**Moti Begna**

**CSCI 5106**

**Homework 8**

**Problem 1**

Using only the *append* relation, formulate queries to determine the following:

a) The third element of a list

Solution: append([\_, \_, X|\_], [\_], L).

b) The last element of a list.

Solution - append([\_|\_], [X], List]).

**Problem 2**

Define relations to determine the following:

a) Is a list L1 a permutation of another list L2?

Solution - permutation(L, R) :- sort(L, X), sort(R, X).

b) Does a list have an even number of elements?

Solution - evenList(L) :- length(L, X), 0 is mod(X, 2).