CS 360 Lab 4

Name:

Lab 4 tasks (#s 1-2 in Prolog, #3 in Scheme)

Access Lab 4 code you tested in the preparation for Lab 4.

Part 1 (4 points)

(i) In Prolog, load the file *gcd.pl*. It contains a prolog predicate for finding the greatest common divisor of two numbers. Find the greatest common divisor of 36 and 21.

Describe the computational complexity of the provided Prolog *gcd* code and compare it with the computational complexity of the Euclid's algorithm.

(ii) In Prolog, load the file *last.pl*. Demonstrate that the *last1* predicate works correctly.

What Prolog data structures and language features are used in the provided code? What is the target of its computation?

(iii) In Prolog, load the file *merge.pl*. Demonstrate that the *mergesort* predicate runs correctly.

Show the results to the TA: _____ (initials)
You may open another session (keeping your current session active and available for reviewing) and proceed with the further work on Lab 4 if the TA is currently not available.

Part 2 (3 points)

In Prolog, load the functions *min* and *sentence* you prepared for the lab. Demonstrate that your functions operate properly.

Show the results to the TA: _____ (initials)
You may open another session (keeping your current session active and available for reviewing) and proceed with the further work on Lab 4 if the TA is currently not available.

Part 3 (3 points)
In Scheme, load the file *ch4-query.scm*. Demonstrate that you can run the provided code and answer simple queries with its help.

Show the results to the TA: _____ (initials)