9. IMPLEMENTATION OF BLOCKS WORLD PROGRAM

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EXP NO: 9

```
class BlocksWorld:
    def __init__(self):
        # Initial state
        self.state = {
            "A": "B",   # A is on B
            "B": "table",  # B is on table
            "C": "table"   # C is on table
        }
        # Goal state
        self.goal = {
            "A": "B",
            "B": "C",
            "C": "table"
        }

    def is_goal_state(self):
        # Check if the current state matches the goal
        return self.state == self.goal

    def move(self, block, destination):
        # Move a block to the destination (either another block or table)
        if block in self.state and self.state[block] != destination:
            print(f"Moving {block} from {self.state[block]} to {destination}")
            self.state[block] = destination
```

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

        # Keep moving blocks until the goal state is reached
        while not self.is_goal_state():
            for block, target in self.goal.items():
                if self.state[block] != target:
                    self.move(block, target)

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

# Run the Blocks World Solver
bw = BlocksWorld()
bw.plan_moves()
```

```
>>>
= RESTART: C:/Users/HDC0719088/AppData/Local/Programs/Python/Python312/exp999.py

Initial State: {'A': 'B', 'B': 'table', 'C': 'table'}
Moving B from table to C

Final Goal State Reached: {'A': 'B', 'B': 'C', 'C': 'table'}
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```