WATER JUG PROBLEM

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REG NO: 22BCE9292 SLOT :L7+L8

1)Solve the water jug problem

CODE:

*#water jug problem*

from collections import defaultdict

jug1 =4

jug2 = 3

aim = 2

*#initilizing  the matrix to default False*

visited  = defaultdict(lambda : False)

def Solve\_Jug( a1,a2):

    if (a1==aim and a2==0)or(a2==aim and a1==0):

        print(a1,a2)

        return True

    if (visited[(a1,a2)]==False) :

        print(a1,a2)

        visited[(a1,a2)] =True

        return( Solve\_Jug(0,a2)or Solve\_Jug(a1,0) or Solve\_Jug(jug1,a2) or Solve\_Jug(a1,jug2) or

                Solve\_Jug(jug1,a2-(4-a1)if a2-(4-a1)>=0 else 0) or Solve\_Jug(a1-(3-a2) if a1-(3-a2)>=0 else 0,3)or

                Solve\_Jug(a1+a2,0) or Solve\_Jug(0,a1+a2))

    else:

        return False

print("Solution: =================================")

Solve\_Jug(0,0)

OUTPUT:

