Task o 1 (A)

The Hs takes the ewovent course, g, resided nodes vas y and a stack vas s. Then the find - course order takes the total number of courses N and list of prerequisites. It initializes an empty graph. The "V" is used to fract rusited courses, The loop will exercise from 1 to N. If the current mode hasn't a been xisited it calls the ofs function. After all this the stack contains the courses in realist order. After guversing it 3[::1] it gives essert order. Tasko1 (B) It decrements the indeger of

The find every proper takes the total number of overses N. and a list of prerequisites. It initializes can empty grouph. The loop to iterates through each prerequisite (a, 6) in the

input. It adds course be as a prerequisible for course ia in the graph and it increments the indegree of course essures to since it now it has one more prejuguisite. After this function inotializes an empty queue. Another loop starates thorough each eswere from 1 to N. It a course has a indegree st means it has no prop preguesites. While que we not rempty the code pops a course from front of the quelle. Then added to course order. Then the eade starates through each prerequisite 'p' of the completed course. It decrements the indegree of p since one of It's presiquisite has been satisfied It proligre of p = 20 means it's added to queue. It not empty list is neturned.

Task 02
The function takes node, groph, missted and result.
We instalize resisted [1]-1 then we iterate in the groph. If resisted [1]-1 cit will return in the groph. If resisted [1]-1 cit will return impossible otherwise we initialize resisted [1] to impossible otherwise we initialize resisted [1] to 0. and wow we will append the tresult the value will be under find low egrophically-smallest square takes a list and you an item integer. We have a list and you an itemporal other one over 2 loops one over preriquisete and other one over (4 to N+1). It resisted to we rebeau it to

Task-03

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Crucke is stock and stone Nodes. initialize nisited away of size N to Sup track. run a lap from o to N. It the mode is not marked True in rivited row, eal the necessire function.

Now mark the eurent Node as True, Run a loop.

on all the nodes which has a directed sedge to the evenent node. It If Ihr node is False call the function. push the current Mide impossible other wise ore similar stackerities for O. and wow we wall append the small the real but the worder find - love es graphic cally smalled - appear takes in list and no on ity entrope. On I hope on our prinqueste and alle on our (a to MA). He resided a en schem at to Eniche is shock and when Nober inidialis on the and of see I to dup Least, seen on lap o to N. El the rade is you could by in rivited ran call the presence No make the event Node as The