

# PELLET: THE OPEN SOURCE OWL REASONER

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# What does Pellet do?



- Provides semantically-enabled applications the ability to reason about information represented in OWL
- Provides features such as classification, consistency checking, and querying against the OWL data using a language such as SPARQL

# Example: Music Ontology

```
<mo:MusicGroup rdf:about="http://zitgist.com/music/artist/65f4f0c5-ef9e-490c-
aee3-909e7ae6b2ab">
  <foaf:name>Metallica</foaf:name>
  <foaf:homepage rdf:resource="http://www.metallica.com" />
  <mo:image rdf:resource="http://metallica.com/images/MySpace/logo.gif" />
  <mo:discogs rdf:resource="http://www.discogs.com/artist/Metallica" />
  <mo:musicmoz rdf:resource="http://musicmoz.org/Bands_and_Artists/M/Metallica/" />
  <mo:wikipedia rdf:resource="http://en.wikipedia.org/wiki/Metallica" />
  <mo:performed rdf:resource="http://zitgist.com/music/track/f415a50d-4594-4d39-
b84d-57afd433ef6d" />
  <foaf:member rdf:resource="http://zitgist.com/music/artist/
2f58d07c-4ed6-4f29-8b10-95266e16fe1b" />
  <mo:similar_to rdf:resource="http://zitgist.com/music/artist/b2d122f9-eadb-4930-
a196-8f221eeb0c66" />
  <sim:link rdf:parseType="Resource">
    <sim:relation rdf:resource="http://purl.org/ontology/mo/similar_to" />
    <sim:level>0.9</sim:level>
    <sim:to rdf:resource="http://zitgist.com/music/artist/b2d122f9-eadb-4930-
a196-8f221eeb0c66" />
  </sim:link>
</mo:MusicGroup>
```

# Example: Music Ontology

## Finding all the Albums for a specific music Group

```
PREFIX mo: <http://purl.org/ontology/mo/>
SELECT ?album
WHERE
{
    ?album a mo:Record;
           mo:releaseType mo:album;
           dc:creator <http://zitgist.com/music/artist/
65f4f0c5-ef9e-490c-ae3-909e7ae6b2ab>.
}
ORDER BY ?album
```

# Example: Music Ontology

**Finding the music Groups similar to a specific music Group by at least 90%**

```
PREFIX mo: <http://purl.org/ontology/mo/>
PREFIX sim: <http://purl.org/ontology/sim/>
PREFIX foaf: <http://xmlns.com/foaf/0.1 />
SELECT *
WHERE {
    <http://zitgist.com/music/artist/65f4f0c5-ef9e-490c-
aee3-909e7ae6b2ab> a mo:MusicGroup;
    <http://zitgist.com/music/artist/65f4f0c5-ef9e-490c-
aee3-909e7ae6b2ab> sim:link ?blank.
    ?blank sim:relation mo:similar_to;
        sim:level ?level;
        sim:to ?similar_group.
    FILTER (xsd:double(?level) >= 0.9).
}
```