Факультет ИУ "Информатика и системы управления"

Кафедра ИУ-3 "Информационные системы и телекоммуникации"

Отчет к лабораторной работе №5

по курсу "**Разработка программного обеспечения**"

направления 2304000062

# " [Расширение Eclipse своими плагинами](http://www.agentlab.ru/confluence/pages/viewpage.action?pageId=55771143)"

Продолжительность 4 часа.

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# Цели лабораторной работы

* Углубление навыков работы с системой контроля версий
* Ознакомление на практике с основами графовых БД и технологий Semantic Web

# Задание

1. Чтобы познакомиться с технологией выполните указания обучающего материала

* [Extending the Eclipse IDE - Plug-in development](http://www.vogella.com/tutorials/EclipsePlugIn/article.html)

2. Откройте Eclipse и обновите локальную копию репозитария

* В перспективе Git, надо сделать Pull

3. Переключитесь на стандартную целевую платформу Eclipse

* Настройки Eclipse > Plug-in Development > Target Platform, установить **Running Platform**

4. Импортируйте в Workspace проекты:

* **ru.agentlab.jfxed**
* **ru.agentlab.jfxed.figures**
* **ru.agentlab.jfxed.figures.class**

4. Запустите редактор

* Конфигурация запуска **Eclipse Jfxed**

Исходный код программы:

package ru.agentlab.jfxed.diagramms.IntroductoryViewpoint

import com.hp.hpl.jena.ontology.OntModel

import com.hp.hpl.jena.query.QueryExecutionFactory

import com.hp.hpl.jena.query.QueryFactory

import com.hp.hpl.jena.query.QuerySolution

import com.hp.hpl.jena.rdf.model.Resource

import de.fxdiagram.core.XDiagram

import ru.agentlab.jfxed.IDiagram

import ru.agentlab.jfxed.figures.product.Rectangle

public class Diagram implements IDiagram {

static String SOURCE = "http://www.agentlab.ru/jfxed/onto/savedowl"

override createJfx(OntModel jenaModel, XDiagram jfxDiagram) {

val queryString ='''

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

select ?uri

where {

?uri rdf:type <«SOURCE»#BusinessActor>

}

'''

val query = QueryFactory.create(queryString)

// Execute the query and obtain results

val qe = QueryExecutionFactory.create(query, jenaModel)

val results = qe.execSelect()

for ( ; results.hasNext() ; )

{

val QuerySolution soln = results.nextSolution()

val Resource x = soln.getResource("uri") // Get a result variable by name.

val target = new Rectangle() => [

layoutX = 280

layoutY = 280

name = x.localName

]

jfxDiagram => [

nodes += target

]

}

qe.close()

}

}

<?xml version="1.0"?>

<!DOCTYPE rdf:RDF [

<!ENTITY owl "http://www.w3.org/2002/07/owl#" >

<!ENTITY xsd "http://www.w3.org/2001/XMLSchema#" >

<!ENTITY rdfs "http://www.w3.org/2000/01/rdf-schema#" >

<!ENTITY j.0 "http://www.agentlab.ru/jfxed/onto/savedowl#" >

<!ENTITY rdf "http://www.w3.org/1999/02/22-rdf-syntax-ns#" >

<!ENTITY ontology "http://www.agentlab.ru/jfxed/onto/savedowl#" >

]>

<rdf:RDF xmlns="http://www.agentlab.ru/jfxed/onto/savedowl#"

xml:base="http://www.agentlab.ru/jfxed/onto/savedowl"

xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"

xmlns:owl="http://www.w3.org/2002/07/owl#"

xmlns:xsd="http://www.w3.org/2001/XMLSchema#"

xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"

xmlns:j.0="http://www.agentlab.ru/jfxed/onto/savedowl#">

<owl:Ontology rdf:about="http://www.agentlab.ru/jfxed/onto/savedowl"/>

<!--

///////////////////////////////////////////////////////////////////////////////////////

//

// Object Properties

//

///////////////////////////////////////////////////////////////////////////////////////

-->

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#propFrom -->

<owl:ObjectProperty rdf:about="&j.0;propFrom">

<rdfs:domain rdf:resource="&j.0;BusinessActor"/>

<rdfs:range rdf:resource="&j.0;BusinessActor"/>

<rdfs:domain rdf:resource="&j.0;Composition"/>

</owl:ObjectProperty>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#propTo -->

<owl:ObjectProperty rdf:about="&j.0;propTo">

<rdfs:domain rdf:resource="&j.0;BusinessActor"/>

<rdfs:range rdf:resource="&j.0;BusinessActor"/>

<rdfs:domain rdf:resource="&j.0;Composition"/>

</owl:ObjectProperty>

<!--

///////////////////////////////////////////////////////////////////////////////////////

//

// Classes

//

///////////////////////////////////////////////////////////////////////////////////////

-->

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#Association -->

<owl:Class rdf:about="&j.0;Association"/>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#BusinessActor -->

<owl:Class rdf:about="&j.0;BusinessActor"/>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#Composition -->

<owl:Class rdf:about="&j.0;Composition">

<rdfs:subClassOf rdf:resource="&j.0;Association"/>

</owl:Class>

<!--

///////////////////////////////////////////////////////////////////////////////////////

//

// Individuals

//

///////////////////////////////////////////////////////////////////////////////////////

-->

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#Archiusrance -->

<owl:NamedIndividual rdf:about="&j.0;Archiusrance">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#BackOffice -->

<owl:NamedIndividual rdf:about="&j.0;BackOffice">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#Car -->

