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A

Triplify mapping file for the Author- Publication example

```

1: <?php
2: $triplify['queries']=array(
3: 'article'=> "SELECT
4:     publication_id as 'id'
5:     , journal as 'bibtex:hasJournal'
6:     FROM article",
7: 'author'=> "SELECT
8:     author_id as 'id'
9:     , institution_id as 'ex:worksFor'
10:    , first_name as 'foaf:firstName'
11:    , last_name as 'foaf:familyName'
12:    , address as 'dbpedia:address'
13:    , email as 'foaf:mbox'
14:    FROM author",
15: 'institution'=> "SELECT
16:     institution_id as 'id'
17:     , institution as 'school:establishmentName'
18:    FROM institution",
19: 'paper'=> "SELECT
20:     publication_id as 'id'
21:     , location as 'bibtex:hasLocation'
22:     , conference as 'ex:conference'
23:    FROM paper",
24: 'publication'=> array("SELECT
25:     publication_id
26:     , publisher as 'dcterms:publisher'
27:     , title as 'dcterms:title'
28:     , year as 'bibtex:hasYear'
29:    FROM publication",
30:     "SELECT publication_id as id, author_id as 'bibtex:hasAuthor' FROM publication_author"));
31:
32: $triplify['namespaces']=array(
33:     "rdf" => "http://www.w3.org/1999/02/22-rdf-syntax-ns#",
34:     "rdfs" => "http://www.w3.org/2000/01/rdf-schema#",
35:     "owl" => "http://www.w3.org/2002/07/owl#",
36:     "xsd" => "http://www.w3.org/2001/XMLSchema#",
37:     "bibtex" => "http://purl.org/net/nknouf/ns/bibtex#",
38:     "foaf" => "http://xmlns.com/foaf/0.1/",
39:     "dbpedia" => "http://dbpedia.org/ontology/",
40:     "ex" => "http://purl.org/example#",
41:     "vcard" => "http://www.w3.org/2006/vcard/ns#",
42:     "school" => "http://education.data.gov.uk/ontology/school#",
43:     "bibo" => "http://purl.org/ontology/bibo/",
44:     "dcterms" => "http://purl.org/dc/terms/");
45:
46: $triplify['classMap']=array(
47:     "article" => "bibtex:Article",
48:     "author" => "foaf:Person",
49:     "institution" => "dbpedia:EducationalInstitution",
50:     "paper" => "ex:paper",
51:     "publication" => "bibtex:Entry",
52: );
53:
54: $triplify['objectProperties']=array(
55:     "ex:worksFor" => "institution",
56:     "bibtex:hasAuthor" => "author"
57: );
58: $triplify['TTL']=0;
59: $triplify['URI']='http://purl.org/example';
60: $triplify['pdo']=new PDO('mysql:host=127.0.0.1;dbname=example','root','root');
61: ?>

