```python
from IPython.display import clear_output

boat_side = "Right"
missionary_on_right = 3
cannibals_on_right = 3
missionary_on_left = 0
cannibals_on_left = 0


def print_state():
    clear_output(wait=True)
    print(f"M = {missionary_on_left} C = {cannibals_on_left}", end='')
    print(" |B-----| ", end='')
    print(f"M = {missionary_on_right} C = {cannibals_on_right}")

print_state()

while True:
    missionary = int(input(f"Enter number of Missionary in boat on {boat_side}: "))
    cannibals = int(input(f"Enter number of Cannibals in boat on {boat_side}: "))

    if missionary + cannibals != 1 and missionary + cannibals != 2:
        print("Invalid move")
        continue

    if boat_side == "Right":
        if missionary > missionary_on_right or cannibals > cannibals_on_right:
            print("Invalid move")
            continue
        missionary_on_right -= missionary
        cannibals_on_right -= cannibals
        missionary_on_left += missionary
        cannibals_on_left += cannibals
        boat_side = "Left"
        print_state()
    else:
        if missionary > missionary_on_left or cannibals > cannibals_on_left:
            print("Invalid move")
            continue
        missionary_on_right += missionary
        cannibals_on_right += cannibals
        missionary_on_left -= missionary
```

```python
            cannibals_on_left -= cannibals
            boat_side = "Right"
            print_state()

        if (missionary_on_right != 0 and missionary_on_right < cannibals_on_right) or (missionary_on_left != 0 and mi
            #or (missionary_on_left != 0 and missionary_on_left < cannibals_on_left):
            print("YOU LOSE")
            break

        if missionary_on_left == 3 and cannibals_on_left == 3:
            print("YOU WIN")
            break

print("GAME OVER")
#11
#10
#02
#01
#20
#11
#20
#01
#02
#01
#02

#m=3 c=3 ------- m=0 c=0
#YOU WIN
#GAME OVER
```

In [ ]: