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: https://purl.org/holy/ns Scanner by URI
Example: http://oops.linkeddata.es/example/swc_2009-05-09.rdf

Scanner by direct input:
```
If you just include the RDF code here, the following Pitfalls will not be
checked:
 P36. URI contains file extension, P37. Ontology not available, P40. Namespace
hijacking
```
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. **2 cases | Minor**

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

• This pitfall appears in the following elements:
› http://purl.org/holy/ns#PublicAdministrationAndDefenceOrganization
› http://purl.org/holy/ns#TransportationAndStorageOrganization

Results for P13: Inverse relationships not explicitly declared. **10 cases | Minor**

This pitfall appears when any relationship (except for those that are defined as symmetric properties using owl:SymmetricProperty) does not have an inverse relationship (owl:inverseOf) defined within the ontology.

• This pitfall appears in the following elements:
› http://purl.org/holy/ns#relatesToApplication
› http://www.w3.org/ns/org#classification
› http://www.w3.org/ns/regorg#orgStatus
› http://dbpedia.org/ontology/country
› http://purl.org/holy/ns#hasIndicator
› http://www.w3.org/ns/regorg#orgActivity
› http://purl.org/holy/ns#relatesToProduct
› http://www.w3.org/ns/regorg#orgType
› http://purl.org/holy/ns#hasProject
› http://www.w3.org/ns/org#hasPrimarySite

Results for P24: Using recursive definitions. **1 case | Important**

An ontology element (a class, an object property or a datatype property) is used in its own definition. Some examples of this would be: (a) the definition of a class as the enumeration of several classes including itself; (b) the appearance of a class within its owl:equivalentClass or rdfs:subClassOf axioms; (c) the appearance of an object property in its rdfs:domain or range rdfs:range definitions; or (d) the appearance of a datatype property in its rdfs:domain definition.

• This pitfall appears in the following elements:
› http://schema.org/Continent

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.

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:

Ontology Engineering Group

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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.
- [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.
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- [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