Depth First search [water Jug] END.NO : Dobe : graph - caoba graphic Stable Mineral Manual Phones is stamped and a TO write a python program to solve a water by jug of problem, and book and sale Algorithm Step 1: Initialize the queue of adal i) create à queue grober à BFS in create a set visited to self track Ob visited shale to avoid cycles iii) Enqueue the initial state (0,0) where the both jugg are semply whole an early Step 2: BFS Loop Station with with I is while are is not ampty ii) Dequeue the Gront state (x,7) where x is the amount of water in jug, and y is the amount of water in fing 2 iii) Ib either x== toorget or y== target ther Endoch H.c. Vietoke: C solution is bound iv) I b the state x, y has been wisited before ship to need iteration V) Mark the state (x, y) as visited VI) For the current state (x, y) generate all possible next states by applying * Bill Jug 1 (Jug 1, y) * fole Jug 2 (Jug 2, x) x Employ Jug 1. (0, y) & Empty Jug 2(x,0) * Pour water from Jug 1 to Jug 2 - with capacity of Jug 2

* Pour water brom Jug 2 to Jug 1 -) with capacity of Jug 1 Step 3: check bor solution i, I is the obvious is exchanged and the target have been reached, grint "solution is not possible" ii) otherwise, grint the sequence of operation leading to the solution i i m ni (kilin kitai) di is refusion to determ in action si CONSTITUTE grank - appears of war, con a con /= [(EcJw (ÉcJw)]m TO U LOTE FORWARD OF WELLES ENGLY Duri : skloukk ei to I ciju wi Bath apprind(Cutos, 13) grain, ogginalfo, allery CARROLL OF SE 1 (1/2) Box marin call Delication (", ", so to remain ...") " a raisi

Priograms of pure months continue 10000 y from collection import dequeue deb solution (a, b) target, were to a god? BOOK AND ASSESSED ON SOME SOND HOS som de la salva is solvable = False path=[] q = deque() ob. append ((0,0)) while ten (3) 50 produced in sudorsays uzg. top left() if (u[0], u[i]) in m: continue is u[0]7a or u[1]7b or u[0]20 or u[jx continue yrath.append([u[o], u[i]]) m[(u[0], u[1])]=1is u [0]==target or u[i]== taaget; is solvable : bul is wo]== barget: is u[1]! =0; youth append ([u[o], o]) else: is uso]! = 0: grath. appard (o, usi]) SIZ z len (grath) Bor i in range (SI); Print ("(", partilio soz, ",", partigizio",) break. 9. append ([u[o], b])

801. SP C 11 D' de weigh, output: J.O.C Enter the capacity of Jug 1:4 Enter the capacity of Jug 2:300 A Enter the capacity of Tug 2:2 Enter the target amount 15.22 1 Park from initial state to solution state (0,0) midocidation : 1 9218 %. CA, O) dende on blace Republic of Sit & Strat 453) Conco O = Leone - B SHIW (3,0) restable show in gold (1,3) 33 thu 320 sizze mate3,3)an was doaled Jese 24 2 2014,27 4 and Jewel 82W Alas est mentre dans danskenavar States of the property of the property of the states of th Test with the season so the easterns midde carrilate the beatistice gas. 1800 alabogu : p 0542 10 30 de 20 0 3d 3400 gradia - 10 2 2 1 1 the state coops and stated grown of April 30 THEORY SHE US SIGNAL LABOROUS WAS SUMPLE BELIEVE SE LEWINGER and the second of the second Berult Thus the water jug Parthern is executed and output is workfeed