```

B

Triple Schema for the Author-Publication example

```
1: <?xml version="1.0" encoding="ISO-8859-1"?>
2: <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
3:     xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
4:     xmlns:owl="http://www.w3.org/2002/07/owl#"
5:     xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
6:     xmlns:bibtex="http://purl.org/net/nknouf/ns/bibtex#"
7:     xmlns:foaf="http://xmlns.com/foaf/0.1/"
8:     xmlns:ex="http://purl.org/example#"
9:     xmlns:dbpedia="http://dbpedia.org/ontology/"
10:    xmlns:vcard="http://www.w3.org/2001/vcard-rdf/3.0#"
11:    xmlns:school="http://education.data.gov.uk/ontology/school#"
12:    xmlns:dcterms="http://purl.org/dc/terms/"
13:    xmlns:dc="http://purl.org/dc/elements/1.1/">
14: <rdf:Class rdf:about="http://purl.org/net/nknouf/ns/bibtex#Article">
15:   <rdf:label xml:lang="en">Article</rdf:label>
16: </rdf:Class>
17: <rdf:Class rdf:about="http://xmlns.com/foaf/0.1/Person">
18:   <rdf:label xml:lang="en">Person</rdf:label>
19: </rdf:Class>
20: <rdf:Class rdf:about="http://dbpedia.org/ontology/EducationalInstitution">
21:   <rdf:label xml:lang="en">EducationalInstitution</rdf:label>
22: </rdf:Class>
23: <rdf:Class rdf:about="http://purl.org/example#paper">
24:   <rdf:label xml:lang="en">paper</rdf:label>
25: </rdf:Class>
26: <rdf:Class rdf:about="http://purl.org/net/nknouf/ns/bibtex#Entry">
27:   <rdf:label xml:lang="en">Entry</rdf:label>
28: </rdf:Class>
29: <rdf:Description rdf:about="http://purl.org/net/nknouf/ns/bibtex#Article">
30:   <rdf:subClassOf rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Entry"/>
31: </rdf:Description>
32: <rdf:Description rdf:about="http://purl.org/example#paper">
33:   <rdf:subClassOf rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Entry"/>
34: </rdf:Description>
35: <owl:DatatypeProperty rdf:about="http://purl.org/net/nknouf/ns/bibtex#hasJournal">
36:   <rdf:domain rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Article"/>
37:   <rdf:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
38:   <rdf:label xml:lang="en">hasJournal</rdf:label>
39: </owl:DatatypeProperty>
40: <owl:ObjectProperty rdf:about="http://purl.org/example#worksFor">
41:   <rdf:domain rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
42:   <rdf:range rdf:resource="http://dbpedia.org/ontology/EducationalInstitution"/>
43:   <rdf:label xml:lang="en">worksFor</rdf:label>
44: </owl:ObjectProperty>
```

```

45: <owl:DatatypeProperty rdf:about="http://purl.org/example#author_id">
46:   <rdfs:domain rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
47:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#integer"/>
48:   <rdfs:label xml:lang="en">author_id</rdfs:label>
49:   <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#FunctionalProperty"/>
50: </owl:DatatypeProperty>
51: <owl:DatatypeProperty rdf:about="http://xmlns.com/foaf/0.1/firstName">
52:   <rdfs:domain rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
53:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
54:   <rdfs:label xml:lang="en">firstName</rdfs:label>
55: </owl:DatatypeProperty>
56: <owl:DatatypeProperty rdf:about="http://xmlns.com/foaf/0.1/familyName">
57:   <rdfs:domain rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
58:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
59:   <rdfs:label xml:lang="en">familyName</rdfs:label>
60: </owl:DatatypeProperty>
61: <owl:DatatypeProperty rdf:about="http://dbpedia.org/ontology/address">
62:   <rdfs:domain rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
63:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
64:   <rdfs:label xml:lang="en">address</rdfs:label>
65: </owl:DatatypeProperty>
66: <owl:DatatypeProperty rdf:about="http://xmlns.com/foaf/0.1/mbox">
67:   <rdfs:domain rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
68:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
69:   <rdfs:label xml:lang="en">email</rdfs:label>
70: </owl:DatatypeProperty>
71: <owl:DatatypeProperty rdf:about="http://purl.org/example#institution_id">
72:   <rdfs:domain rdf:resource="http://dbpedia.org/ontology/EducationalInstitution"/>
73:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#integer"/>
74:   <rdfs:label xml:lang="en">institution_id</rdfs:label>
75:   <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#FunctionalProperty"/>
76: </owl:DatatypeProperty>
77: <owl:DatatypeProperty rdf:about="http://education.data.gov.uk/ontology/school#establishmentName">
78:   <rdfs:domain rdf:resource="http://dbpedia.org/ontology/EducationalInstitution"/>
79:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
80:   <rdfs:label xml:lang="en">establishmentName</rdfs:label>
81: </owl:DatatypeProperty>
82: <owl:DatatypeProperty rdf:about="http://purl.org/net/nknouf/ns/bibtex#hasLocation">
83:   <rdfs:domain rdf:resource="http://purl.org/example#paper"/>
84:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
85:   <rdfs:label xml:lang="en">hasLocation</rdfs:label>
86: </owl:DatatypeProperty>
87: <owl:DatatypeProperty rdf:about="http://purl.org/example#conference">
88:   <rdfs:domain rdf:resource="http://purl.org/example#paper"/>
89:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
90:   <rdfs:label xml:lang="en">conference</rdfs:label>
91: </owl:DatatypeProperty>
92: <owl:ObjectProperty rdf:about="http://purl.org/net/nknouf/ns/bibtex#hasAuthor">
93:   <rdfs:domain rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Entry"/>
94:   <rdfs:range rdf:resource="http://xmlns.com/foaf/0.1/Person"/>
95:   <rdfs:label xml:lang="en">hasAuthor</rdfs:label>
96: </owl:ObjectProperty>
97: <owl:DatatypeProperty rdf:about="http://purl.org/example#publication_id">
98:   <rdfs:domain rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Entry"/>
99:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#integer"/>
00:   <rdfs:label xml:lang="en">publication_id</rdfs:label>
01:   <rdf:type rdf:resource="http://www.w3.org/2002/07/owl#FunctionalProperty"/>
02: </owl:DatatypeProperty>
03: <owl:DatatypeProperty rdf:about="http://purl.org/dc/terms/publisher">
04:   <rdfs:domain rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Entry"/>
05:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
06:   <rdfs:label xml:lang="en">publisher</rdfs:label>
07: </owl:DatatypeProperty>
08: <owl:DatatypeProperty rdf:about="http://purl.org/dc/terms/title">
09:   <rdfs:domain rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Entry"/>
10:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#string"/>
11:   <rdfs:label xml:lang="en">title</rdfs:label>
12: </owl:DatatypeProperty>
13: <owl:DatatypeProperty rdf:about="http://purl.org/net/nknouf/ns/bibtex#hasYear">
14:   <rdfs:domain rdf:resource="http://purl.org/net/nknouf/ns/bibtex#Entry"/>
15:   <rdfs:range rdf:resource="http://www.w3.org/2001/XMLSchema#integer"/>
16:   <rdfs:label xml:lang="en">hasYear</rdfs:label>
17: </owl:DatatypeProperty>
18: </rdf:RDF>

