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CSCIE-97

Assignment 1 Implementation Notes

# Overview

The implementation pretty much reflects the design document as written. I did however, make the following changes:

## Additonal Classes

Added to additional classes for the the exceptions:

ImportException.java

QueryEngineException.java

I added the files to declare the exception classes as public for consumption outside of the Importer and QueryEngine classes.

## Additonal Method

Added an additional private method “generateQueryMap” to KnowledgeGraph. It’s really just a function that isolates the algorithm to create the query strings. I isolated it to the “getTriple()” method wasn’t too messy. Also, the algorithm could be generalized to support other cardinality facts (doubles, quadruples, quintuples, etc.). I thought separating the logic into a seprate function was the first step toward doing that and it made the code cleaner. I added a full description of the algorithm in the Javadoc for the private method.

# Building

Unzip the attached .zip archive

Navigate to the unzipped directory

Compile:

javac cscie97/asn1/knowledge/engine/\*.java cscie97/asn1/test/\*.java

Run the provided input and query files:

java -cp . cscie97.asn1.test.TestDriver inputTriples.nt inputQueries.txt

# Testing

The following invocations can be run to test variaous cases:

Tests invalid triple file import

java -cp . cscie97.asn1.test.TestDriver bogusTriples.nt inputQueries.txt

Test invalid query file import

java -cp . cscie97.asn1.test.TestDriver inputTriples.nt bogusQueries.txt

Test Triples with question marks in the identifier

Test Triples with #parts != 3

java -cp . cscie97.asn1.test.TestDriver invalidTriples.nt inputQueries.txt

Test Queries with #parts != 3

java -cp . cscie97.asn1.test.TestDriver inputTriples.nt invalidQueries.txt

Tests triples without terminating “.” Characters (they should still work).

Tests queries without terminating “.” Characters (they should still work).

java -cp . cscie97.asn1.test.TestDriver unterminatedTriples.nt unterminatedQueries.txt

Test Empty triple file and empty query file

java -cp . cscie97.asn1.test.TestDriver emptyTripleFile.nt emptyQueryFile.txt

# Output

A dump of the provided triple file and query file, as well as all of the above tests is available in Ouput.txt

# Documentation

A full Javadoc HTML export is available in the ‘docs’ folder that is part of the zip package. Open docs/Javadoc/index.html to see all of the javadocs in a browser.