



Backtracking algorithm pseudocode:

function BACKTRACKING-SEARCH(csp) **returns** a solution or *failure*
 return BACKTRACK($csp, \{ \}$)

function BACKTRACK($csp, assignment$) **returns** a solution or *failure*
 if $assignment$ is complete **then return** $assignment$
 $var \leftarrow$ SELECT-UNASSIGNED-VARIABLE($csp, assignment$)
 for each $value$ **in** ORDER-DOMAIN-VALUES($csp, var, assignment$) **do**
 if $value$ is consistent with $assignment$ **then**
 add $\{var = value\}$ to $assignment$
 $inferences \leftarrow$ INFERENCE($csp, var, assignment$)
 if $inferences \neq failure$ **then**
 add $inferences$ to csp
 $result \leftarrow$ BACKTRACK($csp, assignment$)
 if $result \neq failure$ **then return** $result$
 remove $inferences$ from csp
 remove $\{var = value\}$ from $assignment$
 return *failure*