Exercise: Missionaries and Cannibals (Testat)

1. Formalize the following problem and define (10 pt)

   a) how the sets of states is described

   b) what the initial state is

   c) the successor function

   d) the goal test

Three missionaries and three cannibals are on one side of a river that they wish to cross

   – *a boat is available that can hold at most two people*

   – *you must never leave a group of missionaries outnumbered by cannibals on the same bank (and in the boat on the side of this bank)*

   e) Draw a diagram of the state space and derive an action sequence in your representation that brings everyone safely to the opposite bank (10 pt)

Artificial Intelligence - Modeling Search Problems