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from rdflib import Graph, Namespace, RDF, RDFS, OWL, XSD, Literal
# Define paths and file names
BASE = 'http://ex.org#'
ONT FILE = 'ontology.ttl'
PAPER FILE = 'papers.txt'
AUTHOR FILE = 'authors.txt'
KG FILE = 'created_kg.ttl'
# Create rdflib graph
Graph()
# Read ontology from file
g.parse(ONT FILE, format='owl')
def str to id(str):
    """Make sure that the string is a legal part of a URL."""
    return str.replace(' ', ' ')
def add paper(q, line):
    """Add information about a paper to the graph."""
    if line.strip() == '0':
        return
    title, author names, source, pub name, year = line.split(';')
    paper = BASE['publ_'+str_to_id(title.strip())]
    g.add(paper, RDF.type, BASE.Paper)
    g.add(paper, BASE.title, title.strip())
    g.add(paper, BASE.year, int(year))
    publication = BASE['publ_'+str_to_id(source.strip())]
    g.add(publication, BASE.title, source.strip())
    g.add(paper, BASE.publication, publication)
    publisher = BASE['org '+str to id(pub name.strip())]
    g.add(publisher, BASE.name, pub name.strip())
    g.add(paper, BASE.publisher, publisher)
    for auth name in author names.split(','):
        author = BASE['author '+str to id(auth name.strip())]
        g.add(author, BASE.name, auth name.strip())
        g.add(paper, BASE.author, author)
# Read paper information from file and add to graph
with open (PAPER FILE) as file:
    for line in file:
        add paper(g, line)
def add author(g, line):
    """Add information about an author to the graph."""
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if line.strip() == '0':

name, aff name, country name = line.split(';')

author = BASE['author '+str to id(name.strip())]

return

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g.add(author, RDF.type, BASE.Author)
    g.add(author, BASE.name, name.strip())
    affiliation = BASE['org '+str to id(aff name.strip())]
    g.add(affiliation, BASE.name, aff name.strip())
    g.add(author, BASE.affiliation, affiliation)
    country = BASE['country_'+str_to_id(country_name.strip())]
g.add(country, BASE.name, country_name.strip())
    g.add(author, BASE.country, country)
# Read author information from file and add to graph
with open(AUTHOR FILE) as file:
    for line in file:
        add author(g, line)
# Execute RDFS entailments
rdfs = RDFS OWLRL Semantics(g, False, False, False)
# Remove unnecessary triples
g.update("""
DELETE {
    ?s ?p rdfs:Resource .
,
""")
# Save to file
g.serialize(KG_FILE, format='ttl')
```