```
:isPartOf      rdf:type owl:ObjectProperty ;
               rdf:type owl:ReflexiveProperty .

:rents         rdf:type owl:ObjectProperty ;
               rdf:type owl:IrreflexiveProperty .
```

### 4.4.4 Property Axioms

In addition to the property types discussed in the preceding section, we can specify additional characteristics of properties in terms of how they relate to classes and other properties. Some of these are familiar from RDF Schema; others are completely new.

**Domain and Range** As we have seen in section 4.4.3, the way in which OWL2 treats domain and range for properties is exactly the same as in RDF Schema. If more than one rdfs:range or rdfs:domain is asserted for a property, the actual range or domain is the *intersection* of the classes specified in the property axiom.

A common misunderstanding is that domain and range work as a constraint on the types of individuals that *may* be related via a property. In fact, domains and ranges can only be used to *determine* class membership for these individuals. Given the above definition of :rents, any two individuals $p$ and $a$ such that $p$ :rents $a$ will be classified as members of :Person and :Apartment respectively.

**Inverse Properties** OWL2 allows us to define the inverse of properties. A typical example is the pair :rents and :isRentedBy. For instance:

```
:isRentedBy rdf:type      owl:ObjectProperty ;
            owl:inverseOf :rents .
```

This means that a reasoner will determine that our two individuals $p$ and $m$ have the relation $m$ :isRentedBy $p$ in addition to $p$ :rents $m$. Domain and range are inherited from