HÁSKÓLINN Í REYKJAVÍK
REYKJAVIK UNIVERSITY

Fall 2017

T-301-REIR, Reiknirit

S4: WordNet

Halli og Laddi
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Group 1

September 29, 2017

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Directions on performing the assignment are showed here in italics (like this). These should not be included in the report you submit.

1 Data Structures

synsets

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

hypernyms

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

2 Algorithms

Rooted check

Describe concisely the algorithm you used to check if the digraph is rooted and the algorithm you used to check if the digrah is a DAG. What is the order of growth of the best case running time as a function of the number of vertices V and the number of edges E in the digraph? And what is the order of growth of the worst case running time?

Be careful! It is very easy to get these wrong. Keep in mind what the 'best case' and 'worst case' entail. Don't forget about the fact that starting a breadth first search in Java means initializing edgeTo[] arrays, etc.

Table 1: !Insert caption!

	best case	*worst case*
`rooted check`		
`DAG check`		

2.1 SAP

Describe concisely your algorithm to compute the shortest ancestral path in SAP.java? What is the order of growth of the worst-case running time of your methods as a function of the number of vertices V and the number of edges E in the digraph? What is the order of growth of the best-case running time?

Table 2: !Insert caption!

method	*best case*	*worst case*
`length(int, int)`		
`ancestor(int, int)`		
`length(Iterable, Iterable)`		
`ancestor(Iterable, Iterable)`		

2.2 Extra credit optimization

If you implemented an extra credit optimization describe it here.

3 About This Solution

3.1 Known Bugs / Limitations.

Known bugs / limitations. For example, if your program prints out different representations of the same line segment when there are 5 or more points on a line segment, indicate that here.

3.2 Help Received

Describe whatever help (if any) that you received. Don't include readings, lectures, and classes, but do include any help from people (including course staff, lab TAs, classmates, and friends) and attribute them by name.

3.3 Problem Encountered

Describe any serious problems you encountered.

3.4 Comments

List any other comments here. Feel free to provide any feedback on how much you learned from doing the assignment, and whether you enjoyed doing it.