Lab Experiment 9: BLOCKS WORLD PROBLEM.

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class BlocksWorld:

def \_\_init\_\_(self):

self.state = {

"A": "B",

"B": "table",

"C": "table"

}

self.goal = {

"A": "B",

"B": "C",

"C": "table"

}

def is\_clear(self, block):

return all(pos != block for pos in self.state.values())

def is\_goal\_state(self):

return self.state == self.goal

def move(self, block, destination):

if self.state[block] != destination:

if not self.is\_clear(block):

return False

if destination != "table" and not self.is\_clear(destination):

return False

print(f"Moving {block} from {self.state[block]} to {destination}")

self.state[block] = destination

return True

return False

def plan\_moves(self):

print("\nInitial State:", self.state)

while not self.is\_goal\_state():

moved = False

for block, target in self.goal.items():

if self.state[block] != target:

if self.move(block, target):

moved = True

if not moved:

print("No valid moves available, stopping...")

break

print("\nFinal Goal State Reached:", self.state)

bw = BlocksWorld()

bw.plan\_moves()

