6.You are given two jugs, a 4-litre one and a 3-litre one. Neither has any measuring markers on it. There is a pump that can be used to fill the jugs with water. How can you get exactly 2 litres of water into 4-litre jug? Implement this using Depth First Search.

CODE:

```
def pour(jug1, jug2):
    max1, max2, fill = 3, 4, 2
    print("%d\t%d" % (jug1, jug2))
    if jug2 is fill:
        return
    elif jug2 is max2:
        pour(0, jug1)
    elif jug1 != 0 and jug2 is 0:
        pour(0, jug1)
    elif jug1 is 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)
```

OUTPUT: