Task-3 In Jak-1: det Diskstra (diets, dietz, same): Wei = [llout ('int)] = (lendiel2) +3)] Par=[None] (len (did2+3) prion-01 = 5 } Vini = [False] + (len (ded2)+4) wei [Dance] 20 prion-a[roi[sonce]]=sonce While prion = q != {}: m = min (prion-av. keys ()) mins = prior al-pop(n) O(1)+ 0(1394) if Vini [ni-1] cowine QN) Visi[Winz] >The

for hei in diet 2[min 1]:

check = vei [mis] + diels[mis nei]

if check = wei [mai] II (+0 (Floor))

wei [mai] = check

por [mai] = mins

prion-ar[mai[hei]] = hei

is O(MlogN) and where for the adjuncty
eight it is O(N+N)

Total line of complexity = O(MlogN)

+ O(N+N)

Liviland gr

In tark-2 def Diskerton (Dids, dict 2 mone) wei = [flad ('in)] = (lon(daid))+) par = [None] + (len(did2-13) trionar - {> VM12[False] + (len(ds(2)+1)) trai[sonce] = 0 prior a [rai[nonce]]= nonce while prion-a 1 = {}: mamin Cprion-q. keys () O(1) t mind = prion q. pop(m) 0 (1 2 (EV)) I Ctrim Jalier Je -2 Q(V) cowine Uni [mil] ? True

for na in dict 2 [hm]: cheele 2 wei [hms] + dict [[hung re] if check I wei [rei] wei [nei] = Check par[hai] = hing prion- ar [hai (hai]) = hei path = [] & 2 lan (par) - 1 path append (x) while par[x] = Nove: path append (par[x]) x 2 pan [x] patraevare ()

So, have for adjacenty lind it is o(May)

Fand for the algorithm it is o(May)

-- Time complexity: o(MAH) + o(May)

The the number of Litary in each

of the number of titang in each noad in exactly & 1. then the algorithm one can use in Breath First Search which in BFS.