

TASK 7 -Monkey Banana Problem

PROGRAM

Operators

```
def move(subject, x1, x2):
```

```
    return f"Move {subject} from {x1} to {x2}"
```

```
def push_box(x1, x2):
```

```
    return f"Push box from {x1} to {x2}"
```

```
def climb_box(x, direction):
```

```
    return f"Climb box at {x} {direction}"
```

```
def have_banana(x):
```

```
    return f"Have banana at {x}"
```

Initial State

```
initial_state = {
```

```
    'monkeyAt0': True,
```

```
    'monkeyLevel': 'Down',
```

```
    'bananaAt1': True,
```

```
    'boxAt2': True
```

```
}
```

Goal State

```
goal_state = {
```

```
    'GetBanana': True,
```

```
    'at': 1
```

```
}
```

Planning Algorithm

```
def plan_actions(initial_state, goal_state):
```

```
    actions = []
```

```
    # Example planning algorithm to achieve the goal state
```

```
    if initial_state['monkeyAt0'] and initial_state['bananaAt1']:
```

```
        actions.append(move('Monkey', 0, 1))
```

```
        actions.append(climb_box(1, 'Up'))
```

```
actions.append(have_banana(1))

return actions

# Execute the planning algorithm

actions = plan_actions(initial_state, goal_state)

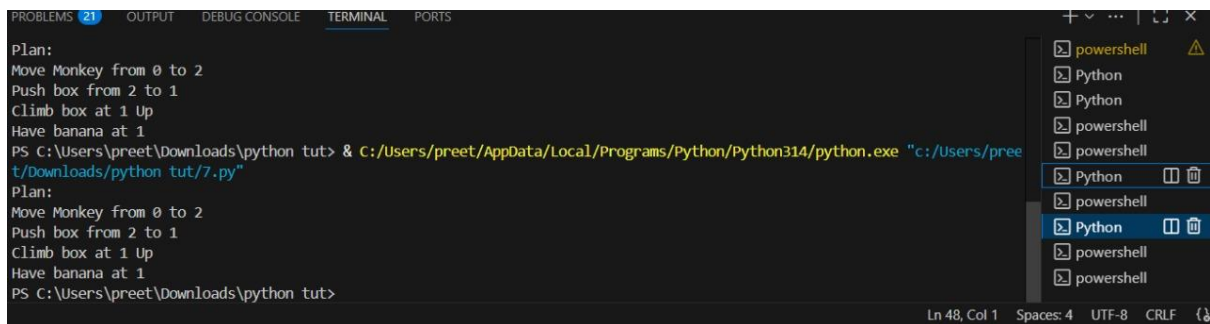
# Print the actions in the plan

print("Plan:")

for action in actions:

    print(action)
```

OUTPUT



```
PROBLEMS 21 OUTPUT DEBUG CONSOLE TERMINAL PORTS
Plan:
Move Monkey from 0 to 2
Push box from 2 to 1
Climb box at 1 Up
Have banana at 1
PS C:\Users\preet\Downloads\python tut> & C:/Users/preet/AppData/Local/Programs/Python/Python314/python.exe "c:/Users/preet/Downloads/python tut/7.py"
Plan:
Move Monkey from 0 to 2
Push box from 2 to 1
Climb box at 1 Up
Have banana at 1
PS C:\Users\preet\Downloads\python tut>
```