INF6306
Patrons pour la compréhension de programme

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1 Identification

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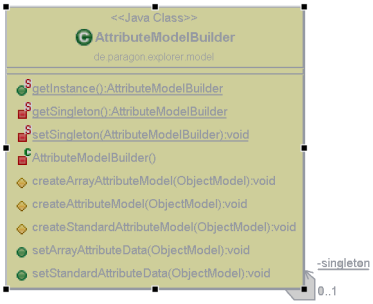
Date: November 04, 2018.

Practice 1

2 Practice 1

Singleton:

The following Singleton pattern was found in the following instance: 'w.tools.explorer.model.AttributeModelBuilder::singleton:fw.tools.explorer.model.AttributeModelBuilder'



The pattern involves a single class which create and object like while making sure that only single object is created.

In the next source code we can see its creating a single instance with the createAttributeModel function and its getting it in the AttributeModelBuilder:

```
package de.paragon.explorer.model;

import java.lang.reflect.Field;
```

```
import java.util.Collections;
import java.util.Vector;

import de.paragon.explorer.util.StandardEnumeration;

public final class AttributeModelBuilder {
private static AttributeModelBuilder singleton;

public static AttributeModelBuilder getInstance() {
return AttributeModelBuilder.getSingleton();
}

private static AttributeModelBuilder getSingleton() {
if (AttributeModelBuilder.singleton == null) {
AttributeModelBuilder.setSingleton(new AttributeModelBuilder());
}
return AttributeModelBuilder.singleton;
}

private static void setSingleton(AttributeModelBuilder builder) {
AttributeModelBuilder.singleton = builder;
}

private AttributeModelBuilder() {
super();
}

protected void createArrayAttributeModel(ObjectModel objModl) {
AttributeModel attrModl = new ArrayAttributeModel();
objModl.addAttributeModel(attrModl);
attrModl.setObjectModel(objModl);
}

/**
 * Kommentar: Diese Methode geht davon aus, dass das ObjectModel bereits mit
 * einem Object versehen ist. Fuer jedes Feld dieses Objects erzeugt sie ein
 * neues AttributeModel und verknuepft es mit dem ObjectModel.
 */
protected void createAttributeModel(ObjectModel objModl) {
AttributeModel attrModl = new AttributeModel();
objModl.addAttributeModel(attrModl);
attrModl.setObjectModel(objModl);
}

protected void createStandardAttributeModel(ObjectModel objModl) {
```

```
AttributeModel attrModl = new StandardAttributeModel();
objModl.addAttributeModel(attrModl);
attrModl.setObjectModel(objModl);
}

/**
 * Kommentar: Diese Methode geht davon aus, das bereits fuer jedes Feld des
 * Objects in objectModel ein AttributeModel er- zeugt wurde. Jedem dieser
 * AttributeModels wird der jeweilige Wert des Feldes zugewiesen.
 */
public void setArrayAttributeData(ObjectModel objModl) {
int i = 0;
// Object aObject;
StandardEnumeration attrModls = objModl.getAttributeModels();
while (attrModls.hasMoreElements()) {
ArrayAttributeModel attrModl = (ArrayAttributeModel) attrModls.nextElement();
// aObject = Array.get(objModl.getObject(), i);
attrModl.setPos(i);
attrModl.setName("[" + (Integer.valueOf(i)).toString() + "]");
attrModl.setType(objModl.getObject().getClass().getComponentType());
// if (aObject != null) {
// attrModl.setValue(aObject);
// } else {
// attrModl.setValue(NullObject.getNullObject());
// }
i = i + 1;
}
}

/**
 * Kommentar: Diese Methode geht davon aus, das bereits fuer jedes Feld des
 * Objects in objectModel ein AttributeModel erzeugt wurde. Jedem dieser
 * AttributeModels wird der jeweilige Wert des Feldes zugewiesen.
 */
public void setStandardAttributeData(ObjectModel objModl) {
int i = 0;
// Object aObject;
Field field;
StandardEnumeration attrModls = objModl.getAttributeModels();
Vector<Field> fields = objModl.getDeclaredFields();
while (attrModls.hasMoreElements()) {
StandardAttributeModel attrModl = (StandardAttributeModel) attrModls.nextElement();
field = fields.elementAt(i);
attrModl.setField(field);
attrModl.setModifiers(field.getModifiers());
```

```
attrModl.setType(field.getType());
attrModl.setName(field.getName());
i = i + 1;
}
Vector<AttributeModel> vector2set = new Vector<AttributeModel>();
Vector<?> vector2transfer = attrModls.getVector();
for (Object object2 : vector2transfer) {
vector2set.add((AttributeModel) object2);
}
Vector<AttributeModel> vector = vector2set;
Collections.sort(vector, new AttributeModelComparator());
}
}
```