

## ISIT315

### LAB EXERCISE FOR WEEK 9

Instruction: Complete the following exercises while you are waiting for your tutor to mark your assignment.

The following exercises are on DL query. Note before DL query is run, the ontology must have been classified first (i.e. you must run the Reasoner first).

#### Task 1

Load the Periodic Table ontology to Protégé and enter the DL query in the DL query tab. (Note: Click all options on the box for Query For on the right hand side of the Query Result Window. The empty cell in the Table below means that you have to write the queries yourself.)

For each query, take note of the query results.

Questions	Query to enter in the Query (class expression box, then click Execute)
Which element has atomic number 95?	atomicNumber value 95
Which element has atomic number between 30 or 95?	(atomicNumber value 38) or (atomicNumber value 95)
Which individuals in the class Group?	Group
What are the instances in the class Classification?	Classification
Which elements have the solid standard state?	Element and (standardState value solid)
Which elements have the period period_1?	Element and (period value period_1)
Which element has color 'silvery white'?	Element and (color value "silvery white")
Which element has color 'silvery white' and in group group_actinoid?	Element and (color value "silvery white") and (group value group_actinoid)
<i>Create five more DL queries yourself.</i>	

#### Task 2

Use the family ontology you have created for Assignment 2, write 10 different DL queries for your ontology.