total int cost

forloop (add all edges)

return sum

---

total int cost time = O(n)

space = int result
+ int in forloop

O(n)

---

cheapest network

sort all edges using comarable

create arraylist -> a b c d ...

if src or dst is in the arraylist {

add cost to sum

}

return sum

Cheapest network time = sort = n^2
+ 2 forloops = n^2

$O(n^2)$

space = int sum
+ 2 int in forloops

O(n)

---

to array

Change 2d array to arraylist
to use in cheapest network

---

toarraylist time = 2 forloops = n^2 = O(n)

space = 2 int + n edges → $O(n^2)$
(2 chars + 2 int)

Saved amount

return (tas[1 - tas[2])

Saved amount time = $O(n^2) + O(n) = O(n^2)$

space = O(n) + O(n) = O(n)

I have completed this assignment individually, without support from anyone else. I hereby accept that only the below listed sources are approved to be used during this assignment:

(i) course textbook

(ii) all material that is made available to me by the professor

(iii) notes taken by me during lectures

I have not used, accessed or taken any unpermitted information from any other source. Hence, all effort belongs to me.

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