**CS 352 Programming Assignment #7 (20 points)**

(warm-up problem) In Prolog, write(X) will print X on screen and nl will print a newline on screen, what will be printed on screen by the following prolog program?

my\_write([]).

my\_write([X|R]):- write(X), nl, my\_write(R).

?- my\_write([a,b,c]).

1. Write a Prolog program ***inc*** which computes or verifies that two lists are related because the elements of the second list are all incremented by one from the elements of the first list. For example:

inc([1,7,5],[2,8,6]). 🡪 true

inc([1,7,5],X). 🡪 X = [2,8,6]

inc([1,7, 4, 2, 8, 12], Y). -> Y = [2,8,5,3,9,13]

inc([],X). 🡪 X = []

inc([1,7,5], [2, 8, 5]). -> false

inc([1,7], [2, 8, 5]). -> false

inc([1,7,5], [2]) -> false

(optional) Can it solve the following?

inc(X,[2,8,6]).

1. Write the Prolog clauses which operate on lists of integers and implement sode — square the odds and delete the evens. For example,

?- sode([],L).

L = []

?- sode([1,2,3,4],L).

L = [1, 9]

?- sode([3,1,4,1,5,9],L).

L = [9, 1, 1, 25, 81]

**Submission requirements:**

Save problem 1 and problem 2 codes in one file, copy and paste all queries and results at the end of the codes using block comments. Submit to blackboard along the assignment link.