

# Theory of programming languages

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## Peg solitarie

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Peg solitaire is a board game for one player involving movement of pegs on a board with holes. Initially, all positions but one have pegs and the game is solved when only one peg remains. Pegs can “jump” over other pegs if there is a hole on the other side, removing the peg we jump over from the board. More information is available [here](#). In this assignment we will implement in Maude the triangular version of the Peg solitaire.

**Ejercicio 1** Define a datatype for the board. Remember that we are interested in the triangular version, and it must be able to represent boards of any size.

**Ejercicio 2** Implement movements by using rewrite rules.

**Ejercicio 3** Define an initial triangular board with 5 rows and a single hole in the second position of the third row (counting from the top). Use the `search` command to find:

- (a) A solution.
- (b) A “perfect solution,” that is, a solution where the final peg is located in the position that originally had the hole.