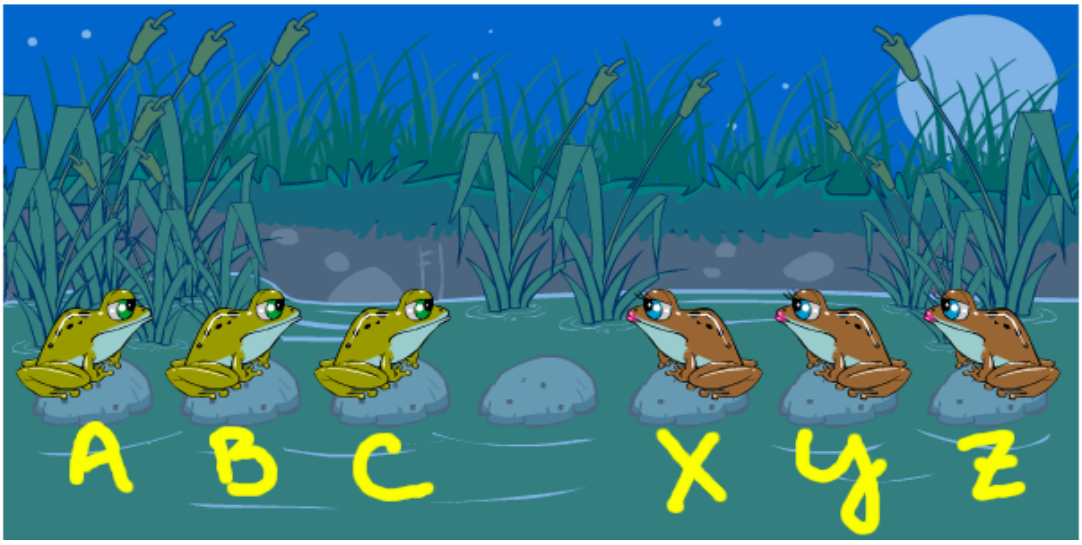
2. In this question you have to formulate the "jumping frog" puzzle as a search problem. (There are a number of flash implementations online, if you want to play with it.1) In general, two sets of frogs are trying to get to the opposite ends of a single row of lily pads. Each frog can jump forward either one or two spaces, but cannot jump onto an occupied pad. Frogs cannot jump backwards or turn around. The start state above as ABC-XYZ. Then the goal state would be XYZ-ABC



   a. Create the graph or solution space for the frog-jumping problem, but you can make two simplifications as below:
      i. Just use four frogs, so the start state is AB-YZ and the goal is YZ-AB.
      ii. There are always two ways to reach the goal: one starts with a frog (A or B) moving right, the other with a frog (Y or Z) moving left. So ignore the solutions starting with Y or Z. This will cut the search space in half.

   b. Perform Breadth first search to find a goal state and print the sequence of states/moves to reach to the goal state.
   c. Perform depth first search to find a goal state and print the sequence of states/moves to reach to the goal state.

********** Best of Luck **********