```python
#Assignment2
#Roll No : 3350
#Name : Rajiya Mulla
#Write a program for Water jug problem


max1=int(input("capacity of JUG1 : "))
max2=int(input("capacity of JUG2 : "))
fill=int(input("how much liters of water fill in JUG1 : "))

def pour(jug1,jug2):
    print("%d\t%d" % (jug1,jug2))
    if jug2==fill:
        return
    elif jug2==max2:
        pour(0,jug1)
    elif jug1 != 0 and jug2==0:
        pour(0,jug1)
    elif jug1==fill:
        pour(jug1,0)
    elif jug1 < max1:
        pour(max1,jug2)
    elif jug1 <(max2-jug2):
        pour(0, (jug1+jug2))
    else:
        pour(jug1-(max2-jug2), (max2-jug2)+jug2)

print("JUG1\tJUG2")
pour(0,0)
```

```
capacity of JUG1 : 3
capacity of JUG2 : 4
how much liters of water fill in JUG1 : 2
JUG1    JUG2
0       0
3       0
0       3
3       3
2       4
0       2
```