2.7.3 RDF

An RDF statement (triple) (R, P, V) is represented as $PropVal(P, R, V)$.

Classes

In our language we have constants $Class, Resource, Property,$ and $Literal$. All classes are instances of $Class$; that is, they have the type $Class$:

$$Type(Class, Class)$$

$$Type(Resource, Class)$$

$$Type(Property, Class)$$

$$Type(Literal, Class)$$

$Resource$ is the most general class: every object is a resource. Therefore, every class and every property is a resource:

$$Type(?p, Property) \longrightarrow Type(?p, Resource)$$

$$Type(?c, Class) \longrightarrow Type(?c, Resource)$$

Finally, the predicate in an RDF statement must be a property:

$$PropVal(?p, ?r, ?v) \longrightarrow Type(?p, Property)$$

The *type* Property

$type$ is a property:

$$Type(type, Property)$$

Note that it is equivalent to $PropVal(type, type, Property)$: the type of $type$ is $Property$. $type$ can be applied to resources and has a class as its value:

$$Type(?r, ?c) \longrightarrow (Type(?r, Resource) \wedge Type(?c, Class))$$