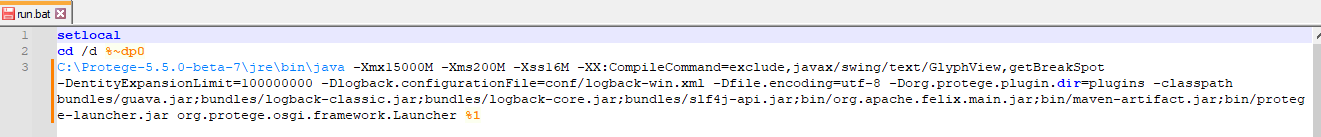
RXNORM in OWL

This is an experimental dataset in support of the RXNORM in OWL Pilot.  
  
This file has not been reviewed by pharmacists and NLM makes no claim of completeness or accuracy.

Goal: Load the RxNorm in OWL distribution into Protégé.

Pre-requisites:

1. PC/Mac with at least 15G RAM
2. Desktop [Protégé 5.5.0-beta-7](https://github.com/protegeproject/protege-distribution/releases/tag/v5.5.0-beta-7) \* installed with bundled jre (version 7)
   1. run.bat edited to increase -Xmx15000M (similar if .sh is on your installation)
   2. [ELK Reasoner](https://github.com/liveontologies/elk-reasoner/releases/tag/v0.4.3) exists in plugins folder (org.semanticweb.elk-0.4.3.jar)



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\* Protégé 5.5.0-beta-7 is based on OWLAPI4 and supports ELK version 0.4.3, together capable of displaying class equivalencies in the Class hierarchy and Description panels. Later versions of Protégé and ELK have limited support for viewing these equivalencies and are slated to be fixed with the official Protégé 5.6.0 (released 230209, yet to be tested with this distribution).

1. Generate the RxNorm-in-OWL file from the GitHub project, or Download the RxNorm-in-OWL at: <https://lhncbc.nlm.nih.gov/RxNav/news/RxNorm-in-OWL.html>

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Opening the Defined RxNorm ontology

1. File -> Open -> /unzipped/directory/Defined-RxNorm-with-SNCT-classes-YYYY-MM-DD.owl

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1. Import the SNOMED CT OWL as a Direct Import after generating SNOMED CT in OWL (follow steps a,b and c below if you do not have a copy) by selecting the Direct Imports circular plus sign.
   1. [Download](https://github.com/IHTSDO/snomed-owl-toolkit/releases) the most recent snomed-owl-toolkit\*executable.jar.
   2. Download the monthly [RF2 distribution](https://www.nlm.nih.gov/healthit/snomedct/international.html) from NLM.
   3. Generate the OWL from RF2 with the command [here](https://github.com/IHTSDO/snomed-owl-toolkit/#snomed-rf2-to-owl-file-conversion).

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1. The Import ontology wizard will begin. Select Import and ontology contained in a specific file.

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1. Select Finish to Confirm the SNOMED import. The Import ontology wizard will exit and the Active Ontology panel will display. When finished progressing, this Direct Import will display on the Active Ontology panel.

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1. Select the ‘ELK 0.4.3’ reasoner. Then Select ‘Start reasoner’

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Persevere through each ELK Warning message by checking the box and selecting OK. Note: Selecting the check box may take some time to register with Protégé. This is expected.

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Select the Entities tab.

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On the Classes tab, select the Inferred view.

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Navigate to the SNOMED Medicinal product class (http://snomed.info/id/763158003).

This is the sub-hierarchy where RxNorm classes are added and classified with SNOMED. A RxNorm class may be equivalent to more than one SNOMED class.

A RxNorm class may also have more than one parent class. Navigating to each may be done via the Description panel.

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Select **Search** to find identifier (IRI fragment) 1923428 *timolol 2.5 MG/ML Ophthalmic Solution*

Double-click the result. Protégé will open the SCD in the hierarchy. Search is possible for any annotation value, etc.

Graphical user interface, text, application

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Known issues (231129):

* In the Defined file of all SCDs and SBDs, regardless of status
  + Branded drug products are purposefully primitive classes
  + Some Obsolete concepts lacking definitional features required for logical definitions are primitive classes
  + Not all SBDs are treed to class 'RXNORM SBDs (Brand Drugs)'
  + SBDs of Status NotCurrent are treed to a Work in Progress class, 'RXNORM WIP SBDs (Brand Drugs)'
  + Some Remapped SBDs of Status E are treed to 'RXNORM WIP SBDs (Brand Drugs)'