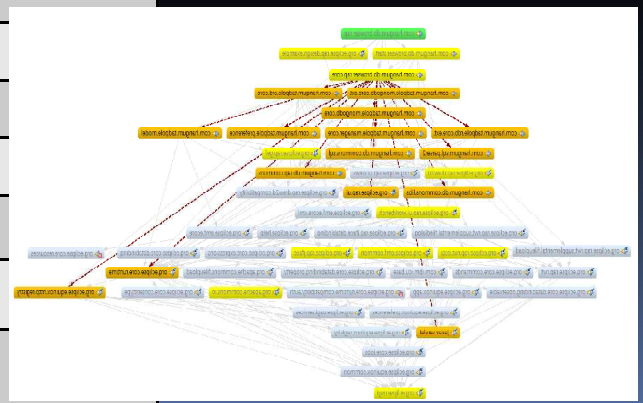

Link
javadoc - snippets
List
javadoc - snippets
Menu
javadoc - snippets
ProgressBar
javadoc - snippets
Sash
javadoc - snippets
ScrolledComposite
javadoc - snippets
Shell
javadoc - snippets
Slider
javadoc - snippets
Scale
javadoc - snippets


CoolBar
javadoc - snippets
CTabFolder
javadoc - snippets
DateTime
javadoc - snippets
ExpandBar
javadoc - snippets
Group
javadoc
Label
javadoc - snippets

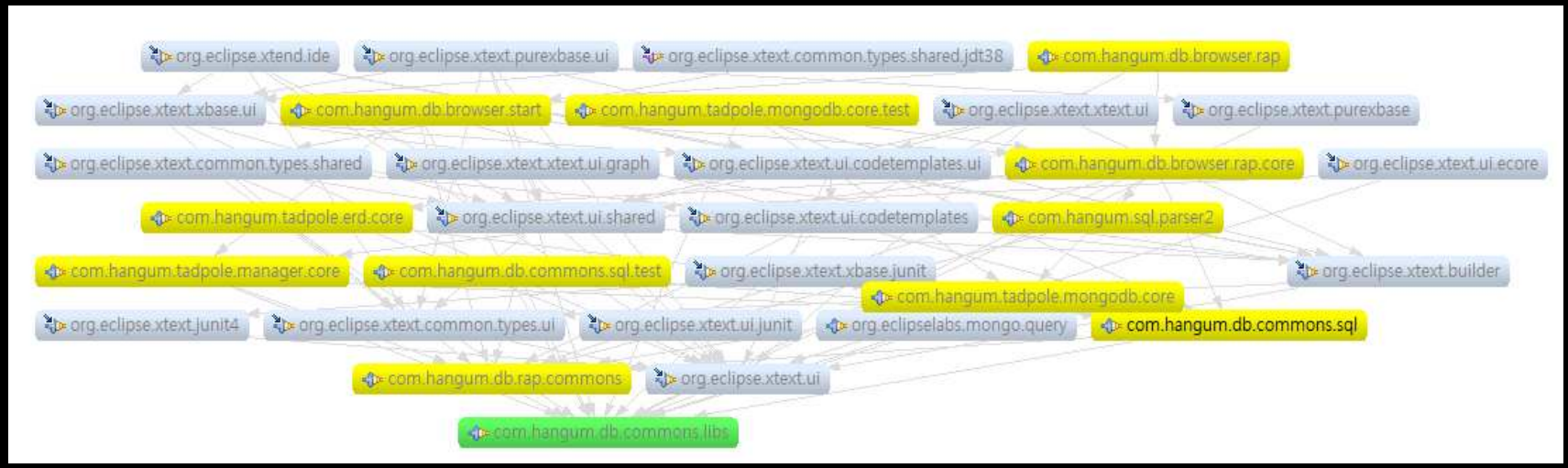

Browser
javadoc - snippets
Button (SWT.ARROW)
javadoc - snippets
Button (SWT.CHECK)
javadoc - snippets
Button (SWT.PUSH)
javadoc - snippets
Button (SWT.RADIO)
javadoc - snippets
Button (SWT.TOGGLE)
javadoc - snippets
Canvas
javadoc - snippets
Combo
javadoc - snippets
Composite
javadoc - snippets

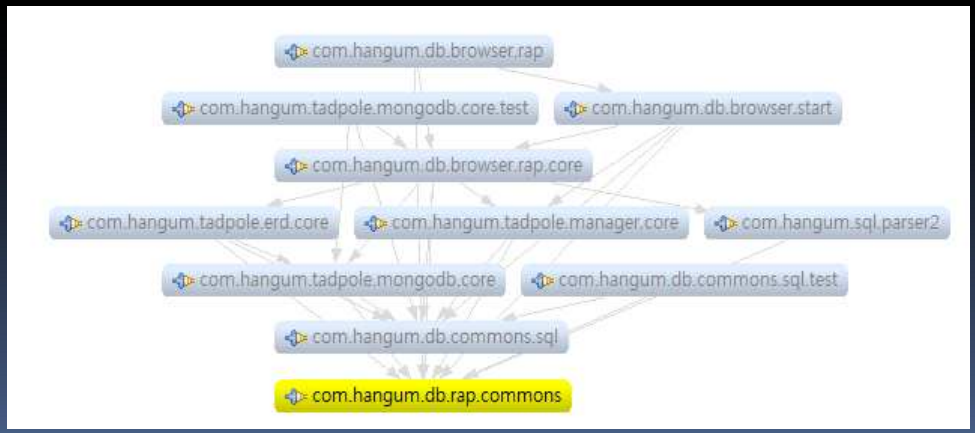
Tadpole Plug-in list

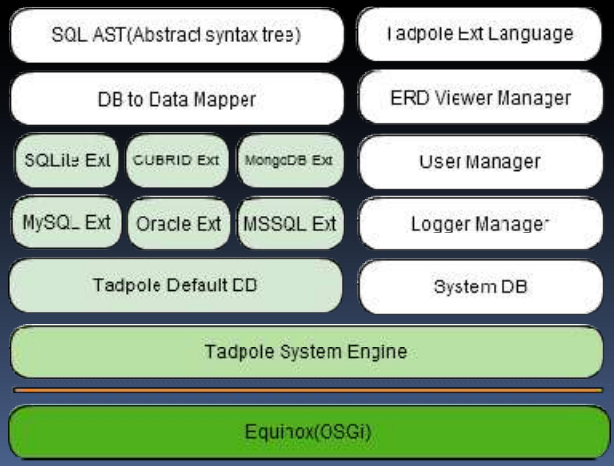
Plug-in	Description
com.hangum.db.browser.rap	•프로젝 트 시작 •Standalond 배포
com.hangum.db.browser.rap.core	•Project explorer •Object explorer •RDB 에디터
com.hangum.db.browser.start	프로젝트 워크 벤치
com.hangum.db.commons.libs	공통 라이브러리 관리(JAR 파일관리)
com.hangum.db.commons.sql	SQL 관리 및 올챙이 내부 시스템 디비
com.hangum.db.rap.commons	공통 코드
com.hangum.sql.parser2	SQL Parser(Formatting)
com.hangum.tadpole.build.war	WAR 파일 배포
com.hangum.tadpole.erd.core	ERD
com.hangum.tadpole.manager.core	메니저
com.hangum.tadpole.model	DTO 모델 정의(ERD의존적)
com.hangum.tadpole.mongodb.core	몽고디비
org.eclipselabs.mongo.query	몽고디비 쿼리 생성
targetProject	Target platform
com.hangum.tadpole.feature com.hangum.tadpole.feature.site	프로젝트 관리 및 buckminster 배포



