WordNet

WordNet is a semantic lexicon for the English language that computational linguists and cognitive scientists use extensively. For example, WordNet was a key component in IBM's Jeopardy-playing Watson computer system. WordNet groups words into sets of synonyms called synsets. For example, { AND circuit, AND gate } is a synset that represent a logical gate that fires only when all of its inputs fire. WordNet also describes semantic relationships between synsets. One such relationship is the is-a relationship, which connects a hyponym (more specific synset) to a hypernym (more general synset). For example, the synset { gate, logic gate } is a hypernym of { AND circuit, AND gate } because an AND gate is a kind of logic gate.

Here is the link to User Interface of Word Net : http://wordnetweb.princeton.edu/perl/webwn

Task to be done:

- Read the Word Net problem carefully. (Understand terms ancestral paths and Shortest Ancestral Paths)
- WordNet.java, SAP.java files, In.java, StdIn.java with API are given. Please check them.
- Build the Digraph, using Di-graph API given.
- Use the Idea of the data types to solve problem.
- Take care of the check style errors, while writing the code.

Input Format:
First line contains filename of synsets. **(They are in the Files folder of same directory)**
Second line contains filename of hypernyms. **(They are in the Files folder of same directory)**
Third line contains either **Graph** or **Queries**.
If the third line is Graph, print the Adjacency representation of Graph.
If the third line is Queries.
From the fourth line on wards, there will two strings separated by space.

Output Format:
For the Graph:
Print Adjacency representation of Graph.
For the queries:
Print the distance and ancestor separated by comma and space in the given format.

Example :
distance = 5, ancestor = h
Note:

- Use Bag.java and Digraph.java to print the Adjacency List Representation.
- For the exceptions like if graph is not rooted, print the exception message "Multiple roots"
- If the graph is not DAG, print the exception message "Cycle detected".
- Other exceptions, print the exception message "IllegalArgumentException".