Graphical Editor Development with GMF and Eugenia

Homework Assignment 3

In this assignment you will

- Get familiar with Eugenia and its annotations
- Design a graphical editor using pen and paper
- Implement your graphical editor using Eugenia
- Construct sample models with your editor and manage them programmatically
- Refine your graphical editor

Exercise 1

- Reproduce the steps of the Eugenia tutorial
  - See the “Running Eugenia” section of https://eclipse.org/epsilon/doc/articles/eugenia-gmf-tutorial/ and the annotated metamodel at the top of the page
- To customise the icons in the palette of the editor replace the default icons under the icons/full/obj16 folder of your generated .edit plugin with the icons in https://git.eclipse.org/c/epsilon/org.eclipse.epsilon.git/plain/examples/org.eclipse.epsilon.eugenia.examples.filesystem.edit/icons/full/obj16/

Exercise 2

- Design a paper prototype of a graphical editor for one of the languages from Homework Assignment 2
  - What shapes/colors would you want to use to represent your model elements graphically?
  - How should your model elements be connected? (e.g. through links, via containment compartments)

Exercise 3

- Annotate your metamodel with Eugenia annotations to implement your paper prototype into a working GMF editor
- Run the generated GMF editor and create a few sample models

Exercise 4

- Refine your editor using one or more of the advanced features provided by Eugenia
  - Polishing transformations https://eclipse.org/epsilon/doc/articles/eugenia-polishing/
  - Nodes with images instead of shapes https://eclipse.org/epsilon/doc/articles/eugenia-nodes-with-images/
  - Phantom nodes https://eclipse.org/epsilon/doc/articles/eugenia-phantom-nodes/