

# Eclipse with UIMA workbench

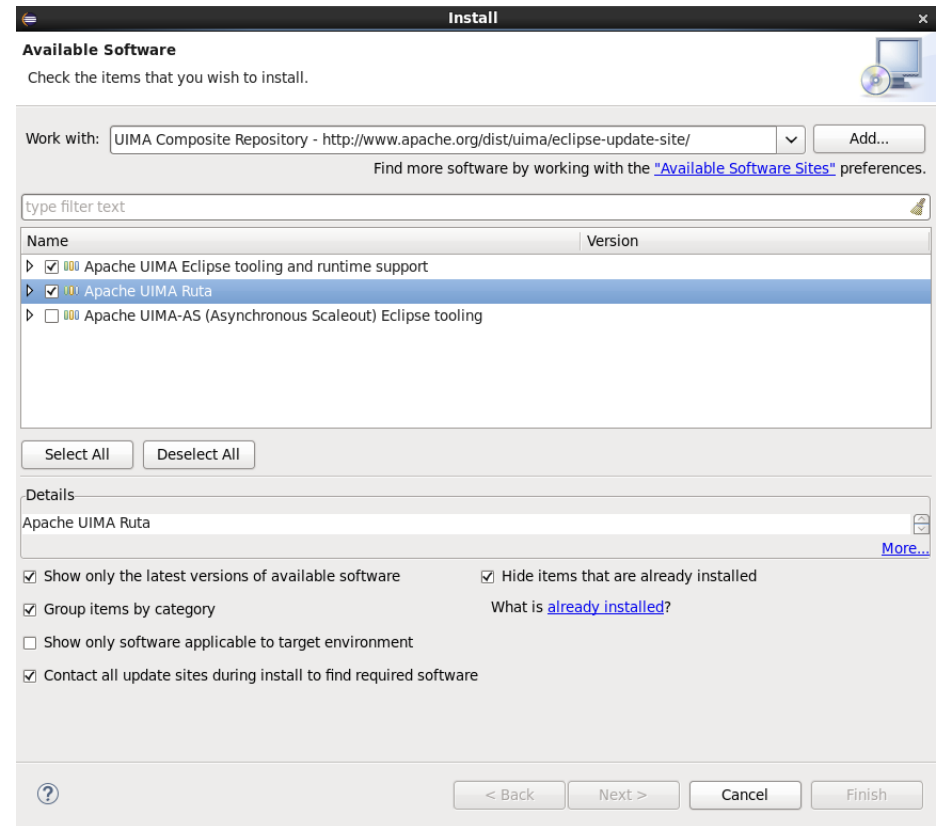


# Agenda

- Eclipse setup
- UIMA Ruta sample project
- UIMA Ruta sample PEAR creation

# UIMA Ruta Workbench installation

- Get Eclipse Luna (for Java) from [eclipse.org](http://eclipse.org).
- Start Eclipse
- Install UIMS Ruta plugin:  
Help->Install new software -> Add  
<http://www.apache.org/dist/uima/eclipse-update-site/> -> select “Apache UIMA Ruta” and “Apache UIMA Eclipse tooling and runtime support”, install
- Restart Eclipse

