

# Prolog

## 1 Problem 1

Define the relation

**reverse(List,ReversedList)**

that reverses lists. For example:

*reverse([a, b, c, d], [d, c, b, a]).*

**ANSWER:**

*reverse([], []).*

*reverse([First|Rest], Reversed) :-*

*reverse(Rest, ReversedRest), conc(ReversedRest, [First], Reversed).*

## 2 Problem 2

Rewrite the monkey world program as the relation

**canget(State,Actions)**

to answer not just 'yes' or 'no', but to produce a sequence of monkey's actions represented as a list of moves. For example:

*Actions = [walk(door, window), push(window, middle), climb, grasp]*

**ANSWER:**

*canget(state(-, -, has), []).*

*canget(State, [Action|Actions]) :-*

*move(State, Action, NewState), canget(NewState, Actions).*