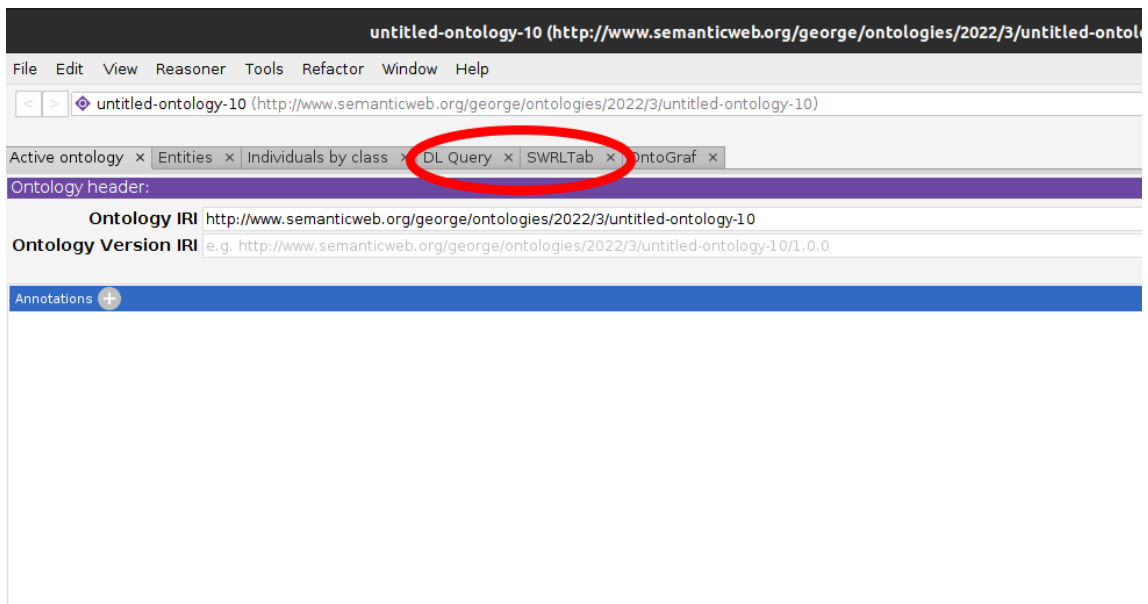
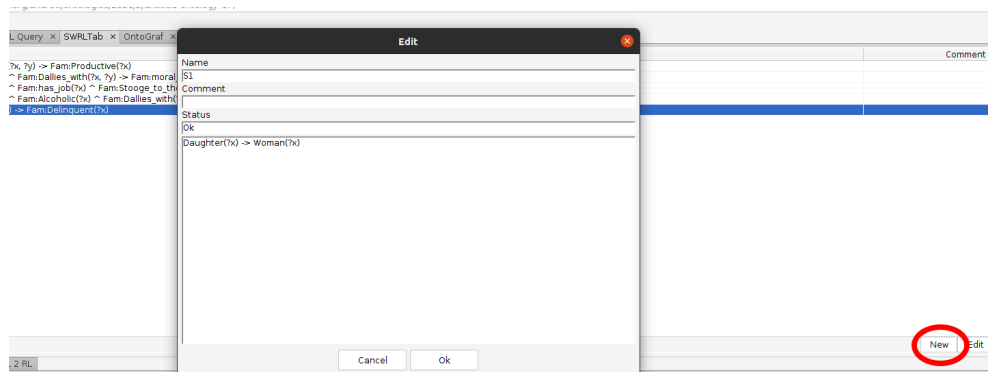


# SWRL

Week 11 lab





es and relevant OWL knowledge to the rule engine.  
e engine knowledge to OWL knowledge.  
uses an OWL 2 RL-based reasoner to perform reasoning.  
issoner.

Query x   SWRLTab x   OntoGraf x	Rule
. ?y ) => Fam:Productive(?x)	
Fam:Dallies_with(?x, ?y) => Fam:moral_reprobate(?x) ^ Fam:moral_reprobate(?y)	
Fam:has_job(?x) ^ Fam:Stooge_to_the_status_quo(?x) => Fam:Boring(?x)	
Fam:Alcoholic(?x) ^ Fam:Dallies_with(?x, ?y) => Fam:Interesting(?x)	
Fam:Dallies_with(?x, ?y)	

RL

and relevant OWL knowledge to the rule engine.

engine knowledge to OWL knowledge.

es an OWL 2 RL-based reasoner to perform reasoning.

ner.

OWL+SWRL->Drools

Run Drools

Drools->OWL

untitled-ontology-17 (http://www.semanticweb.org/andrew/ontologies/2021/2/untitled-ontology-17)

Active ontology x Entities x Individuals by class x DL Query x SWRLTab x OntoGraf x

	Name	Rule
<input checked="" type="checkbox"/>	Rule 2	Fam.is_Daughterof(x, y) -> Fam.Productive(x)
<input checked="" type="checkbox"/>	Rule 3	Fam.is_Married(x) ^ Fam.Dalles_with(x, y) -> Fam.moral_reprobate(x) ^ Fam.moral_reprobate(y)
<input checked="" type="checkbox"/>	Rule 4	Fam.is_Married(x) ^ Fam.has_job(x) ^ Fam.Stooge_to_the_status_quest(x) -> Fam.Boring(x)
<input checked="" type="checkbox"/>	Rule 5	Fam.is_Married(x) ^ Fam.Alcoholic(x) ^ Fam.Dalles_with(x, y) -> Fam.Interesting(x)
<input checked="" type="checkbox"/>	Rule 6	Fam.is_Son(x, y) -> Fam.Dallequent(x)

Control | Rule | **Asserted Axioms** | Inferred Axioms | OWL 2 RL

Using the Drools Reasoner

Press the 'OWL+SWRL->Drools' button to transfer SWRL rules and relevant OWL knowledge to the rule engine.  
Press the 'Run Drools' button to run the rule engine.  
Press the 'Drools->OWL' button to transfer the inferred rule engine knowledge to OWL knowledge.

The SWRLAPI supports an OWL profile called OWL 2 RL and uses an OWL 2 RL-based reasoner to perform reasoning.  
See the 'OWL 2 RL' sub-tab for more information on this reasoner.

OWL+SWRL->Drools Run Drools