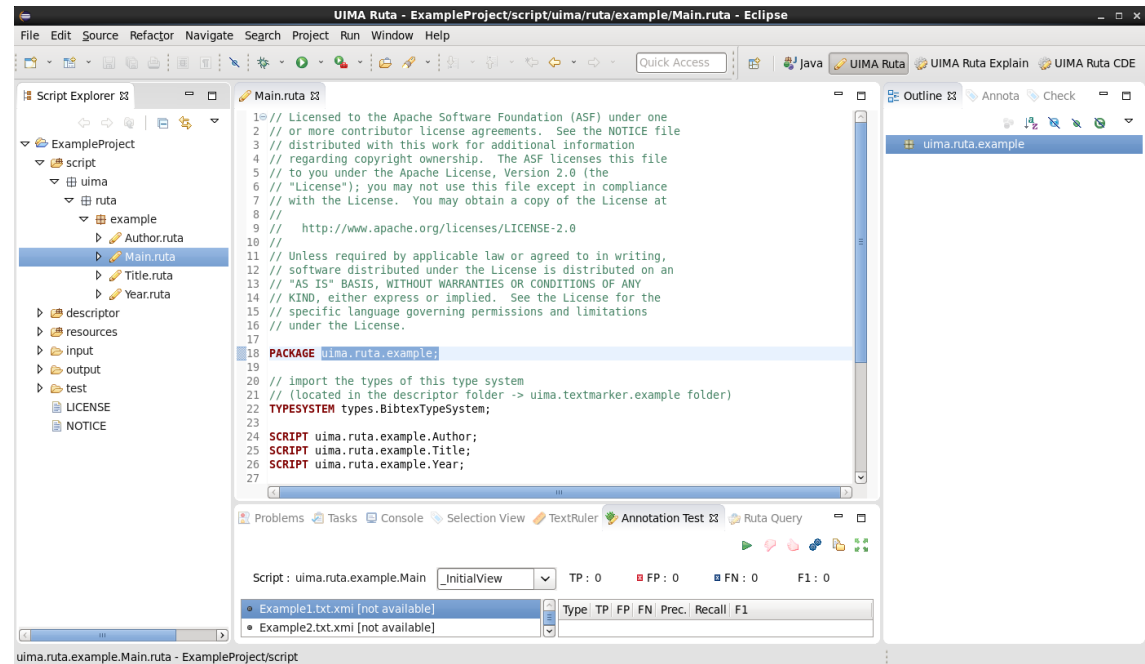


# Load UIMA Ruta ExampleProject

- Download sources from <https://uima.apache.org/downloads.cgi#Latest%20Official%20Releases>  
UIMA Ruta 2.4.0 zip and unzip under /home/streamsadmin/UIMA-Ruta/
- Eclipse->File->Import...->General-> Existing project into workspace: /home/streamsadmin/UIMA-Ruta/ruta-2.4.0/example-projects/ExampleProject
- Perspectives: UIMA Ruta, UIMA Ruta Explain, UIMA Ruta CDE

