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.

```python
def pour(jug1, jug2):
    max1, max2, fill = 3, 4, 2  #Change maximum capacity and final capacity

    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

```
JUG1        JUG2
0           0
3           0
0           3
3           3
2           4
0           2
```