

Assignment 4 : : Inference using OWL

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PART 1 : program that extracts XML data and combines it with the ontology.

Instructions for run this file:

Install the libraries required by given command:

pip install rdflib

pip install owlready2

And if some module not found can be installed with command

Pip install XXXX

Create a folder : Copy these given file

Shopping_Mall.xml

Shopping_Mall.dtd

Assignment4rdf.rdf

Code_to_integrate.py

In Command Prompt run the file by command :

python Code_file.py

Output file generated:

Assignment_final.rdf

Assignment_consistent.rdf

DATAinferred.txt // inferred + pre existing

Allinferred.txt // inferred by reasoner triples

It has a python file which takes input as owl/rdf file and xml file optional(DTD file) and generate output file which is a **triple file of rdf**

PART 2 : You should check for consistency using an OWL reasoner

Yes, checked the with

```
146 from owlready2 import *
147 import rdflib
148 onto = get_ontology(cwd+"/Assignment4rdf.rdf").load()
149 with onto:
150     sync_reasoner()
151 onto.save("Assignment4rdf_consistent.rdf")
152
```

PART 3:

Display both the extracted and inferred triples as the final result of the program:

Inferred triple : with the use of file handling stores in “**Allinferred.txt**”

Assignment4rdf_consistent.rdf is the file after the reasoner check.

All data in final data stored in file : “**DATAinferred.txt**”.

Assignment4rdf_final.rdf is the file after the reasoner checks and with given triples.