```

C

RDFRendererVisitor format

```
1: <?xml version="1.0" encoding="utf-8"?>
2: <rdf:RDF xmlns="http://knowledgeweb.semanticweb.org/heterogeneity/alignment#"
3:     xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
4:     xmlns:xsd="http://www.w3.org/2001/XMLSchema#">
5:   <Alignment>
6:     <xml>yes</xml>
7:     <level>0</level>
8:     <type>11</type>
9:     <onto1>http://purl.org/example</onto1>
10:    <onto2>http://xmlns.com/foaf/0.1</onto2>
11:    <uri1>http://purl.org/example</uri1>
12:    <uri2>http://xmlns.com/foaf/0.1</uri2>
13:    <map>
14:      <Cell>
15:        <entity1 rdf:resource="http://purl.org/example#institution"/>
16:        <entity2 rdf:resource="http://xmlns.com/foaf/0.1/Organization"/>
17:        <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">0.695652173913</measure>
18:        <relation>=</relation>
19:      </Cell>
20:    </map>
21:    <map>
22:      <Cell>
23:        <entity1 rdf:resource="http://purl.org/example#first_name"/>
24:        <entity2 rdf:resource="http://xmlns.com/foaf/0.1/firstName"/>
25:        <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">1</measure>
26:        <relation>=</relation>
27:      </Cell>
28:    </map>
29:    <map>
30:      <Cell>
31:        <entity1 rdf:resource="http://purl.org/example#first_name"/>
32:        <entity2 rdf:resource="http://xmlns.com/foaf/0.1/givenName"/>
33:        <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">1</measure>
34:        <relation>=</relation>
35:      </Cell>
36:    </map>
37:    <map>
38:      <Cell>
39:        <entity1 rdf:resource="http://purl.org/example#first_name"/>
40:        <entity2 rdf:resource="http://xmlns.com/foaf/0.1/givenname"/>
41:        <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">1</measure>
42:        <relation>=</relation>
43:      </Cell>
44:    </map>
```

```

45: <map>
46:   <Cell>
47:     <entity1 rdf:resource="http://purl.org/example#last_name"/>
48:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/familyName"/>
49:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">1</measure>
50:     <relation>=</relation>
51:   </Cell>
52: </map>
53: <map>
54:   <Cell>
55:     <entity1 rdf:resource="http://purl.org/example#last_name"/>
56:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/surname"/>
57:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">1</measure>
58:     <relation>=</relation>
59:   </Cell>
60: </map>
61: <map>
62:   <Cell>
63:     <entity1 rdf:resource="http://purl.org/example#address"/>
64:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/account"/>
65:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">0.769230769231</measure>
66:     <relation>=</relation>
67:   </Cell>
68: </map>
69: <map>
70:   <Cell>
71:     <entity1 rdf:resource="http://purl.org/example#institution"/>
72:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/Organization"/>
73:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">0.695652173913</measure>
74:     <relation>=</relation>
75:   </Cell>
76: </map>
77: <map>
78:   <Cell>
79:     <entity1 rdf:resource="http://purl.org/example#location"/>
80:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/depiction"/>
81:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">0.705882352941</measure>
82:     <relation>=</relation>
83:   </Cell>
84: </map>
85: <map>
86:   <Cell>
87:     <entity1 rdf:resource="http://purl.org/example#conference"/>
88:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/age"/>
89:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">0.666666666667</measure>
90:     <relation>=</relation>
91:   </Cell>
92: </map>
93: <map>
94:   <Cell>
95:     <entity1 rdf:resource="http://purl.org/example#publication_id"/>
96:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/publications"/>
97:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">0.846153846154</measure>
98:     <relation>=</relation>
99:   </Cell>
01: </map>
02: <map>
03:   <Cell>
04:     <entity1 rdf:resource="http://purl.org/example#title"/>
05:     <entity2 rdf:resource="http://xmlns.com/foaf/0.1/title"/>
06:     <measure rdf:datatype="http://www.w3.org/2001/XMLSchema#float">1</measure>
07:     <relation>=</relation>
08:   </Cell>
09: </map>
10: </Alignment>
11: </rdf:RDF>

