Sample Input => num course == 4 mont paragod Proveprisites = [[1,0], [2,1], [3,2]] it to reddiga regrong of Initialization's (marrows) sprahou stolay : · I c 1000 00 0 [[], E], E], E] = 181160 indegree = [0,0,0,0] hopoloder = [] + Store the final order of courses queue = depuers + processing cources with o in-degree STEPI: Build an adjaceny list & computerinderce Presnequisik = [1,0] in prerrequise asis course = 1 g preven + D, update adulist & indegree array adilist = [[]],[],[],[] # 0 -> 1 indequees = [0,1,0,0] 1 Presepuir = [2,1] in prep given list course=2 prerez=1, update adjuist à indgree alseq adilist=[[], [2], [], []) [ #1) indegrees=[0,1,1,0,d of slbo. 3 Presequiste = [3,2] in given preseq lat Course-3 prevoy-2 uplate adilist & indexee asky adilist = [[1], [2], [3], []] # 2 = 3 indegree = [0,1,1,1] STEPZ: Initialize puone with o indysee course in a queue 100 James Jaholi 10'21 topordon in ven toporder= [0] = 826/10 pot STEP3: Process Nodes in BFT manner 1) Deque 10 1 from Que DI 20000 11A process neighbor of 10's Exporder = [0] 1-8 so decrement indegree of 1 indegree = [0,0,1, -Interes of 1 is 0 now quene = [1] so add it to prieme ) 6 00%

2. Deque 2 trom queue mun ( purate d'ang)? [ o Cial D. La parderingsiera Exporder = [0, 1] · Process neighbor at '1' indegrees: [0,0,0,1] · If indegree o' add to quem. [] = +21160 [0,0,0,0] = empshall 3. Deque 2 from queve? 1 mbogad pureus deques > Proporter with a thing · process '3' (neighbors) of '2' STEP I Build or (managraph) garpaphi salphylore · It inday ree o' all to pi lo la Himponson? ento graphai squiente allaj, or como e consuo 10 porder = [0, 1, 2 indepree [0,0,0,0] Quero = [ 23] 1: [15] - 111 138 279 1 course = 2 propos I suppose colorist & struct 1 Degue 3 from queue , add 3 to toporder · Update indegree & queeze 9x9ba 2 18 Queure EL J 5- 494979 5toporder = [0,1,2,3] indepe + 10,0,0,0,07 Conclusion: length or toporder = by, which is equal to numcourses (NO tycles in graph] ASM Return The 1290019 189311 All courses can be finished and of Times o(vtE) phois dominos Space of O(V+E) of 11 has 2