<owl:NamedIndividual rdf:about="&j.0;Car">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#CustomerRelations -->

<owl:NamedIndividual rdf:about="&j.0;CustomerRelations">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#DocumentProcessingSsc -->

<owl:NamedIndividual rdf:about="&j.0;DocumentProcessingSsc">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#Finance -->

<owl:NamedIndividual rdf:about="&j.0;Finance">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#FrontOffice -->

<owl:NamedIndividual rdf:about="&j.0;FrontOffice">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#HRM -->

<owl:NamedIndividual rdf:about="&j.0;HRM">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#HomeAway -->

<owl:NamedIndividual rdf:about="&j.0;HomeAway">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#IntermediaryRelations -->

<owl:NamedIndividual rdf:about="&j.0;IntermediaryRelations">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#LegalAid -->

<owl:NamedIndividual rdf:about="&j.0;LegalAid">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#ProductDevelopment -->

<owl:NamedIndividual rdf:about="&j.0;ProductDevelopment">

<rdf:type rdf:resource="&j.0;BusinessActor"/>

</owl:NamedIndividual>

<!-- http://www.agentlab.ru/jfxed/onto/savedowl#compositionIndividual -->

<owl:NamedIndividual rdf:about="&j.0;compositionIndividual">

<rdf:type rdf:resource="&j.0;Composition"/>

<propTo rdf:resource="&j.0;Archiusrance"/>

<propFrom rdf:resource="&j.0;BackOffice"/>

<propTo rdf:resource="&j.0;BackOffice"/>

<propFrom rdf:resource="&j.0;Car"/>

<propTo rdf:resource="&j.0;Car"/>

<propTo rdf:resource="&j.0;CustomerRelations"/>

<propFrom rdf:resource="&j.0;CustomerRelations"/>

<propFrom rdf:resource="&j.0;DocumentProcessingSsc"/>

<propFrom rdf:resource="&j.0;Finance"/>

<propTo rdf:resource="&j.0;FrontOffice"/>

<propFrom rdf:resource="&j.0;FrontOffice"/>

<propFrom rdf:resource="&j.0;HRM"/>

<propTo rdf:resource="&j.0;HomeAway"/>

<propFrom rdf:resource="&j.0;HomeAway"/>

<propTo rdf:resource="&j.0;IntermediaryRelations"/>

<propFrom rdf:resource="&j.0;IntermediaryRelations"/>

<propFrom rdf:resource="&j.0;LegalAid"/>

<propTo rdf:resource="&j.0;LegalAid"/>

<propFrom rdf:resource="&j.0;ProductDevelopment"/>

</owl:NamedIndividual>

</rdf:RDF>

<!-- Generated by the OWL API (version 3.5.0) http://owlapi.sourceforge.net -->

package ru.agentlab.jfxed.diagramms.IntroductoryViewpoint;

import com.hp.hpl.jena.ontology.OntModel;

import com.hp.hpl.jena.query.Query;

import com.hp.hpl.jena.query.QueryExecution;

import com.hp.hpl.jena.query.QueryExecutionFactory;

import com.hp.hpl.jena.query.QueryFactory;

import com.hp.hpl.jena.query.QuerySolution;

import com.hp.hpl.jena.query.ResultSet;

import com.hp.hpl.jena.rdf.model.Resource;

import de.fxdiagram.core.XDiagram;

import de.fxdiagram.core.XNode;

import javafx.collections.ObservableList;

import org.eclipse.xtend2.lib.StringConcatenation;

import org.eclipse.xtext.xbase.lib.ObjectExtensions;

import org.eclipse.xtext.xbase.lib.Procedures.Procedure1;

import ru.agentlab.jfxed.IDiagram;

import ru.agentlab.jfxed.figures.product.Rectangle;

@SuppressWarnings("all")

public class Diagram implements IDiagram {

private static String SOURCE = "http://www.agentlab.ru/jfxed/onto/savedowl";

public void createJfx(final OntModel jenaModel, final XDiagram jfxDiagram) {

StringConcatenation \_builder = new StringConcatenation();

\_builder.append("PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> ");

\_builder.newLine();

\_builder.append("select ?uri ");

\_builder.newLine();

\_builder.append("where { ");

\_builder.newLine();

\_builder.append("\t");

\_builder.append("?uri rdf:type <");

\_builder.append(Diagram.SOURCE, "\t");

\_builder.append("#BusinessActor> ");

\_builder.newLineIfNotEmpty();

\_builder.append("} ");

\_builder.newLine();

final String queryString = \_builder.toString();

final Query query = QueryFactory.create(queryString);

final QueryExecution qe = QueryExecutionFactory.create(query, jenaModel);

final ResultSet results = qe.execSelect();

for (; results.hasNext();) {

{

final QuerySolution soln = results.nextSolution();

final Resource x = soln.getResource("uri");

Rectangle \_rectangle = new Rectangle();

final Procedure1<Rectangle> \_function = new Procedure1<Rectangle>() {

public void apply(final Rectangle it) {

it.setLayoutX(280);

it.setLayoutY(280);

String \_localName = x.getLocalName();

it.setName(\_localName);

}

};

final Rectangle target = ObjectExtensions.<Rectangle>operator\_doubleArrow(\_rectangle, \_function);

final Procedure1<XDiagram> \_function\_1 = new Procedure1<XDiagram>() {

public void apply(final XDiagram it) {

ObservableList<XNode> \_nodes = it.getNodes();

\_nodes.add(target);

}

};

ObjectExtensions.<XDiagram>operator\_doubleArrow(jfxDiagram, \_function\_1);

}

}

qe.close();

}

}

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