Tadpole plug-in dependencies

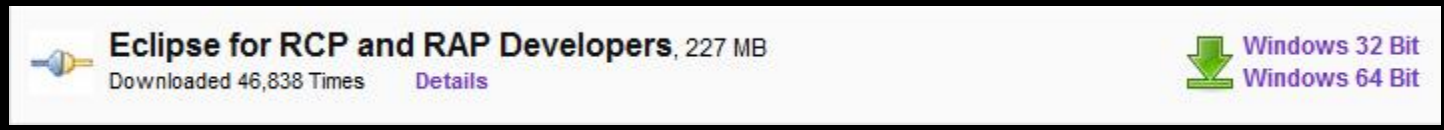


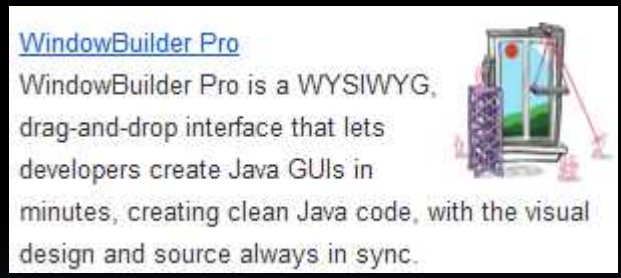




Eclipse Plug-in 개발환경

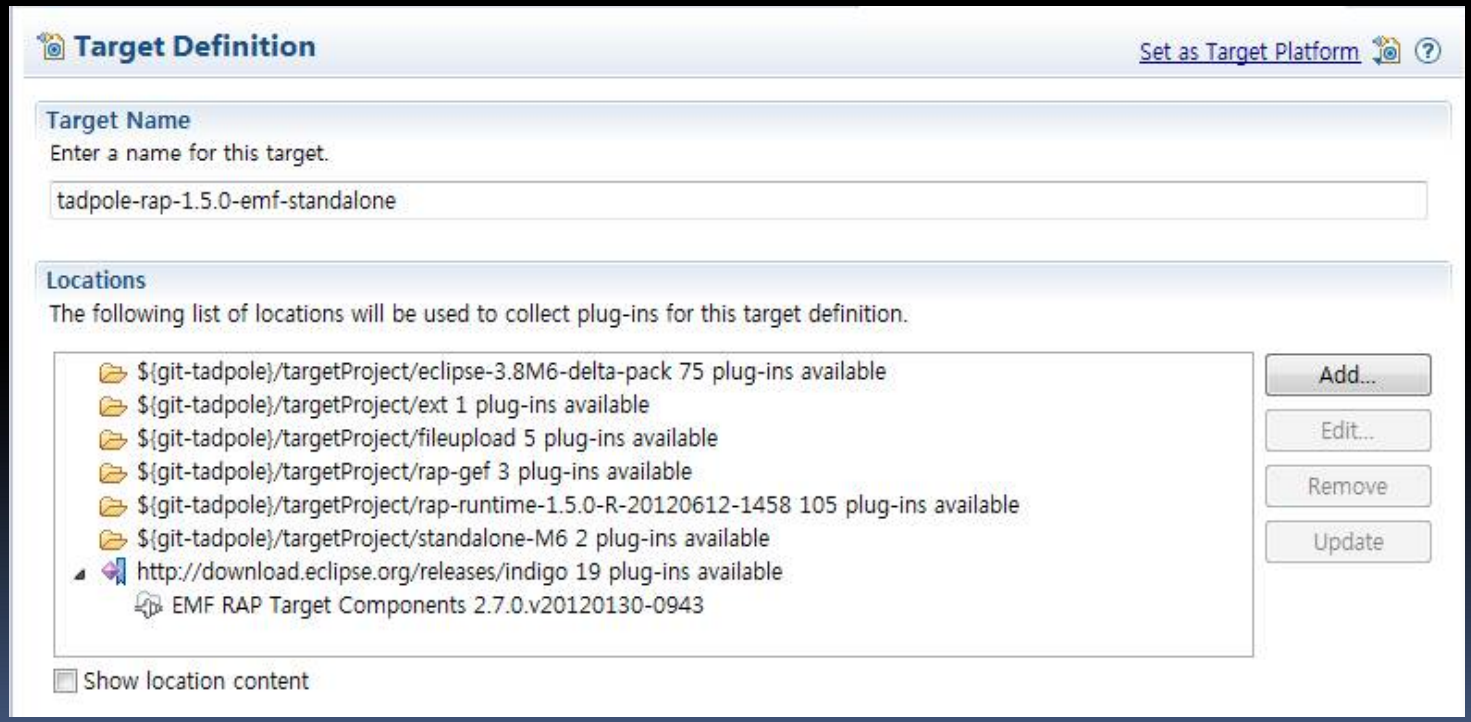
- PDE(Plug-in Development Environment)



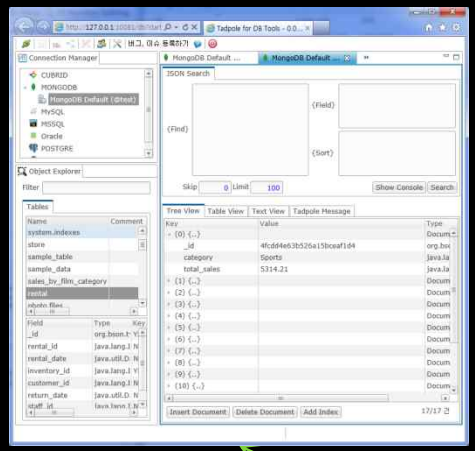


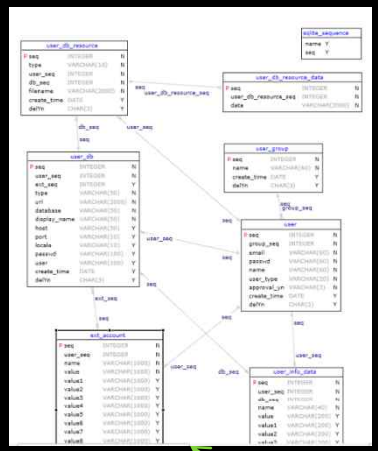
Target Platform

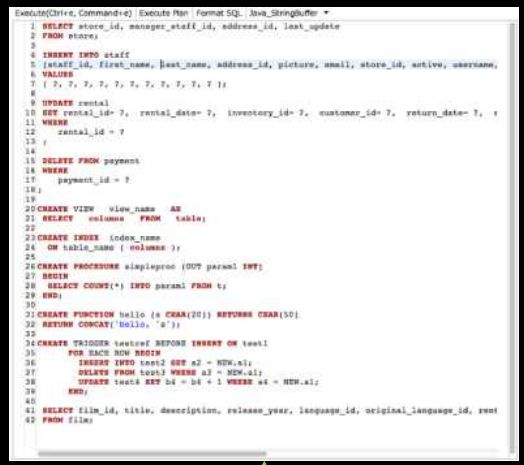
- 개발하기 전에 제일 먼저 해야 할 일
- 공통 라이브러리 정의



Tadpole Overview







Node	Content
xml	version="1.0" encoding="UTF-8"
DOCTYPE	sqlMap PUBLIC "-//ibatis.apache.org//DTD SQL Map 2.0//EN
sqlMap	(typeAlias* | cacheModel* | resultMap* | parameterMap* | sql
namespace	MySQL_query
--	table 이름
select	(include | dynamic
--	table, view의 컬럼
select	(include | dynamic
--	테이블간의 관계
select	(include | dynamic
--	모든 관계 테이블
select	(include | dynamic
--	view 정보
select	(include | dynamic
--	index 정보, SHOW
select	(include | dynamic
--	procedure list
select	(include | dynamic
--	function list
select	(include | dynamic
--	show triggers
select	(include | dynamic