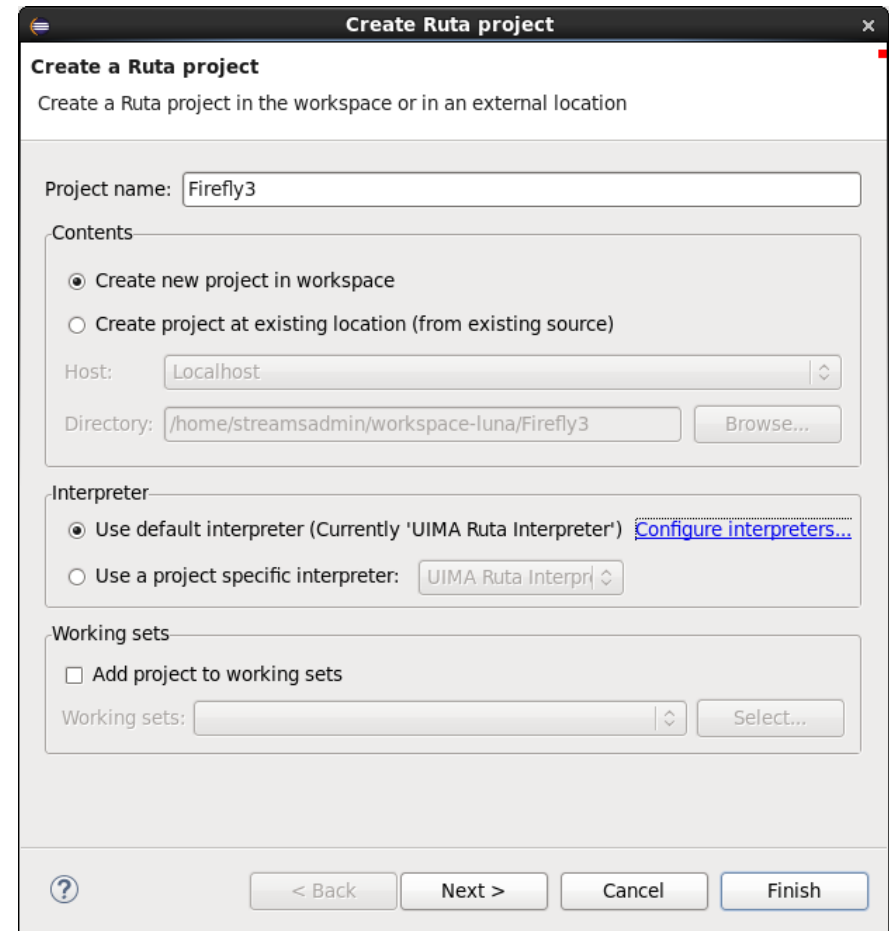
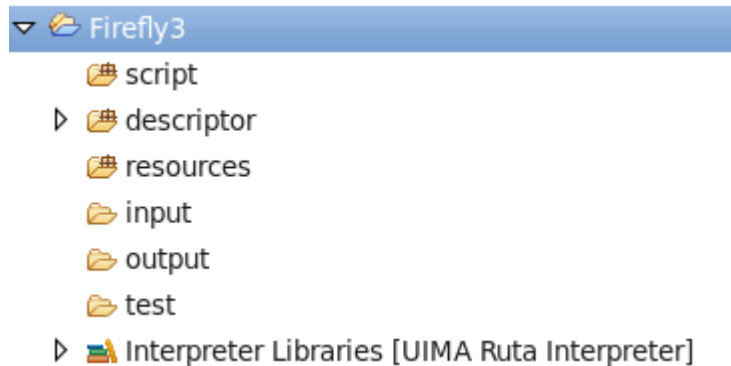
- Views:

- Annotation Test
- Applied Rules
- Check Annotations
- Covering Rules
- Created By
- Failed Rules
- False Negative
- False Positive
- Matched Rules
- Rule Elements
- Rule List
- Statistics
- Ruta Query
- TextRuler
- TextRuler Results
- True Positive



# UIMA Ruta create project wizard

- Eclipse: File → New → UIMA Ruta Project  
give a project name, Finish
- That results in the following project folder structure:



## A first sample UIMA Ruta project

- Create a new package under Firefly3->script  
File->New->UIMA Ruta package, name it e.g. uima.ruta.firefly3, Finish
- Create a new file under package Firefly3->script->uima.ruta.firefly3  
File->New->UIMA Ruta File, name it e.g. Main.ruta, Finish
  - Enter script text, e.g.
 

