

# oops! Ontology Pitfall Scanner!

**OOPS! (Ontology Pitfall Scanner!)** helps you to detect some of the most common pitfalls appearing when developing ontologies.

To try it, enter a URI or paste an OWL document into the text field above. A list of pitfalls and the elements of your ontology where they appear will be displayed.

Scanner by URI:

Scanner by URI

Example: [http://data.semanticweb.org/ns/swc/swc\\_2009-05-09.rdf](http://data.semanticweb.org/ns/swc/swc_2009-05-09.rdf)

Scanner by direct input:

```
<?xml version="1.0"?>
<rdf:RDF
  xmlns:protege="http://protege.stanford.edu/plugins/owl/protege#"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
  xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
  xmlns:owl="http://www.w3.org/2002/07/owl#"
  xmlns:daml="http://www.daml.org/2001/03/daml+oil#"
  xmlns:dc="http://purl.org/dc/elements/1.1/"
  xmlns="http://www.co-ode.org/ontologies/pizza/2005/05/16/classified"
```

Scanner by RDF

☐ Uncheck this checkbox if you don't want us to keep a copy of your ontology.

[Go to advanced evaluation](#)

## Evaluation results

It is obvious that not all the pitfalls are equally important; their impact in the ontology will depend on multiple factors. For this reason, each pitfall has an importance level attached indicating how important it is. We have identified three levels:

- **Critical** 🚫 : It is crucial to correct the pitfall. Otherwise, it could affect the ontology consistency, reasoning, applicability, etc.
- **Important** ⚠️ : Though not critical for ontology function, it is important to correct this type of pitfall.
- **Minor** 🟡 : It is not really a problem, but by correcting it we will make the ontology nicer.

[\[Expand All\]](#) | [\[Collapse All\]](#)

### Results for P02: Creating synonyms as classes.

1 case | Minor 🟡

Several classes whose identifiers are synonyms are created and defined as equivalent (owl:equivalentClass) in the same namespace. This pitfall is related to the guidelines presented in [2], which explain that synonyms for the same concept do not represent different classes.

- This pitfall appears in the following elements:  
> <http://www.co-ode.org/ontologies/pizza/2005/05/16/classified/pizza.owl#VegetarianPizzaEquivalent2>

### Results for P04: Creating unconnected ontology elements.

1 case | Minor 🟡

Ontology elements (classes, object properties and datatype properties) are created isolated, with no relation to the rest of the ontology.

- This pitfall appears in the following elements:  
> <http://www.co-ode.org/ontologies/pizza/2005/05/16/classified/pizza.owl#ValuePartition>

### Results for P06: Including cycles in a class hierarchy.

1 case | Critical 🚫

A cycle between two classes in a hierarchy is included in the ontology. A cycle appears when some class A has a subclass (directly or indirectly) B, and at the same time B is a superclass (directly or indirectly) of A. This pitfall was first identified in [3]. Guidelines presented in [2] also provide recommendations to avoid this pitfall.

- The following classes are involved in a cycle:  
> , <http://www.co-ode.org/ontologies/pizza/2005/05/16/classified/pizza.owl#VegetarianPizzaEquivalent1>, <http://www.co-ode.org/ontologies/pizza/2005/05/16/classified/pizza.owl#VegetarianPizzaEquivalent2>

## Want to help?

- [Suggest new pitfalls](#)
- [Provide feedback](#)

## Documentation:

- [Pitfall catalogue](#)
- [User guide](#)
- [Technical report](#)

## Related papers:

- [IJSWIS 2014](#)
- [EKAW 2012](#)
- [ESWC 2012 Demo](#)
- [Ontoqual 2010](#)
- [CAEPIA 2009](#)

## Web services:

- [REST Web Service](#)

## Developed by:



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According to the highest importance level of pitfall found in your ontology the conformance badge suggested is "Critical pitfalls" (see below). You can use the following HTML code to insert the badge within your ontology documentation:



```
<p>
<a href="http://oops.linkeddata.es"></a>
</p>
```

## References:

- [1] Aguado-De Cea, G., Montiel-Ponsoda, E., Poveda-Villalón, M., and Giraldo-Pasmin, O.X. (2015). Lexicalizing Ontologies: The issues behind the labels. In Multimodal communication in the 21st century: Professional and academic challenges. 33rd Conference of the Spanish Association of Applied Linguistics (AESLA), XXXIII AESLA.
- [2] Noy, N. F., McGuinness, D. L., et al. (2001). Ontology development 101: A guide to creating your first ontology.
- [3] Gómez-Pérez, A. (1999). Evaluation of Taxonomic Knowledge in Ontologies and Knowledge Bases. Proceedings of the Banff Knowledge Acquisition for Knowledge-Based Systems Workshop. Alberta, Canada.
- [4] Montiel-Ponsoda, E., Vila Suero, D., Villazón-Terrazas, B., Dunsire, G., Escolano Rodríguez, E., Gómez-Pérez, A. (2011). Style guidelines for naming and labeling ontologies in the multilingual web.
- [5] Vrandečić, D. (2010). Ontology Evaluation. PhD thesis.
- [6] Gómez-Pérez, A. (2004). Ontology evaluation. In Handbook on ontologies, pages 251-273. Springer.
- [7] Rector, A., Drummond, N., Horridge, M., Rogers, J., Knublauch, H., Stevens, R., Wang, H., and Wroe, C. (2004). Owl pizzas: Practical experience of teaching owl-dl: Common errors & common patterns. In Engineering Knowledge in the Age of the Semantic Web, pages 63-81. Springer.
- [8] Hogan, A., Harth, A., Passant, A., Decker, S., and Polleres, A. (2010). Weaving the pedantic web. In Proceedings of the

WWW2010 Workshop on Linked Data on the Web, LDOW 2010, Raleigh, USA, April 27, 2010.

- [9] Archer, P., Goedertier, S., and Loutas, N. (2012). D7. 1.3-study on persistent URIs, with identification of best practices and recommendations on the topic for the Mss and the EC. PwC EU Services.
- [10] Bernes-Lee Tim. (2006). "Linked Data - Design issues". <http://www.w3.org/DesignIssues/LinkedData.html>
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- [12] Vatan, B. (2012). Is your linked data vocabulary 5-star?. [http://bvatant.blogspot.fr/2012/02/is-your-linked-data-vocabulary-5-star\\_9588.html](http://bvatant.blogspot.fr/2012/02/is-your-linked-data-vocabulary-5-star_9588.html)

Please, help us making OOPS! better. **Feedback** is more than welcome!

In addition, you can also **suggest new pitfalls** so that they can be detected in future evaluations.

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