Postgre.xml

MSSQL.xml

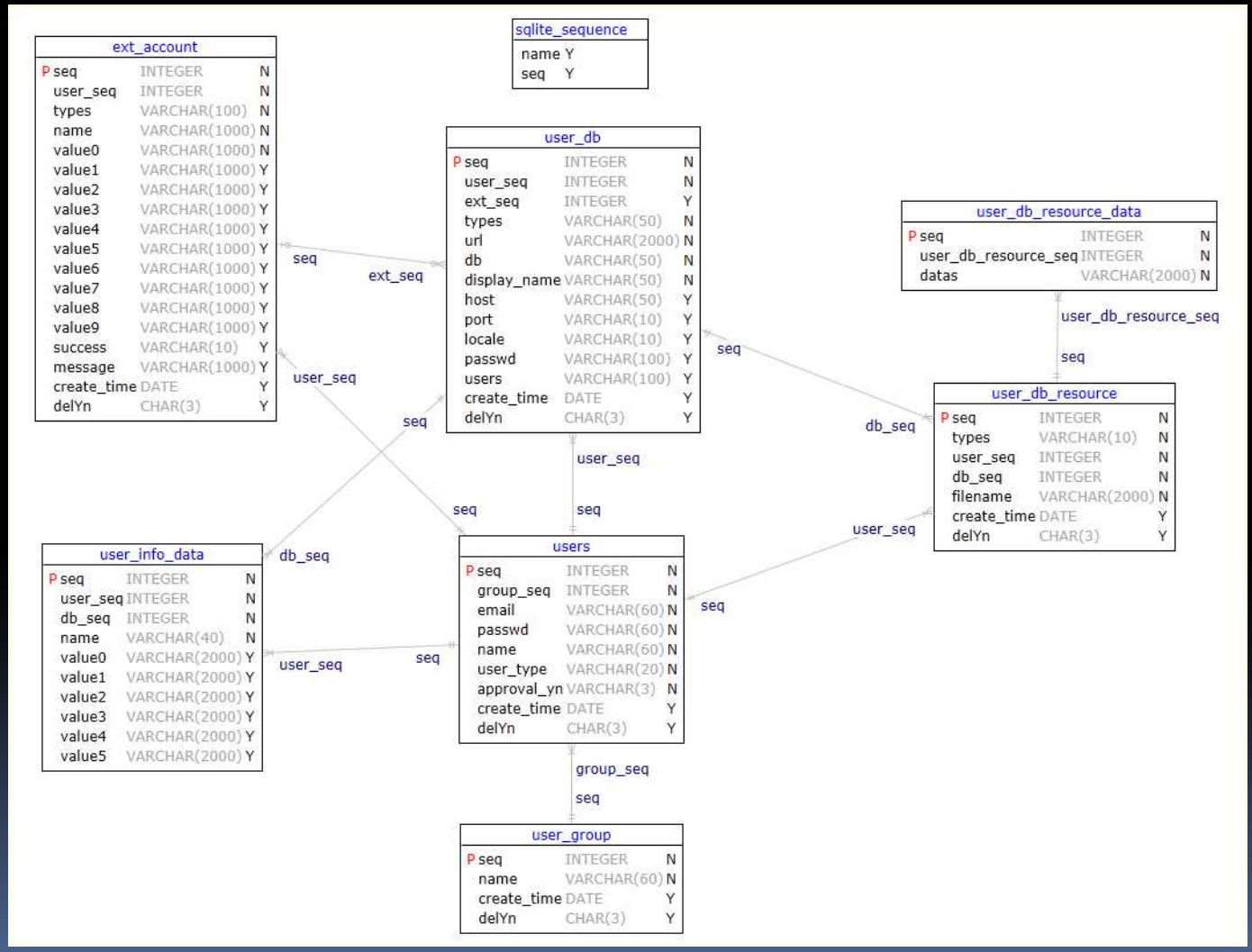
SQLite.xml

Oracle.xml

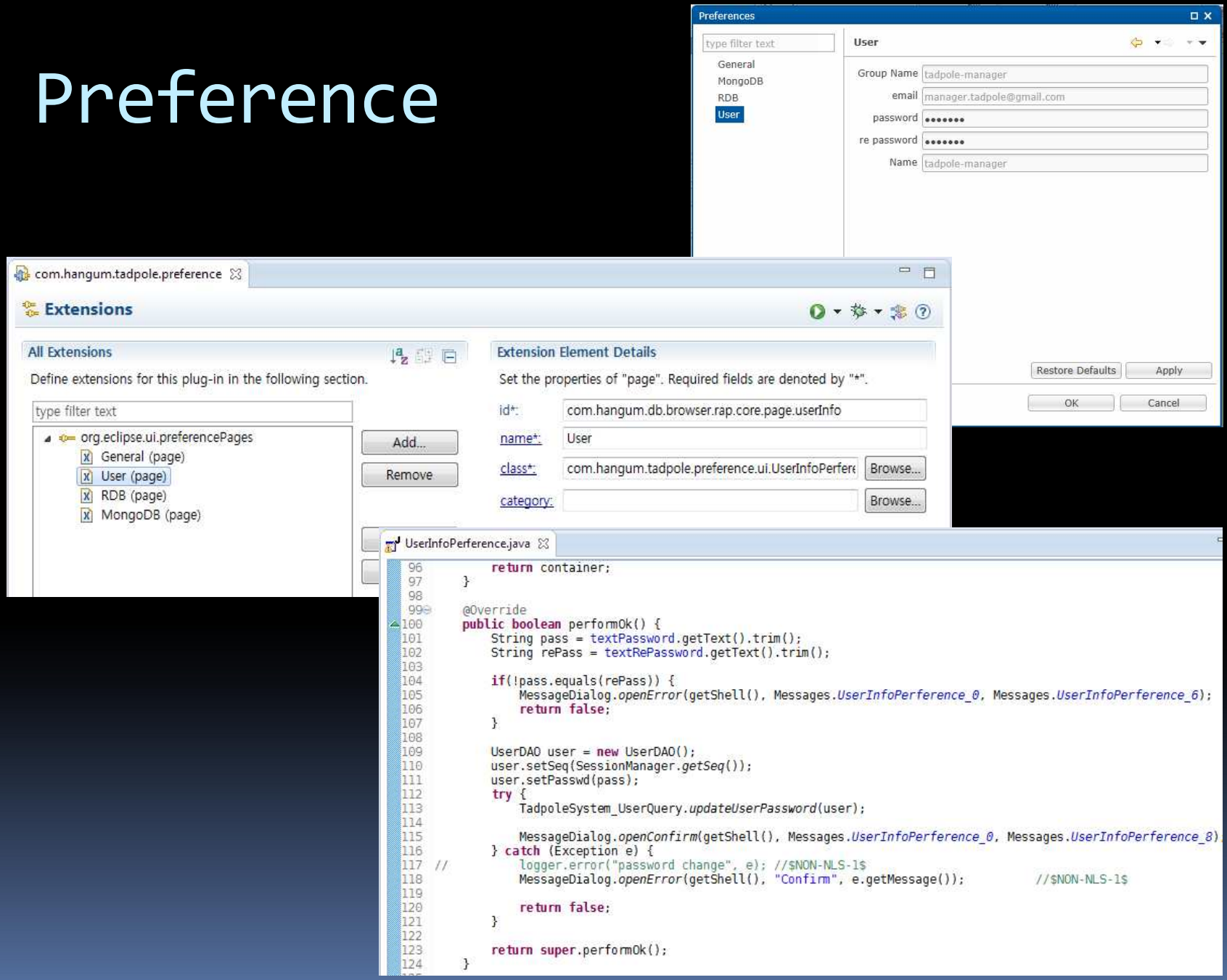
MySQL.xml

Cubrid.xml

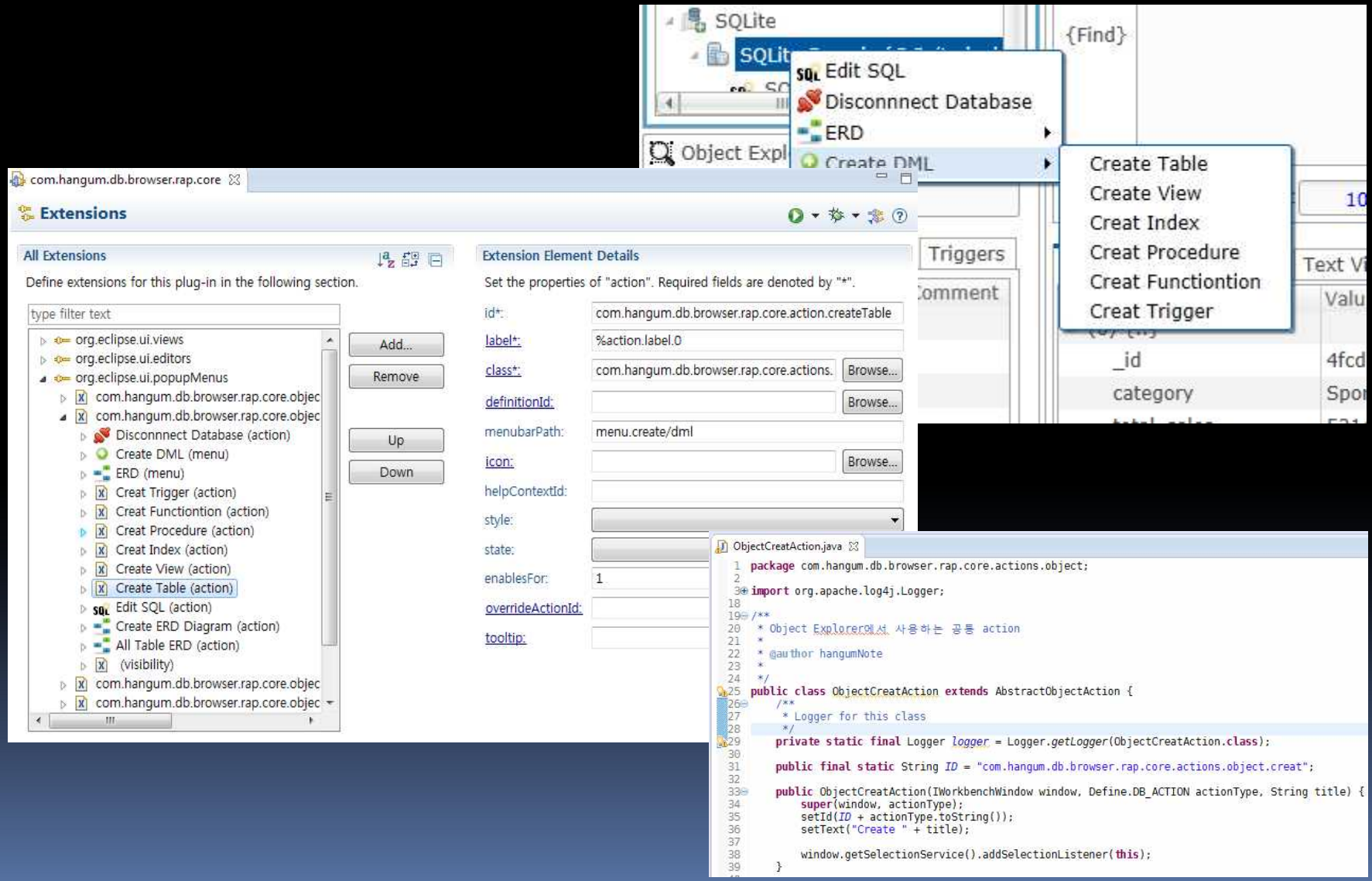
Tadpole Engine DB



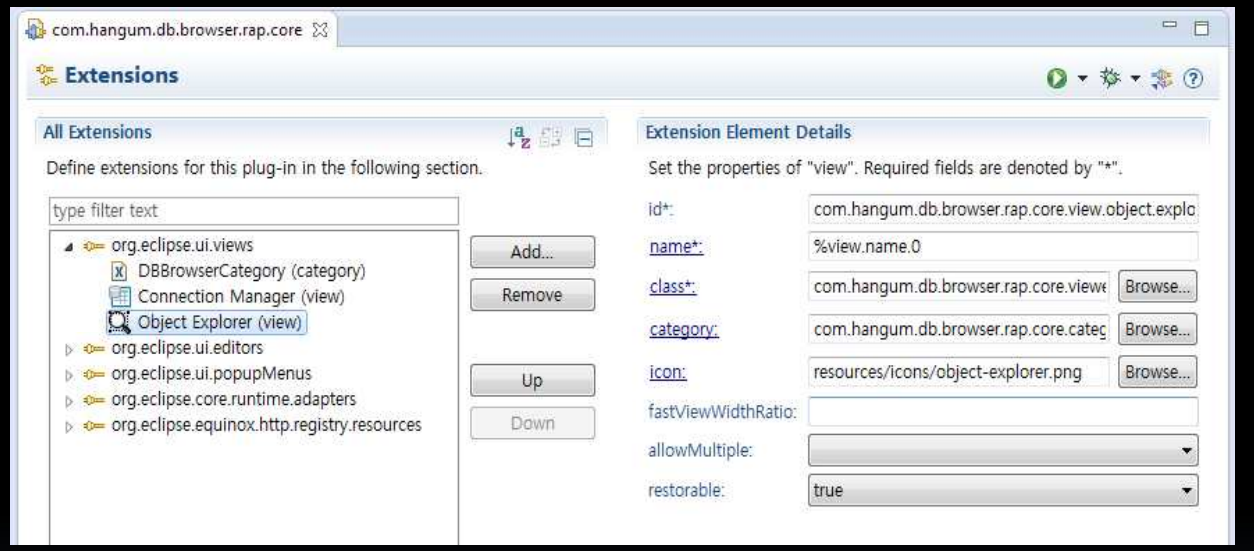
Preference

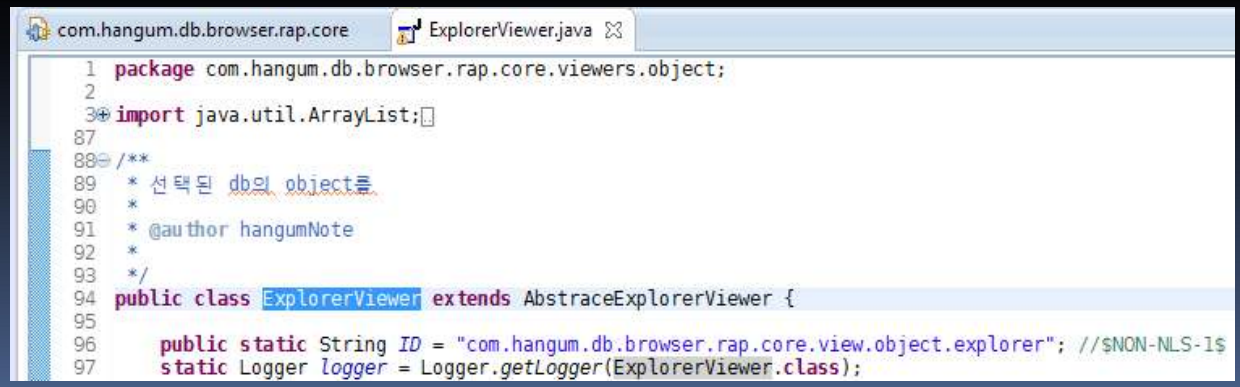

Preferences
type filter text
General
MongoDB
RDB
User
User
Group Name
tadpole-manager
email
manager.tadpole@gmail.com
password
re password
Name
tadpole-manager
Restore Defaults
Apply
OK
Cancel
com.hangum.tadpole.preference
Extensions
All Extensions
Define extensions for this plug-in in the following section.
type filter text
org.eclipse.ui.preferencePages
General (page)
User (page)
RDB (page)
MongoDB (page)
Add...
Remove
Extension Element Details
Set the properties of "page". Required fields are denoted by "*".
id*:
com.hangum.db.browser.rap.core.page.userInfo
name*:
User
class*:
com.hangum.tadpole.preference.ui.UserInfoPerfer
Browse...
category:
Browse...
UserInfoPerference.java
