**TASK 7 :**

**To Implement the Monkey Banana Problem in Goal Stack planning using python**

**Program :**

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 = {

'monkeyAt': 2,

'monkeyLevel': 'Down',

'bananaAt': 0,

'boxAt': 2

}

goal\_state = {

'GetBanana': True,

'at': 0

}

def plan\_actions(initial\_state, goal\_state):

actions = []

monkey\_pos = initial\_state['monkeyAt']

box\_pos = initial\_state['boxAt']

banana\_pos = initial\_state['bananaAt']

if monkey\_pos != box\_pos:

actions.append(move("Monkey", monkey\_pos, box\_pos))

monkey\_pos = box\_pos

if box\_pos != banana\_pos:

actions.append(push\_box(box\_pos, banana\_pos))

box\_pos = banana\_pos

monkey\_pos = banana\_pos # monkey moves with the box

actions.append(climb\_box(banana\_pos, "Up"))

actions.append(have\_banana(banana\_pos))

return actions

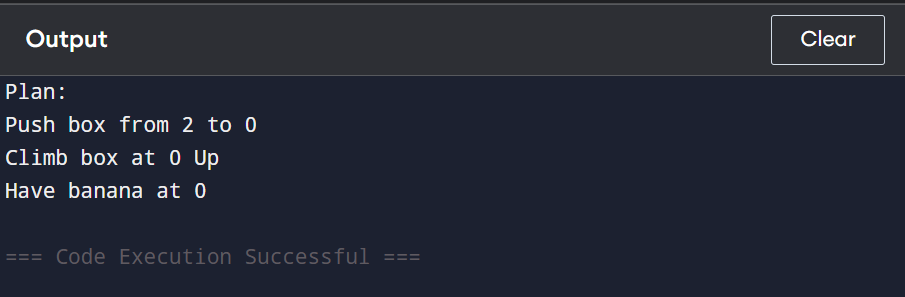
actions = plan\_actions(initial\_state, goal\_state)

print("Plan:")

for action in actions:

print(action)

**Output :**

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