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://oops.linkeddata.es/example/swc_2009-05-09.rdf

Scanner by direct input:

```
    <!-- http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#PestB -->

    <owl:Class rdf:about="http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#PestB">
        <rdfs:subClassOf rdf:resource="http://www.semanticweb.org/hp/ontologies/2022/2/untitled-
```

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 P04: Creating unconnected ontology elements. **3 cases | 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.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#disease
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#crop
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#pest

Want to help?

- Suggest new pitfalls
- Provide feedback

Documentation:

- Pitfall catalogue
- User guide
- Technical report

Related papers:

- IJSWIS 2014
- EKAW 2012
- ESWC 2012 Demo

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 inolved in a cycle:
› , http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#fertilizer, http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#fertilizerA, http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#fertilizerB

Results for P08: Missing annotations. **24 cases | Minor**

This pitfall consists in creating an ontology element and failing to provide human readable annotations attached to it. Consequently, ontology elements lack annotation properties that label them (e.g. rdfs:label, lemon:LexicalEntry, skos:prefLabel or skos:altLabel) or that define them (e.g. rdfs:comment or dc:description). This pitfall is related to the guidelines provided in [5].

• The following elements have no rdfs:label defined:
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#fertilizer
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#diseaseC
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#pestE
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#fertilizerA
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#diseaseD
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#pest
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#Root
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#Tuber
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#disease
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#crop
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#diseaseB
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#Drain
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#pestG
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#Fruit
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#PestB
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#Vigetable
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#pestA
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#Cardiman
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#fertilizerB
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#pestF
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#diseaseA
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#pestC

- Ontoqual 2010
- CAEPIA 2009

Web services:

- REST Web Service

Developed by:

Follow @OOPSoeg

› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#diseaseE
› http://www.semanticweb.org/hp/ontologies/2022/2/untitled-ontology-148#Dairy

Results for P10: Missing disjointness. **ontology* | Important**

The ontology lacks disjoint axioms between classes or between properties that should be defined as disjoint. This pitfall is related with the guidelines provided in [6], [2] and [7].

*This pitfall applies to the ontology in general instead of specific elements.

Results for P22: Using different naming conventions in the ontology. **ontology* | Minor**

The ontology elements are not named following the same convention (for example CamelCase or use of delimiters as "-" or "_") . Some notions about naming conventions are provided in [2].

*This pitfall applies to the ontology in general instead of specific elements.

Results for P41: No license declared. **ontology* | Important**

The ontology metadata omits information about the license that applies to the ontology.

*This pitfall applies to the ontology in general instead of specific elements.

According to the highest importance level of pitfall found in your ontology the conformace bagde 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"><img
        src="http://oops.linkeddata.es/resource/image/oops_critical.png"
        alt="Critical pitfalls were found" height="69.6" width="100" /></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.
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- [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] Vrandecic, D. (2010). Ontology Evaluation. PhD thesis.
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- [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.
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- [10] Bernes-Lee Tim. (2006). "Linked Data - Design issues". http://www.w3.org/DesignIssues/LinkedData.html
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How to cite OOPS!

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BibTex:

```
@article{poveda2014oops,
 title={{OOPS! (OntOlogy Pitfall Scanner!): An On-line Tool for Ontology Evaluation}},
 author={Poveda-Villal{\'o}n, Mar{\'i}a and G{\'o}mez-P{\'e}rez, Asunci{\'o}n and Su{\'a}rez-Figueroa, Mari Carmen},
 journal={International Journal on Semantic Web and Information Systems (IJSWIS)},
 volume={10},
 number={2},
 pages={7--34},
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 publisher={IGI Global}
}
```

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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Contact email: oops(at)delicias.dia.fi.upm.es. Latest revision April 2021