96 return container;
97 }
98
99 @Override
100 public boolean performOk() {
101 String pass = textPassword.getText().trim();
102 String rePass = textRePassword.getText().trim();
103
104 if(!pass.equals(rePass)) {
105 MessageDialog.openError(getShell(), Messages.UserInfoPerference_0, Messages.UserInfoPerference_6);
106 return false;
107 }
108
109 UserDAO user = new UserDAO();
110 user.setSeq(SessionManager.getSeq());
111 user.setPasswd(pass);
112 try {
113 TadpoleSystem_UserQuery.updateUserPassword(user);
114
115 MessageDialog.openConfirm(getShell(), Messages.UserInfoPerference_0, Messages.UserInfoPerference_8);
116 } catch (Exception e) {
117 // logger.error("password change", e); //$NON-NLS-1$
118 MessageDialog.openError(getShell(), "Confirm", e.getMessage()); //$NON-NLS-1$
119
120 return false;
121 }
122
123 return super.performOk();
124 }

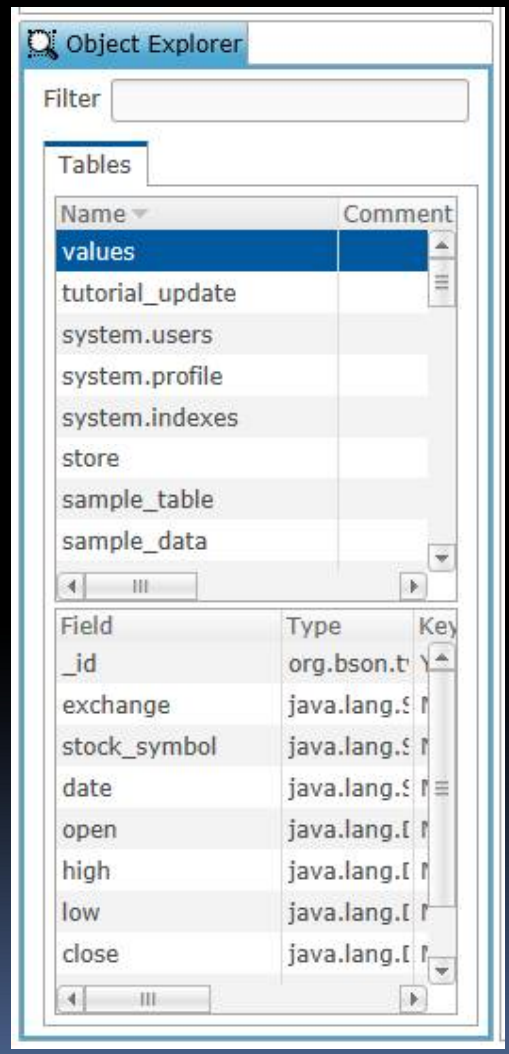
Command and Action



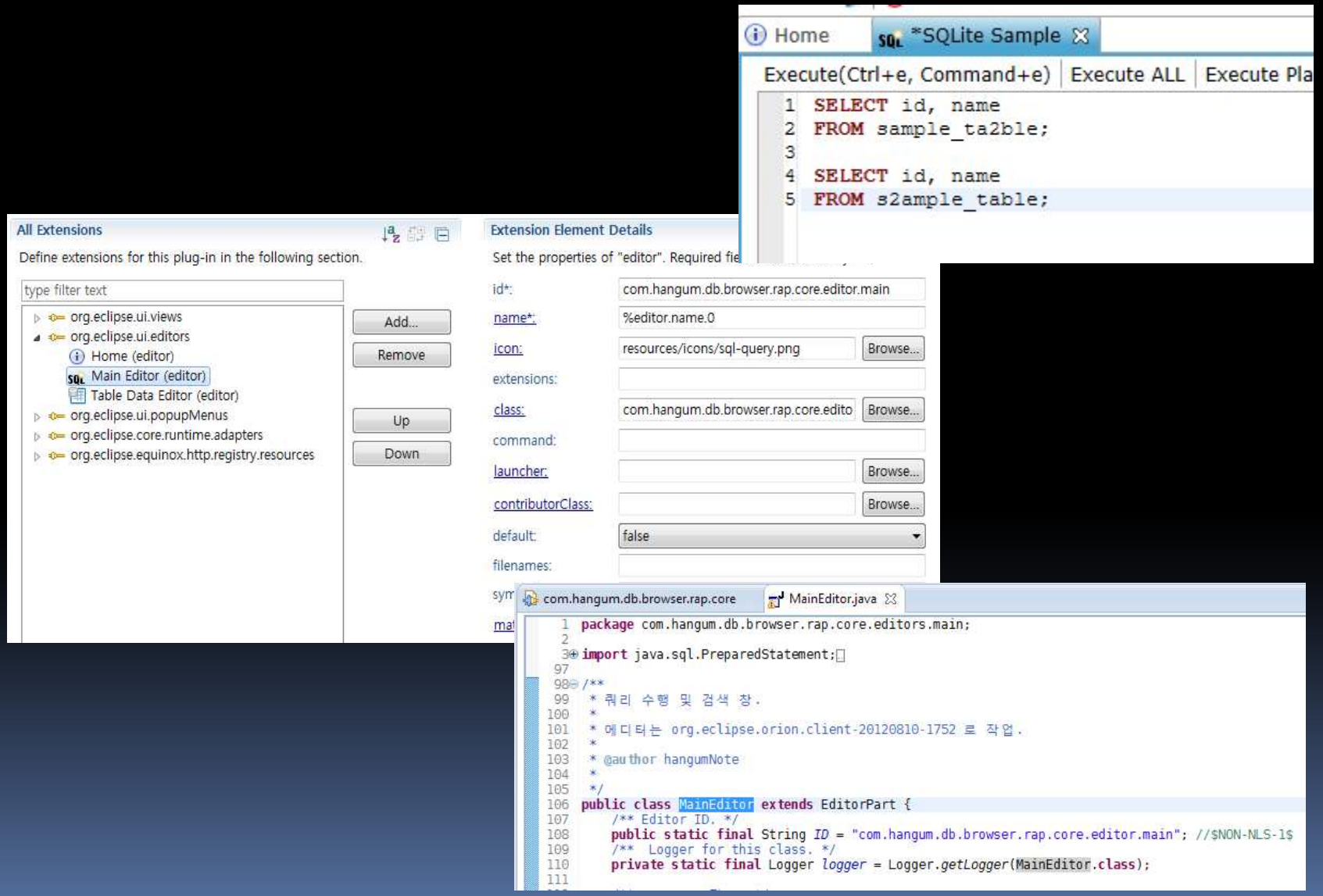
Viewer(Object Explorer)





