

Code:

```
import time
A, B = 0, 0
m, n = 4, 3
print("Initial state = (0,0)")
print("Capacities = (4,3)")
print("Goal state = (2,0)")

... Initial state = (0,0)
      Capacities = (4,3)
      Goal state = (2,0)

while(A != 2):
    r = int(input("Enter rule you want to execute: "))
    if (r == 1):
        A = m
    elif (r == 2):
        B = n
    elif (r == 3):
        A = 0
    elif (r == 4):
        B = 0
    elif (r == 5):
        t = n - B
        B = n
        A -= t
    elif (r == 6):
        t = m - A
        A = m
        B -= t
    elif (r == 7):
        B += A
        A = 0
    elif (r == 8):
        A += B
        B = 0
    elif (r == 9):
        A = B
        B = 0
```

```
elif (r == 10):
    B = A
    A = 0
elif (r == 11):
    A += 2
    B -= 2
elif (r == 12):
    A -= 2
print (f"Volume of A filled: {A} \nVolume of B filled:
{B} \n")
```

```
...   Volume of A filled: 4
      Volume of B filled: 0
```

```
      Volume of A filled: 2
      Volume of B filled: 0
```