Describe the data structure(s) you used to store the information in synsets.txt. Why did you make this choice?

The synset data is stored in a Symbol with the form of Java’s default HashMap. In the HashMap, the synset ID is used as the Key and the synset definition is used as the value in the form <Integer, String>. I use a Symbol Table because the WordNet needs to store a lot of data and retrieve a value quickly. The Symbol table allows quick retrieval in the matter of log(n) time.

Describe the data structure(s) you used to store the information in hypernyms.txt. Why did you make this choice?

The data structure is similar to the one used for synsets.txt. I use a Symbol Table with the synset ID being the Key and a Bag of hypernyms being the value.

Describe your algorithm to compute the SAP. What is the worst-case running time as a function of the structure of the graph

(height, number of vertices, number of edges, etc)? Best case running time?