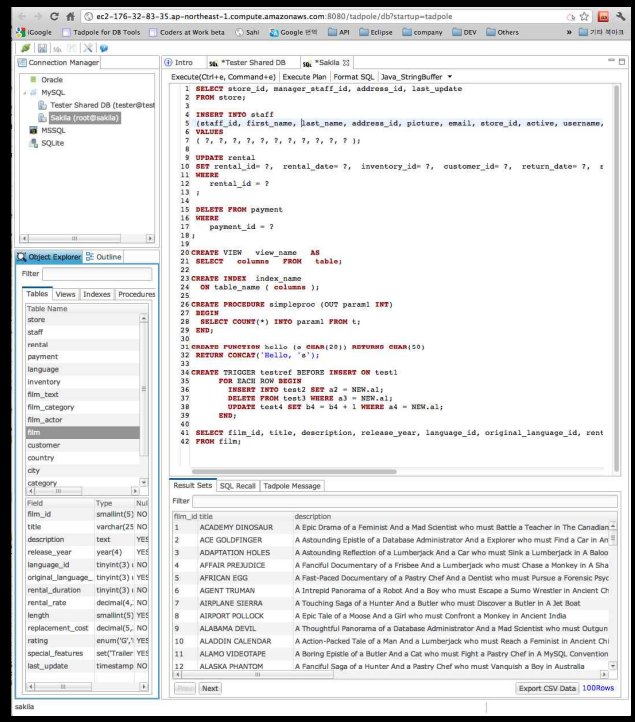


Editor(SQL Editor)



Perspective

- 화면(Viewer, Editor) 배치

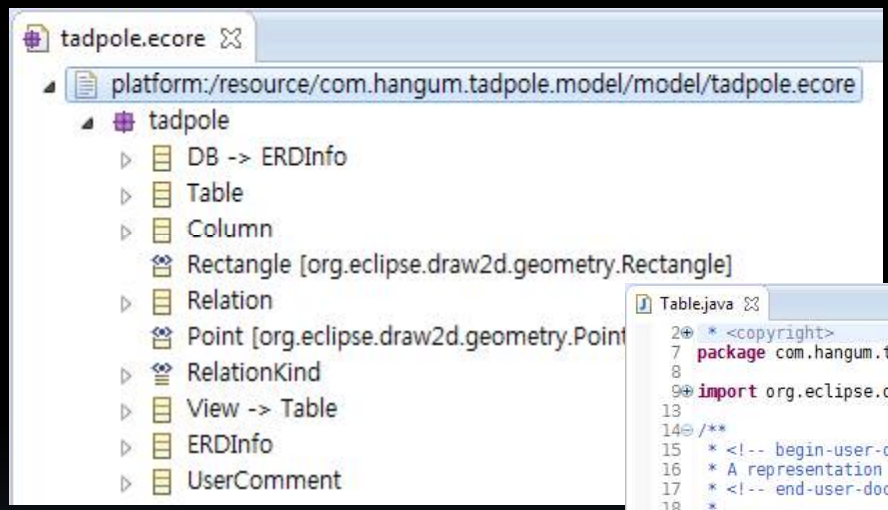


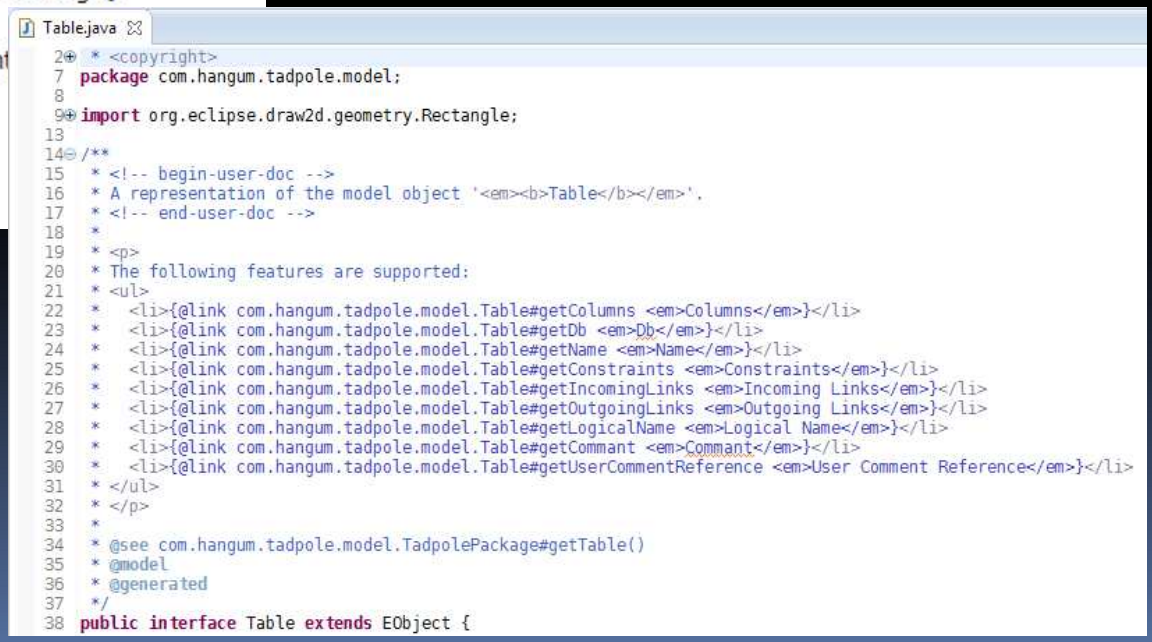
Perspective.java

```java
package com.hangum.db.browser.rap;

import org.eclipse.ui.IFolderLayout;

/**
 * Configures the perspective layout. This class is contributed
 * through the plugin.xml.
 */
public class Perspective implements IPerspectiveFactory {

    public void createInitialLayout(IPageLayout layout) {
        String editorArea = layout.getEditorArea();
        layout.setEditorAreaVisible(true);
        layout.setFixed(true);

        IFolderLayout leftFolder = layout.createFolder("id"+ManagerViewer.ID, IPageLayout.LEFT, 0.27f, editorArea);
        leftFolder.addView(ManagerViewer.ID);

        IFolderLayout leftUnderFolder = layout.createFolder("id"+ExplorerViewer.ID, IPageLayout.BOTTOM, 0.3f, "id"+ManagerViewer.ID);
        leftUnderFolder.addView(ExplorerViewer.ID);
//      leftUnderFolder.addView(IPageLayout.ID_OUTLINE);

    }
}
```

