

A Simple Prolog Game

Programming Assignment #5
CSC 481 – Spring '15

Problem Statement

The game is a simple one: given a list of integers, figure out whether there is a hole in the sequence of the given integers and what are the values that are missing. A couple of rules:

- (a) The integers given will always be greater than 0.
- (b) No integer value is allowed to be repeated in the list.
- (c) The integer values do not necessarily appear in order.
- (d) Each list has at most one hole.
- (e) You should return a list of value(s).
- (f) If no hole exists, return an empty list.

For example:

?- game([3,1,4,6,5],X).

X = [2]

?- game([3,1,2,4],X).

X = []

?- game([2,6,7,5],X).

X = [3,4]

Hint: the built-in predicate sort/2 (see prolog help menu) might come in handy.

Deliverables

- (1) Submit your source code and proof that your program works (for example, a screen capture of running your program with some telling examples). (80points)
- (2) Also submit a written report detailing your knowledge representation and your approach to solving this problem. (20points)

Submitting your Project

Submit your work via Sakai by **Wednesday April 15th 11:30pm**.