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Assignment 1

## DESIGN VARIATIONS

- **Improvement:** My queryMapSet implementation does not hold sets of triples. Rather, each value holds a String concatenation of the query entry's matching triple identifiers. Each triple object comprises 4 identifiers and 4 createDates. String concatenations only contain the triple's identifiers. This was done conserve memory usage
- getQuery () is an additional knowledge graph (kgraph class) method added to primarily update querymapSet. It is called by the importTriple () method to update queryMapSet.
- My exceptions are implemented using if-else rather than the conventional throw-catch implementation. This replacement still meets the design document specifications
- When an invalid triple is entered, the implementation does not just print "Null". It rather prints out a QueryEngineException that indicates the query entry problem.
- Two additional methods (containsPred () and containsNode ()) were added to the kgraph class to check if predicates and nodes exist in predicateMap and nodeMap respectively.
- .txt files were used to build the knowledge graph and make queries rather than .nt files
- inputQueries.txt contains the contents of sampleQueries.nt

## DESIGN DOCUMENT ASSISTANCE

- It was very helpful and self-explanatory. It was a good foundation, which enabled me to pursue further optimizations

## FUTURE DESIGN DOCUMENT IMPROVEMENTS

- A hierarchical class diagram picture will certainly provide more clarity for me.

## FILES INCLUDED

- inputTriples.txt (to build knowledge base)
- inputQueries.txt (default queries)
- inputResults.txt (result of running inputQueries.txt against inputTriples.txt knowledge graph)
- currentQueries.txt (another query file to display exception catches)
- currentResults.txt (result of running currentQueries.txt against inputTriples.txt knowledge graph)

## Compile CMD

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

## Run CMD:

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