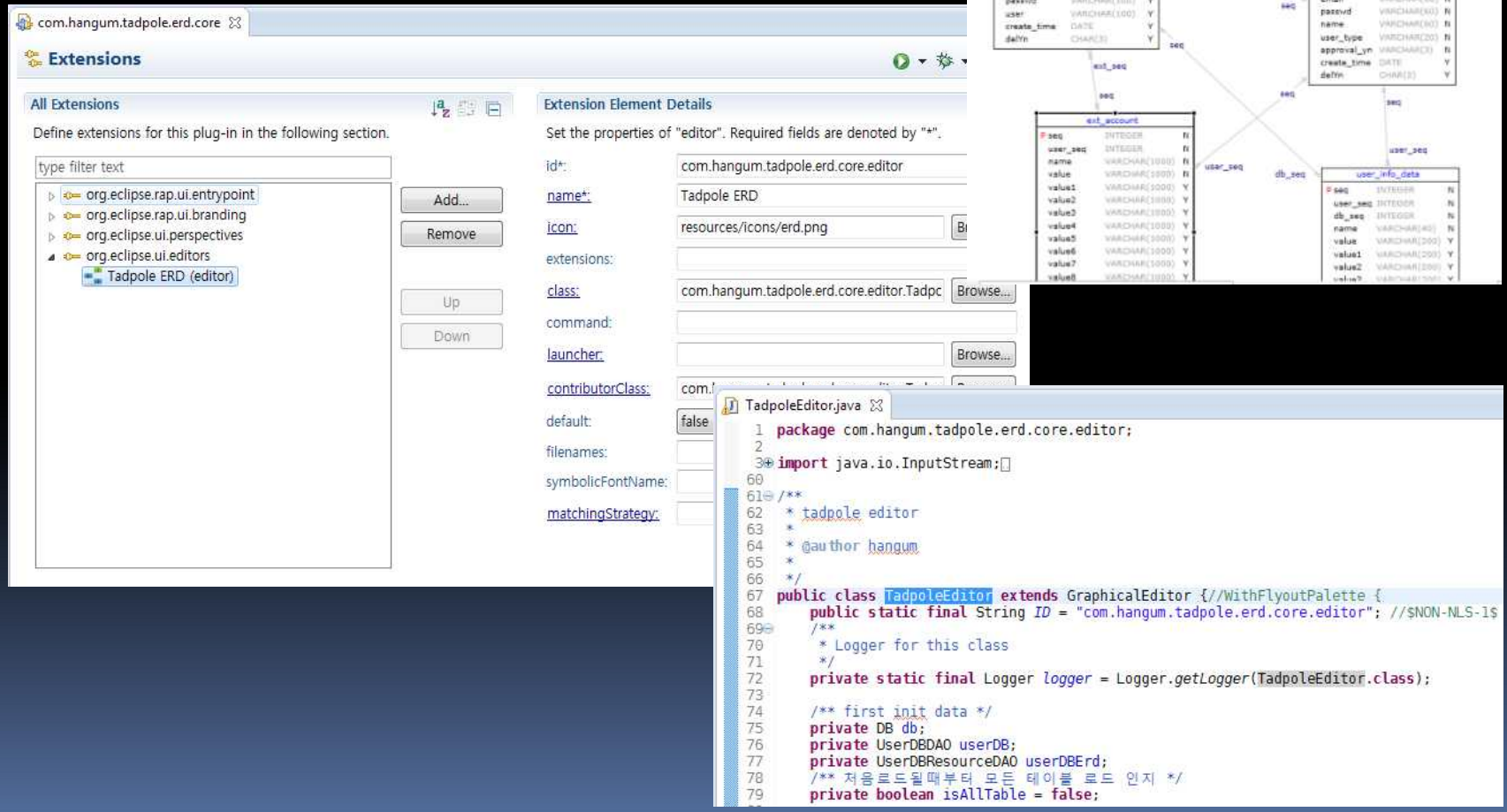
EMF(Data Modeling)

- Model to Java,Test code generation

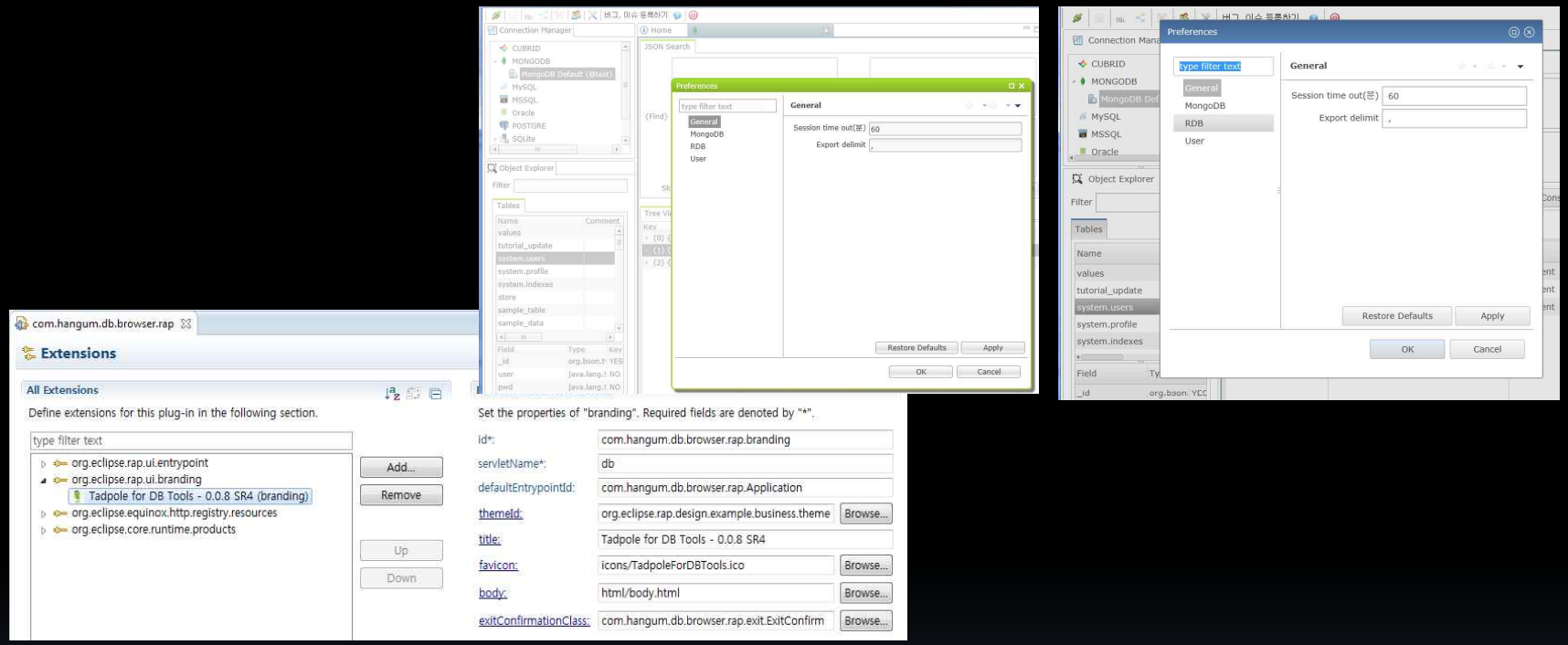


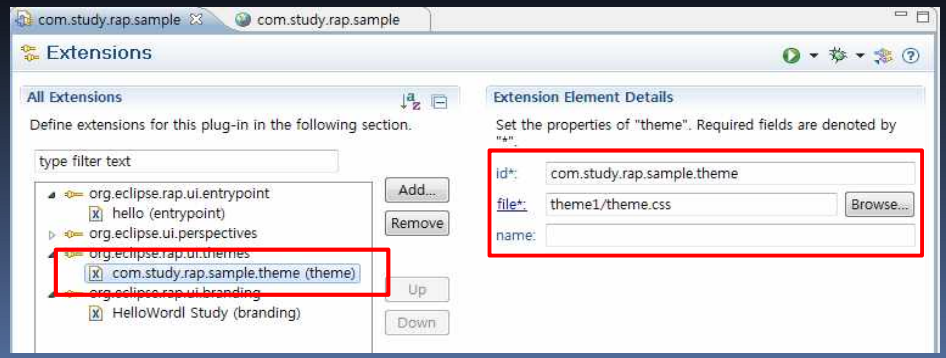


GEF(ERD)


com.hangum.tadpole.erd.core
Extensions
All Extensions
Define extensions for this plug-in in the following section.
type filter text
org.eclipse.rap.ui.entrypoint
org.eclipse.rap.ui.branding
org.eclipse.ui.perspectives
org.eclipse.ui.editors
Tadpole ERD (editor)
Add...
Remove
Up
Down
Extension Element Details
Set the properties of "editor". Required fields are denoted by "*".
id*: com.hangum.tadpole.erd.core.editor
name*: Tadpole ERD
icon: resources/icons/erd.png
extensions:
class: com.hangum.tadpole.erd.core.editor.Tadpc
Browse...
command:
launcher:
Browse...
contributorClass:
default: false
filenames:
symbolicFontName:
matchingStrategy:
TadpoleEditor.java
1 package com.hangum.tadpole.erd.core.editor;
2
3 import java.io.InputStream;
60
61 /**
62 * tadpole editor
63 *
64 * @author hangum
65 *
66 */
67 public class TadpoleEditor extends GraphicalEditor {//WithFlyoutPalette {
68 public static final String ID = "com.hangum.tadpole.erd.core.editor"; //$NON-NLS-1$
69 /**
70 * Logger for this class
71 */
72 private static final Logger logger = Logger.getLogger(TadpoleEditor.class);
73
74 /** first init data */
75 private DB db;
76 private UserDBDAO userDB;
77 private UserDBResourceDAO userDBErd;
78 /** 처음로드될때부터 모든 테이블 로드 인지 */
79 private boolean isAllTable = false;

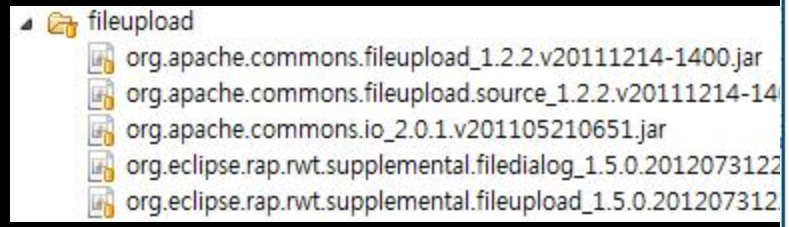
Themes(css)

