

# A Simple Prolog Game

Programming Assignment #3  
CSC 481 – Spring '10

## ***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***

Submit your source code and proof that your program works (for example, a screen capture of running your program with some telling examples).

## ***Submitting your Project***

Submit your work by email to [hamel@cs.uri.edu](mailto:hamel@cs.uri.edu) by **Thursday February 25<sup>th</sup> 10pm**.