```

D

OWL Axioms Renderer Visitor format

```
1: <?xml version="1.0" encoding="utf-8"?>
2: <rdf:RDF xmlns:owl="http://www.w3.org/2002/07/owl#"
3:     xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
4:     xmlns:rdfs="http://www.w3.org/2000/01/rdf-schema#"
5:     xmlns:xsd="http://www.w3.org/2001/XMLSchema#"
6: <owl:Ontology rdf:about="">
7:   <rdfs:comment>Aligned ontologies</rdfs:comment>
8:   <owl:imports rdf:resource="http://purl.org/example"/>
9:   <owl:imports rdf:resource="http://xmlns.com/foaf/0.1"/>
10: </owl:Ontology>
11: <owl:Class rdf:about="http://purl.org/example#institution">
12:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/Organization"/>
13: </owl:Class>
14: <owl:Class rdf:about="http://purl.org/example#first_name">
15:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/firstName"/>
16: </owl:Class>
17: <owl:Class rdf:about="http://purl.org/example#first_name">
18:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/givenName"/>
19: </owl:Class>
20: <owl:Class rdf:about="http://purl.org/example#first_name">
21:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/givenname"/>
22: </owl:Class>
23: <owl:Class rdf:about="http://purl.org/example#last_name">
24:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/familyName"/>
25: </owl:Class>
26: <owl:Class rdf:about="http://purl.org/example#last_name">
27:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/surname"/>
28: </owl:Class>
29: <owl:Class rdf:about="http://purl.org/example#address">
30:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/account"/>
31: </owl:Class>
32: <owl:Class rdf:about="http://purl.org/example#institution">
33:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/Organization"/>
34: </owl:Class>
35: <owl:Class rdf:about="http://purl.org/example#location">
36:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/depiction"/>
37: </owl:Class>
38: <owl:Class rdf:about="http://purl.org/example#conference">
39:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/age"/>
40: </owl:Class>
41: <owl:Class rdf:about="http://purl.org/example#publication_id">
42:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/publications"/>
43: </owl:Class>
44: <owl:Class rdf:about="http://purl.org/example#title">
45:   <owl:equivalentClass rdf:resource="http://xmlns.com/foaf/0.1/title"/>
46: </owl:Class>
46: </rdf:RDF>
```