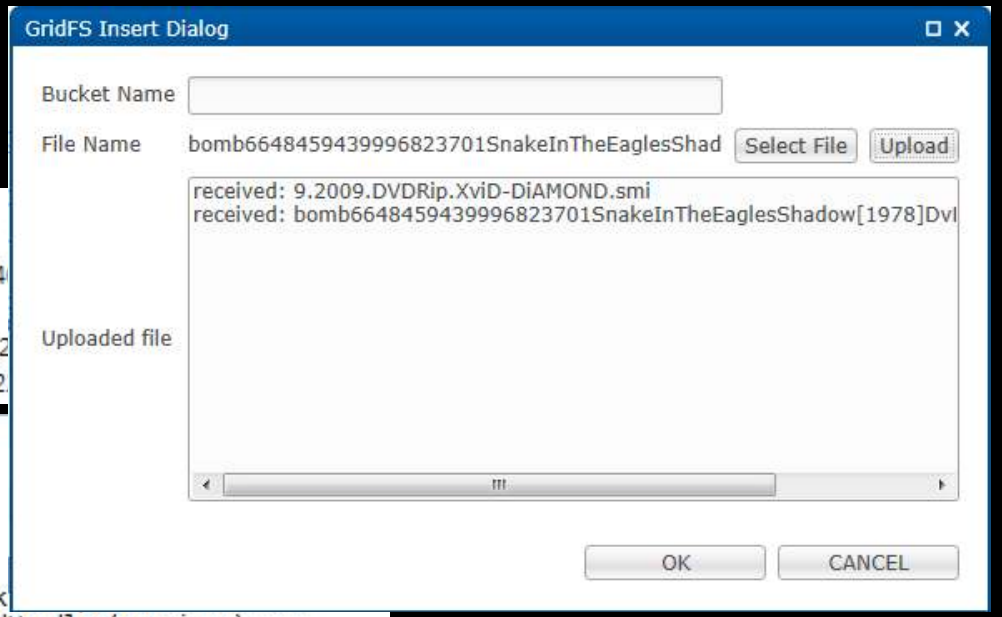





```
58 Button {
59   color: #705e42;
60   padding: 3px 6px 3px 4px;
61   font: bold 12px Arial, Helvetica, sans-serif;
62 }
```

File upload





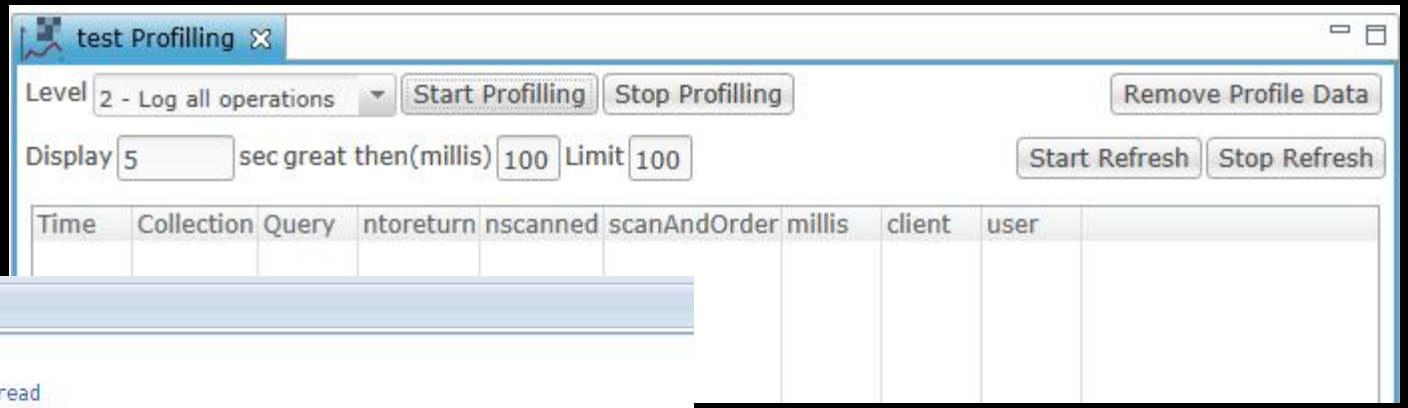

```
/**
 * 저장 이벤트
 *
 * @return
 */
private String startUploadReceiver() {
    final DiskFileUploadReceiver receiver = new Disk
    FileUploadHandler uploadHandler = new FileUploadHandler(receiver);
    uploadHandler.addUploadListener(new FileUploadListener() {

        public void uploadProgress(FileUploadEvent event) {
        }

        public void uploadFailed(FileUploadEvent event) {
            addToLog( "upload failed: " + event.getFileName() ); //$NON-NLS-1$
        }

        public void uploadFinished(FileUploadEvent event) {
            addToLog( "received: " + event.getFileName() ); //$NON-NLS-1$

            listFiles.add(receiver.getTargetFile().getAbsolutePath());
        }
    });

    return uploadHandler.getUploadUrl();
}
```

Session

- 사용자 로그인 정보
- 사용자 기초 정보

```
/**
 * 신규 user의 사용자를 등록
 *
 * @param email
 * @param name
 */
public static void newLogin(int groupSeq, int seq, String email, String passwo
    HttpSession sStore = RWT.getSessionStore().getHttpSession();

    sStore.setAttribute(SESSEION_NAME.GROUP_SEQ.toString(), groupSeq);
    sStore.setAttribute(SESSEION_NAME.SEQ.toString(), seq);
    sStore.setAttribute(SESSEION_NAME.LOGIN_EMAIL.toString(), email);
    sStore.setAttribute(SESSEION_NAME.LOGIN_PASSWORD.toString(), password);
    sStore.setAttribute(SESSEION_NAME.LOGIN_NAME.toString(), name);
    sStore.setAttribute(SESSEION_NAME.LOGIN_TYPE.toString(), userType);
    sStore.setAttribute(SESSEION_NAME.MANAGER_SEQ.toString(), managerSeq);
}

public static int getGroupSeq() {
    HttpSession sStore = RWT.getSessionStore().getHttpSession();
    return (Integer)sStore.getAttribute(SESSEION_NAME.GROUP_SEQ.toString());
}
```

Server Push(UICallback)

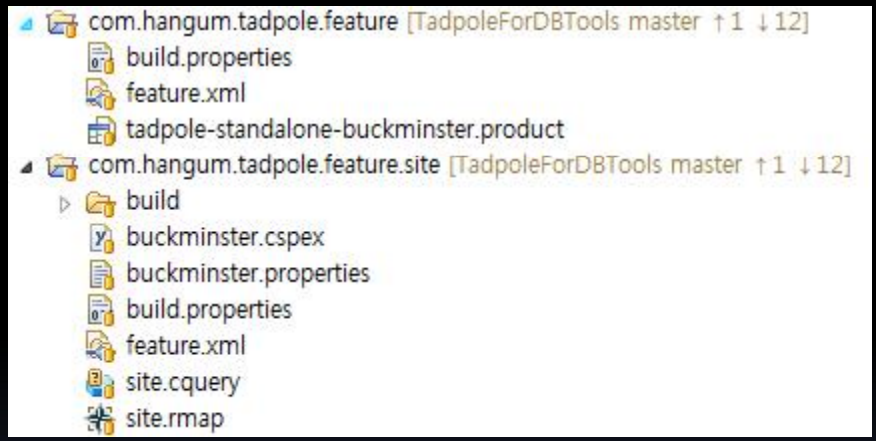


ProfillingEditor.java

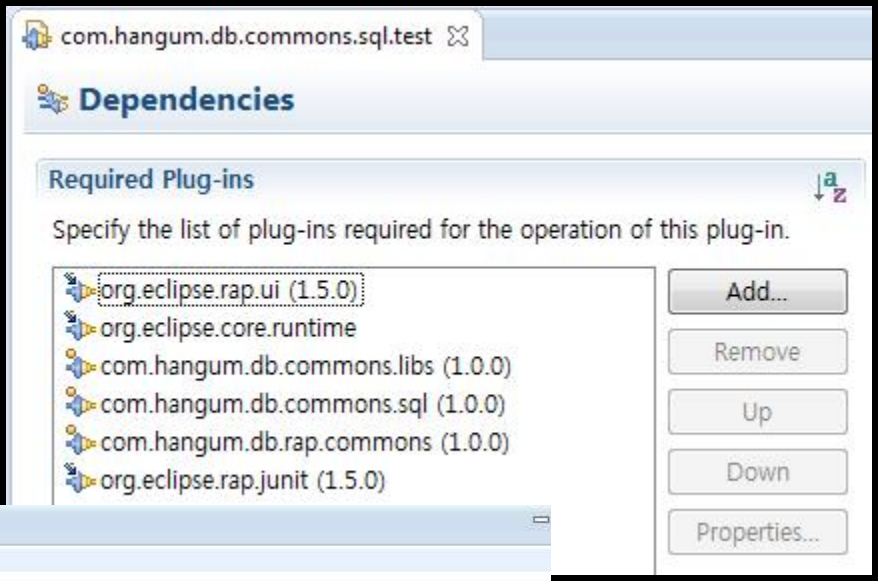
```
234
235     /**
236      * start ui thread
237      */
238     private void startUIThread() {
239         synchronized(tableViewerResult) {
240             if(!boolUIThreadRunning) {
241                 UICallBack.activate(ProfillingUICallbackID);
242                 notifierThread = new Thread(createRunnable());
243                 notifierThread.setDaemon(true);
244                 notifierThread.start();
245             }
246         }
247     }
248
249     /**
250      * stop ui thread
251      */
252     private void stopUIThread() {
253         synchronized(tableViewerResult) {
254             logger.debug("[stopUIThread] stop thread");
255             boolUIThreadRunning = false;
256         }
257     }
258
259     /**
260      * notifier runnable
261      */
262     private Runnable createRunnable() {
263         final int refreshSec = Integer.parseInt(textRefresh.getText()) * 1000;
264
265         return new Runnable() {
266             public void run() {
```

