

Course: Principles of Biological Vision

Assignment 4 : RDF & SPARQL

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Tools Used:

- To Visualise the Graph: <http://www.ldf.fi/service/rdf-grapher>
- To Convert File Format Turtle to Notation3 : <https://www.easyrdf.org/converter>
- To Run the SPARQL query : <http://demo.openlinksw.com/sparql>
- URI Generator : <https://dopiaza.org/tools/datauri/index.php>

Documentation Referred:

- Turtle File Database Creation: <https://www.stardog.com/tutorials/data-model/>
- For Linking the two graphs, referred documentation : <https://www.w3.org/2000/10/swap/doc/tutorial-1.pdf> , section 6.2 Merging Data, but haven't got how to implement
- Implementation for 2 parts of the graph done by connecting them to a blank node named 'bn' and linking it via URI generated from the above mentioned reference.
- For terms/namespace : <https://dublincore.org/specifications/dublin-core/dcmi-terms/>

Part 1:

URL:

https://drive.google.com/file/d/1-QiZMzNvn6xi_2sQr1ND6RKEWziWSXD6/view?usp=sharing

Turtle File:

PREFIX : <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9u>

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

PREFIX cd: <http://purl.org/dc/terms#>

PREFIX bn: <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9u>

:Cogvis rdf:contributor :bn .

:Cogvis cd:publisher :Wip .

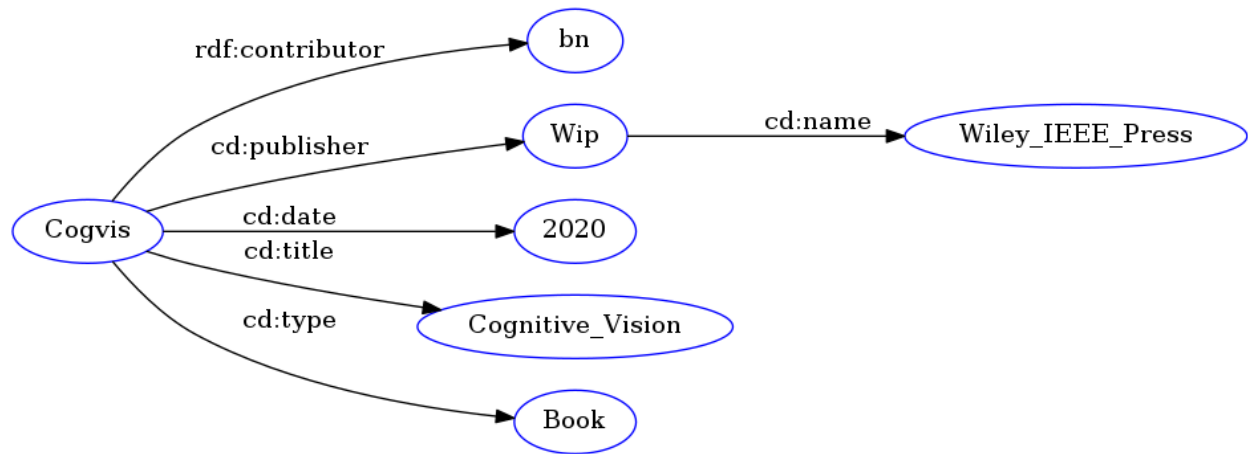
:Wip cd:name :Wiley_IEEE_Press .

:Cogvis cd:date :2020 .

:Cogvis cd:title :Cognitive_Vision .

:Cogvis cd:type :Book .

Graph Generated:



Namespaces:
 data:text/plain;charset=utf-8;base64,QmlvVmlzaW9u
 rdf: http://www.w3.org/1999/02/22-rdf-syntax-ns#
 xsd: http://www.w3.org/2001/XMLSchema#
 cd: http://purl.org/dc/terms#

Notation3:

@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

@prefix ns0: <http://purl.org/dc/terms#> .