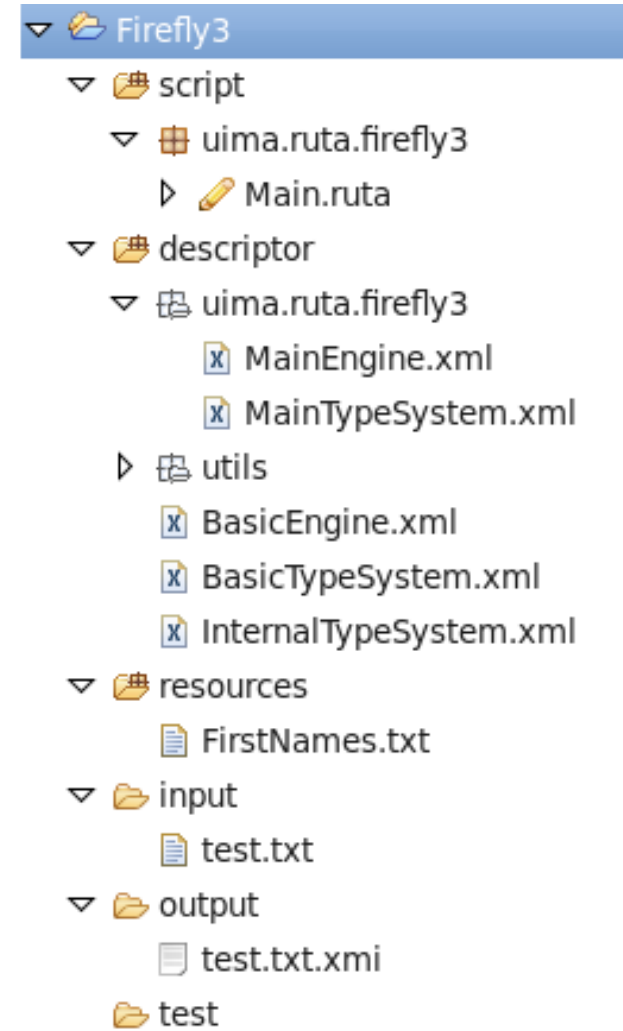
```
PACKAGE uima.ruta.firefly3;
WORDLIST FirstNameList = 'FirstNames.txt';
DECLARE FirstName, PersName;
Document{-> MARKFAST(FirstName, FirstNameList)};
(FirstName CW?) {-> MARK(PersName)};
```
- Create the resource referenced in the script under Firefly3->resources  
File->New->File, name it as used in the script: FirstNames.txt
  - Enter some first names – one per line, e.g.
 

```
Klaus
Lisa
```
- Create a sample input text under Firefly3->input  
File->New->File, name it e.g. test.txt
  - Enter some test text containing names, e.g.
 

```
Klaus Kleber is reading the news. Lisa Parker listens.
```
- Build the project: Select Firefly3, Project -> Build Project
  - That generates 2 new files
 

```
Firefly3->descriptor->uima.ruta.firefly3->MainEngine.xml
Firefly3->descriptor->uima.ruta.firefly3->MainTypeSystem.xml
```
- Run the project: Select Firefly3, Run->Run as->UIMA Ruta
  - That generates the output
 

```
Firefly3->Output->test.txt.xmi
```



## Package the script, descriptor and resources in a PEAR file

- Add UIMA nature to the Firefly3 project in order to get the PEAR context:  
Firefly3->(context menu) Add UIMA nature
  - that adds the “Generate PEAR file” to the context
- Package a PEAR from the project  
Firefly3->(context menu) Generate PEAR file
  - Fill the wizard fields as follows  
Component ID: Firefly3  
Component Descriptor: descriptor/uima/ruta/firefly3/MainEngine.xml  
**Next**  
Operating System: Linux  
JDK level (Minimum): 1.4.0  
**Next**  
Deselect all  
Select only: descriptor, metadata, resources and script  
Choose a pear file path/name: e.g. /home/streamsadmin/Firefly3.pear  
**Finish**
- This PEAR file will not properly validate (due to missing Ruta AE inside), but it installs the scripts, resources and descriptors fine and the Streams RutaText operator knows the Ruta AE already.
  - One tweak is still needed before use: Streams operator needs to fix hard coded paths in the MainEngine.xml
  - scriptPath, descriptorPath and resourcePath

## References

- Apache UIMA Ruta Workbench  
<https://uima.apache.org/d/ruta-current/tools.ruta.book.html#ugr.tools.ruta.workbench>
- Apache UIMA Ruta (Rule-based Text Annotation)  
<https://uima.apache.org/ruta.html>
- Detecting mentions of characters in German novels with Apache UIMA Ruta  
<http://uima.apache.org/downloads/ruta/tutorial-GermanNovels.pdf>
- Rule-based Text Annotation (Peter Klügl)  
<http://uima.apache.org/downloads/gscl2013/2013-GSCL-Ruta.pdf>