feature

- 제품의 구조 정의
  - 제품의 배포
  - 제품의 업데이트



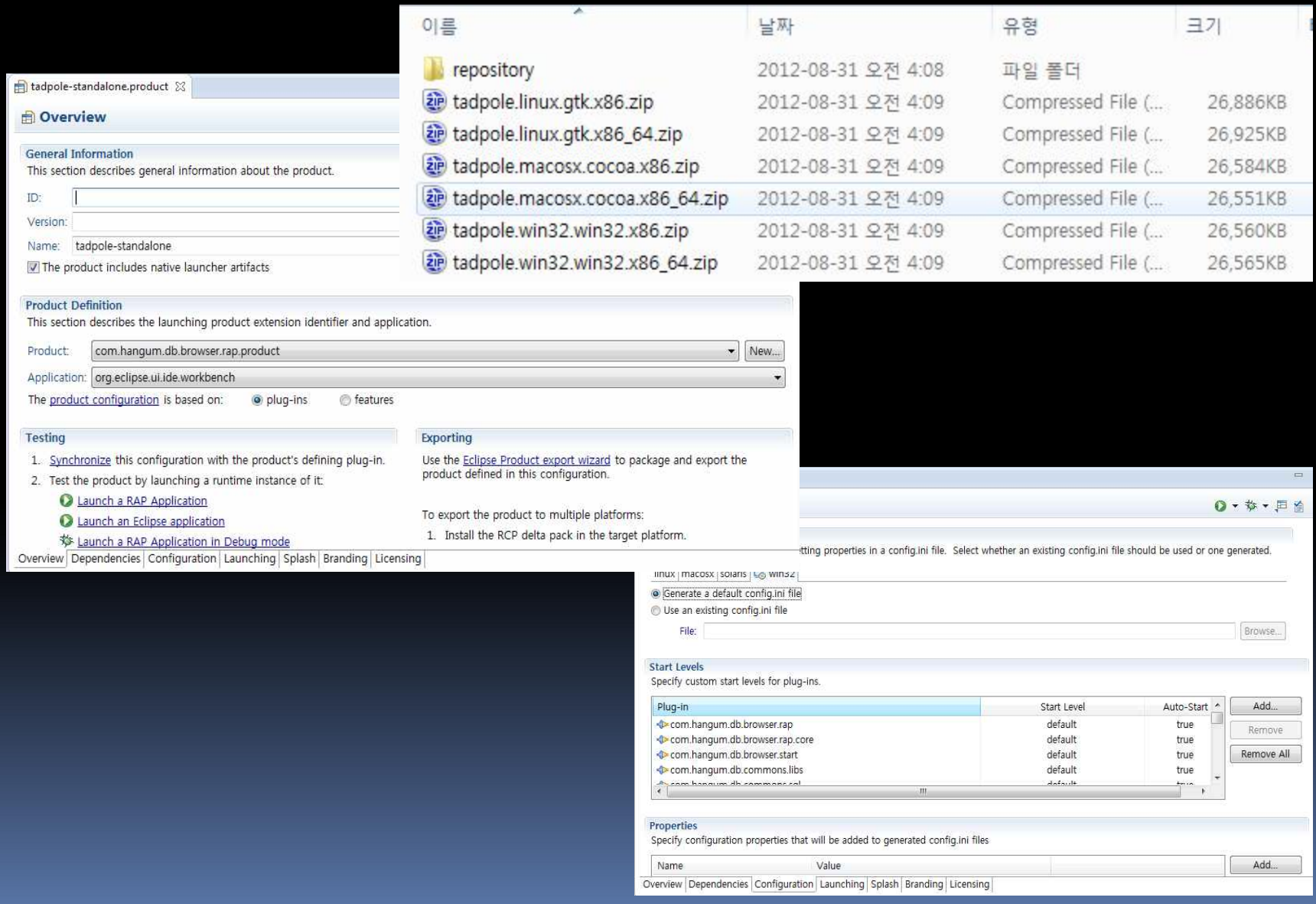
Test



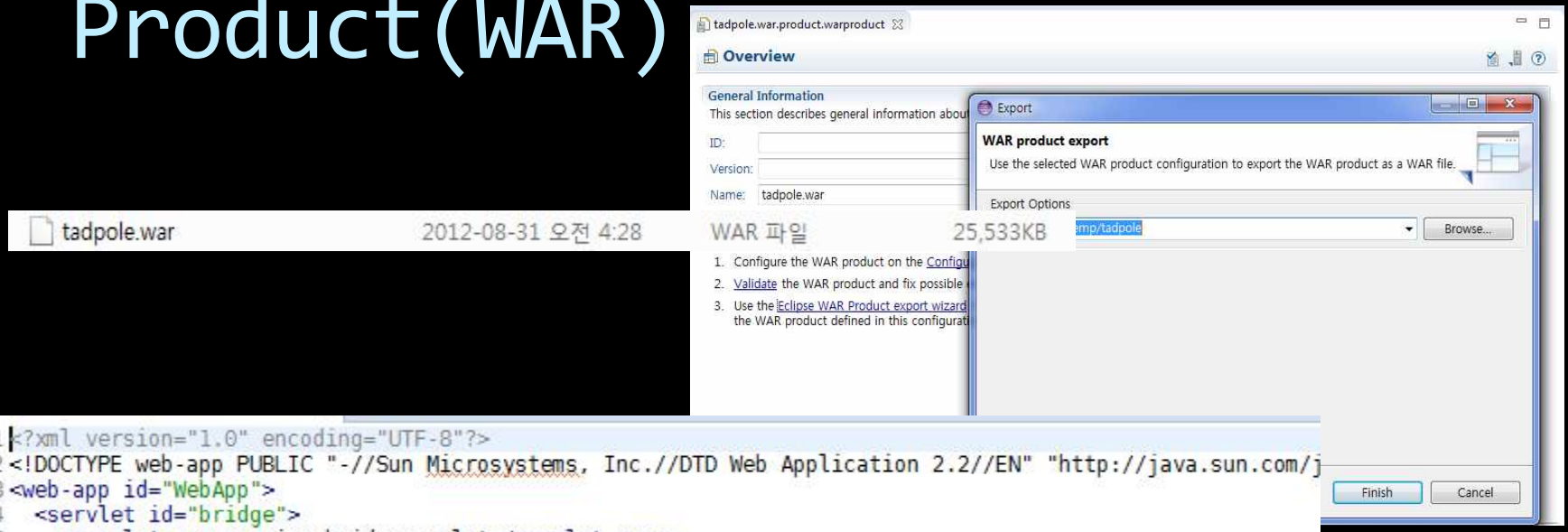
TadpoleSystem_UserDBQueryTest.java

```
 1 package com.hangum.db.system;
 2
 3 import java.util.List;
 9
10 /**
11  * {@link com.hangum.db.system.TadpoleSystem_UserDBQuery 시스템 UserDB 테스트}
12  *
13  * @author hangum
14  *
15  */
16 public class TadpoleSystem_UserDBQueryTest extends TestCase {
17     public UserDBDAO userDb = null;
18     public int groupSeq = 0;
19
21     protected void setUp() throws Exception {
44
45     /**
46      * {@link com.hangum.db.system.TadpoleSystem_UserDBQuery#newUserDB(UserDBDAO) UserDB등록 테스트}
47      */
48     public void testNewUserDB() {
49         UserDBDAO userDb2 = TadpoleSystemConnector.getUserDB();
50         userDb2.setDisplay_name("junit testName");
51
52         try {
53             userDb = TadpoleSystem_UserDBQuery.newUserDB(userDb2, groupSeq);
54
55             assertNotNull(userDb);
56         } catch (Exception e) {
57             e.printStackTrace();
58             fail("newUserDB exception");
59         }
60     }
61
62     /**
63      * {@link com.hangum.db.system.TadpoleSystem_UserDBQuery#getUserDB(int) 세션의 데이터를 가져오기위한 코드인데
```

Product(Standalone)



Product(WAR)




```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE web-app PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application 2.2//EN" "http://java.sun.com/j
<web-app id="WebApp">
  <servlet id="bridge">
    <servlet-name>equinoxbridgeservlet</servlet-name>
    <display-name>Equinox Bridge Servlet</display-name>
    <description>Equinox Bridge Servlet</description>
    <servlet-class>org.eclipse.equinox.servletbridge.BridgeServlet</servlet-class>

    <!-- Framework Controls could be useful for testing purpose, but
         we disable it per default -->
    <init-param>
      <param-name>enableFrameworkControls</param-name>
      <param-value>false</param-value>
    </init-param>

    <!-- Enable multi-language support for the extension registry -->
    <!-- the OSGi console is useful for trouble shooting but will fill up your
         appserver log quickly, so deactivate on production use. Uncomment
         the -console parameter to enabled OSGi console access.  -->
    <init-param>
      <param-name>commandline</param-name>
      <param-value>-registryMultiLanguage -consolelog -test -debuglog -ws rap</param-value>
    </init-param>

    <load-on-startup>1</load-on-startup>
  </servlet>
```