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#Aim: To write Python program for Water Jug Problem

jug1_capacity = 4
jug2_capacity = 3
target_amount = 2
jug1_current = 0
jug2_current = 0
step = 1
while jug1_current != target_amount and jug2_current !=
target_amount:
    print(f"Step {step}: Jug 1 has {jug1_current} units and Jug
2 has {jug2_current} units")
    if jug1_current == 0:
        jug1_current = jug1_capacity
    while jug1_current > 0 and jug2_current < jug2_capacity:
        jug1_current -= 1
        jug2_current += 1
        print(f"Step {step}: Pour water from Jug 1 to Jug 2 -
Jug 1 has {jug1_current} units and Jug 2 has {jug2_current}
units")
        step += 1
    if jug2_current == jug2_capacity:
        jug2_current = 0
        print(f"Step {step}: Empty Jug 2 - Jug 1 has
{jug1_current} units and Jug 2 has {jug2_current} units")
        step += 1
print(f"\nTarget amount of {target_amount} units achieved!")
```

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Step 1: Jug 1 has 0 units and Jug 2 has 0 units
Step 1: Pour water from Jug 1 to Jug 2 - Jug 1 has 3 units and Jug 2 has 1 units
Step 2: Pour water from Jug 1 to Jug 2 - Jug 1 has 2 units and Jug 2 has 2 units
Step 3: Pour water from Jug 1 to Jug 2 - Jug 1 has 1 units and Jug 2 has 3 units
Step 4: Empty Jug 2 - Jug 1 has 1 units and Jug 2 has 0 units
Step 5: Jug 1 has 1 units and Jug 2 has 0 units
Step 5: Pour water from Jug 1 to Jug 2 - Jug 1 has 0 units and Jug 2 has 1 units
Step 6: Jug 1 has 0 units and Jug 2 has 1 units
Step 6: Pour water from Jug 1 to Jug 2 - Jug 1 has 3 units and Jug 2 has 2 units
Step 7: Pour water from Jug 1 to Jug 2 - Jug 1 has 2 units and Jug 2 has 3 units
Step 8: Empty Jug 2 - Jug 1 has 2 units and Jug 2 has 0 units

Target amount of 2 units achieved!
```