

# Homework #1

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The 8-puzzle problem can be defined by the search problem  $\langle \Sigma, succ, S_0, G \rangle$  where:

$\Sigma$  is the set of all possible configurations of the 8-puzzle problem.  
 $succ \subseteq \Sigma \times \Sigma$  where  $(s, u) \in succ$  iff it is possible to reach  $u$  from state  $s$  through one of the four possible moves  
 $S_0$  is the given initial state: a configuration made of 9 characters  
 $G$  is the given goal state.