

Blocks-world problem

Each block has a unique id.

Blocks are in stacks.

Can move one block at a time -
the block on top of a stack.

Always room for another stack.



initial state



table on(A, C)

on table(C)

on table(B)

clear(A)

clear(B)

goal state



clear(A)

on(A, B)

on(B, C)

on table(C)

move(x, y) move block x on top of block y
where x & y are blocks

precondition: clear(x)
clear(y)

effect: \neg clear(y)
on(x, y)

either \neg on(x, z)? or \neg ontable(x)

NEED TO FIX THIS

move from table (x, y) to on top of block y
move ^{block} x from the table

precondition: $\text{ontable}(x)$
 $\text{clear}(x)$
 $\text{clear}(y)$

effect: $\neg \text{ontable}(x)$
 $\neg \text{clear}(y)$
 $\text{on}(x, y)$

move from block (x, y, z) to on top of block y
move block x from on top of block z to on top of block y

precondition: $\neg \text{clear}(z)$, $\text{on}(x, z)$, $\text{clear}(x)$, $\text{clear}(y)$
effect: $\text{clear}(z)$, $\neg \text{on}(x, z)$, $\neg \text{clear}(y)$, $\text{on}(x, y)$

move to table (x, z) move block x from on top of block z to the table

precondition: $\text{clear}(x)$, $\text{on}(x, z)$
effect: $\neg \text{on}(x, z)$, $\text{ontable}(x)$, $\text{clear}(z)$