<http://www.w3.org/1999/02/22-rdf-syntax-ns/Cogvis>

 rdf:contributor <http://www.w3.org/1999/02/22-rdf-syntax-ns/Cogvis/bn> ;

 ns0:publisher <http://www.w3.org/1999/02/22-rdf-syntax-ns/Cogvis/Wip> ;

 ns0:date <http://www.w3.org/1999/02/22-rdf-syntax-ns/Cogvis/2020> ;

 ns0:title <http://www.w3.org/1999/02/22-rdf-syntax-ns/Cogvis/Cognitive_Vision> ;

 ns0:type <http://www.w3.org/1999/02/22-rdf-syntax-ns/Cogvis/Book> .

<data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uWip> ns0:name

<data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uWiley_IEEE_Press> .

SPARQL:

@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

@prefix ns0: <http://purl.org/dc/terms#>

@prefix ns1: <data:text/plain;charset=utf-8;base64,>

SELECT ?bookTitle

WHERE

{

 ?bookTitle ns0:title ?bookTitle .

}

QUERY Result:



Part 2:

Link :

<https://drive.google.com/file/d/1XJ1Q2x143uWjqJvFP6MMGYSYQIk3Zf2h/view?usp=sharing>

PREFIX : <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9u>

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

PREFIX cd: <http://purl.org/dc/terms#>

PREFIX bn: <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9u>

:bn rdf:contributor :Hiranmay .

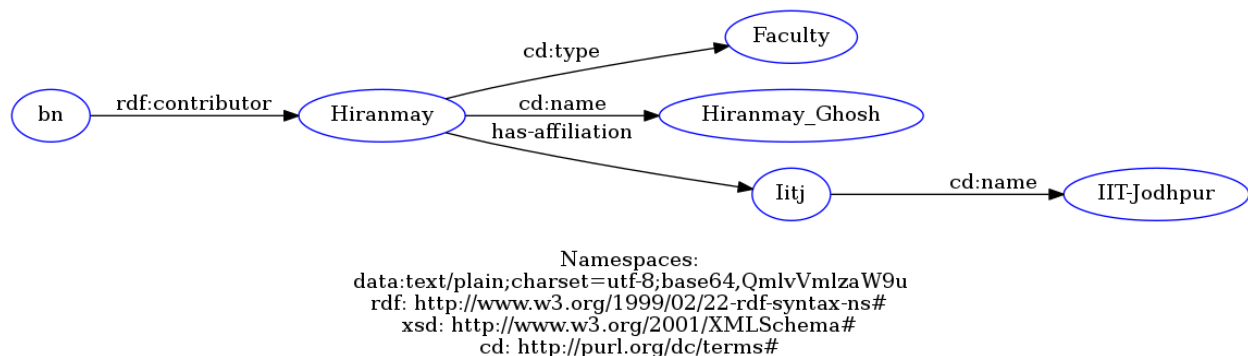
:Hiranmay cd:type :Faculty .

:Hiranmay cd:name :Hiranmay_Ghosh .

:Hiranmay :has-affiliation :Iitj .

:Iitj cd:name :IIT-Jodhpur .

Graph Generated:



Notation3 File:

@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

@prefix ns0: <http://purl.org/dc/terms#> .

<data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uCogvis>

rdf:contributor <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9ubn> ;

ns0:publisher <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uWip> ;

ns0:date <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9u2020> ;

ns0:title <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uCognitive_Vision> ;

ns0:type <data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uBook> .

<data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uWip> ns0:name
<data:text/plain;charset=utf-8;base64,QmlvVmlzaW9uWiley_IEEE_Press> .

SPARQL :

@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .

@prefix ns0: <http://purl.org/dc/terms#> .

@prefix ns1: <data:text/plain;charset=utf-8;base64,> .

SELECT ?author ?instiName

WHERE

{

?author rdf:contributor ?author .

?instiName ns1:QmlvVmlzaW9uhas-affiliation ?instiName

}

Query Result:

author	instiName
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