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:
```
</rdfs:comment>
        <rdfs:comment xml:lang="en">This is the third version of the stuff
ontology (July 2016). The main updates are the stuff relations (portions and
stuff-parts/ingredients) and the import of a module of the OM ontology.
</rdfs:comment>
    </owl:Ontology>


    <!--
```
[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 P07: Merging different concepts in the same class.   **33 cases | Minor** 🟡

A class whose name refers to two or more different concepts is created.

- This pitfall appears in the following elements:
  › http://www.wurvoc.org/vocabularies/om-1.8/Square_metre_multiple_or_submultiple
  › http://www.wurvoc.org/vocabularies/om-1.8/Tonne_multiple_or_submultiple
  › http://www.wurvoc.org/vocabularies/om-1.8/Gram_multiple_or_submultiple_per_litre_multiple_or_submultiple
  › http://www.wurvoc.org/vocabularies/om-1.8/Electronvolt_multiple_or_submultiple
  › http://www.wurvoc.org/vocabularies/om-1.8/Gram_per_litre_multiple_or_submultiple

---

Want to help?

- Suggest new pitfalls
- Provide feedback

Documentation:

- Pitfall catalogue
- User guide
- Technical report

Related papers:

- IJSWIS 2014
- EKAW 2012
- ESWC 2012 Demo

› http://www.wurvoc.org/vocabularies/om-1.8/Lux_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Joule_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Metre_multiple_or_submultiple_gram_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Bit_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Calorie-mean_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Gram_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Mole_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Unit_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Steradian_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Coulomb_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Mole_multiple_or_submultiple_per_litre
› http://www.wurvoc.org/vocabularies/om-1.8/Unified_atomic_mass_unit_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Mole_per_litre_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Becquerel_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Lumen_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Ampere_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Litre_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Gram_multiple_or_submultiple_per_litre
› http://www.wurvoc.org/vocabularies/om-1.8/Mole_multiple_or_submultiple_per_litre_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Mole_multiple_or_submultiple_per_metre_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Mole_multiple_or_submultiple_per_metre
› http://www.wurvoc.org/vocabularies/om-1.8/Molair_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Watt_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Volt_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Cubic_metre_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Ohm_multiple_or_submultiple
› http://www.wurvoc.org/vocabularies/om-1.8/Vectorial_or_tensorial_character
› http://www.wurvoc.org/vocabularies/om-1.8/Byte_multiple_or_submultiple

Results for P08: Missing annotations.	**170 cases | Minor** ○
Results for P11: Missing domain or range in properties.	**23 cases | Important** ○

Object and/or datatype properties without domain or range (or none of them) are included in the ontology.

• This pitfall appears in the following elements:
› http://www.wurvoc.org/vocabularies/om-1.8/unit_of_measure
› http://www.wurvoc.org/vocabularies/om-1.8/quantity
› http://www.wurvoc.org/vocabularies/om-1.8/phenomenon
› http://www.wurvoc.org/vocabularies/om-1.8/uses_application_area
› http://www.wurvoc.org/vocabularies/om-1.8/measurement_scale
› http://www.wurvoc.org/bibliography/om-1.8/reference

Ontoqual 2010
CAEPIA 2009

Web services:

REST Web Service

Developed by:

Ontology Engineering Group

Follow @OOPSoeg

> http://www.wurvoc.org/vocabularies/om-1.8/definition
> http://www.meteck.org/files/ontologies/stuff.owl#hasPart
> http://www.meteck.org/files/ontologies/stuff.owl#hasScatterStuffPart
> http://www.meteck.org/files/ontologies/stuff.owl#hasSelfContainedScatteredPortion
> http://www.meteck.org/files/ontologies/stuff.owl#scatterPortion
> http://www.meteck.org/files/ontologies/stuff.owl#containedIn
> http://www.meteck.org/files/ontologies/stuff.owl#partOf
> http://www.meteck.org/files/ontologies/stuff.owl#hasPartStuff
> http://www.meteck.org/files/ontologies/stuff.owl#hasContainedScatteredPortion
> http://www.meteck.org/files/ontologies/stuff.owl#properPartOf
> http://www.meteck.org/files/ontologies/stuff.owl#hasPortion
> http://www.meteck.org/files/ontologies/stuff.owl#contiguousPortion
> http://www.meteck.org/files/ontologies/stuff.owl#hasStuffDistribution
> http://www.meteck.org/files/ontologies/stuff.owl#hasProperPart
> http://www.meteck.org/files/ontologies/stuff.owl#properContainedIn
> http://www.wurvoc.org/vocabularies/om-1.8/numerical_value
> http://www.meteck.org/files/ontologies/stuff.owl#hasDataValue

• **Tip:** Solving this pitfall may lead to new results for other pitfalls and suggestions. We encourage you to solve all cases when needed and see what else you can get from OOPS!

Results for P13: Inverse relationships not explicitly declared.	**35 cases | Minor** ○
Results for P22: Using different naming conventions in the ontology.	**ontology* | Minor** ○
Results for P24: Using recursive definitions.	**2 cases | Important** ○
Results for P30: Equivalent classes not explicitly declared.	**7 cases | Important** ○
Results for P41: No license declared.	**ontology* | Important** ○
SUGGESTION: symmetric or transitive object properties.	**10 cases**

According to the highest importance level of pitfall found in your ontology the conformace bagde suggested is "Important 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_important.png"
        alt="Important 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.
- [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] Vrandecic, 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
- [11] Heath, T. and Bizer, C. (2011). Linked Data: Evolving the Web into a Global Data Space. Morgan & Claypool, 1st edition.
- [12] Vatant, B. (2012). Is your linked data vocabulary 5-star?. http://bvatant.blogspot.fr/2012/02/is-your-linked-data-vocabulary-5-star_9588.html

How to cite OOPS!

Poveda-Villalón, María, Asunción Gómez-Pérez, and Mari Carmen Suárez-Figueroa. "OOPS!(Ontology Pitfall Scanner!): An on-line tool for ontology evaluation." International Journal on Semantic Web and Information Systems (IJSWIS) 10.2 (2014): 7-34.

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},
 year={2014},
 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.

[María Poveda](#)

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

[Website Templates](#) by [Free CSS Templates](#)