Algorithm: Breadth-First Search

1. Create a variable called *NODE-LIST* and set it to the initial state.

2. Until a goal state is found or *NODE-LIST* is empty do:

   (a) Remove the first element from *NODE-LIST* and call it E. If *NODE-LIST* was empty, quit.

(b) For each way that each rule can match the state described in E do:

   i. Apply the rule to generate a new state.

   ii. If the new state is a goal state, quit and return this state.

   iii. Otherwise, add the new state to the end of NODE-LIST.

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