Jeremy ClarkTest
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.