
Prolog Programming Exercise 2

The problems below should be solved using Prolog. You should be able to also provide the Haskell equivalent for the program and if necessary, an imperative equivalent as well.

1. Write the code that will insert a specified element into a given list at the position specified by the third attribute. For example, '4' can be inserted into [1,2,3] in position 1 to give [1,4,2,3]. Note that the positions are zero-indexed.
2. Write the code that inserts a specified element into all possible positions in a given list. For example, 1 could be inserted into the list [2,3,4] to obtain

[[1,2,3,4], [2,1,3,4], [2,3,1,4], [2,3,4,1]]

3. Write the code that would accomplish a selection sort on a given list.
4. Will the code in #3 above work for integers and strings? If not produce the code that would work for any type of list.