

Course ID: CS 501

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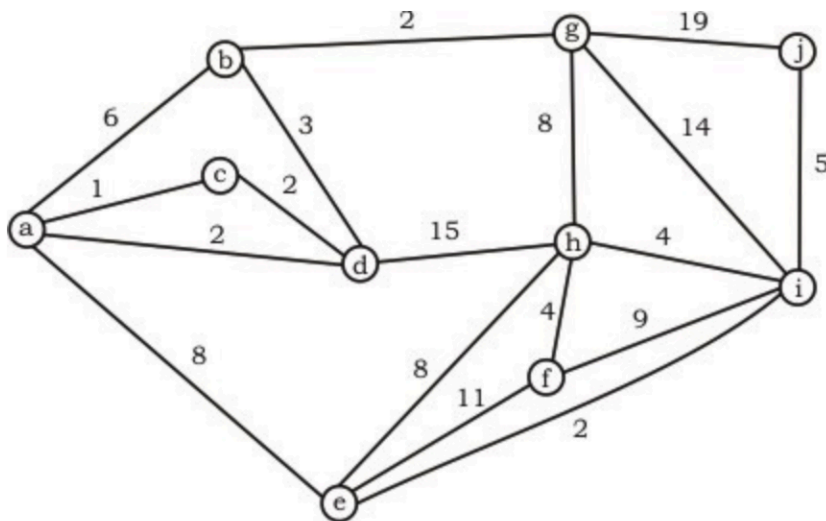
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**Description:**

[http://npu85.npu.edu/~henry/npu/classes/algorithm/minimum\\_spann\\_tree/slide/exercise\\_minimum\\_spann\\_tree.html](http://npu85.npu.edu/~henry/npu/classes/algorithm/minimum_spann_tree/slide/exercise_minimum_spann_tree.html)

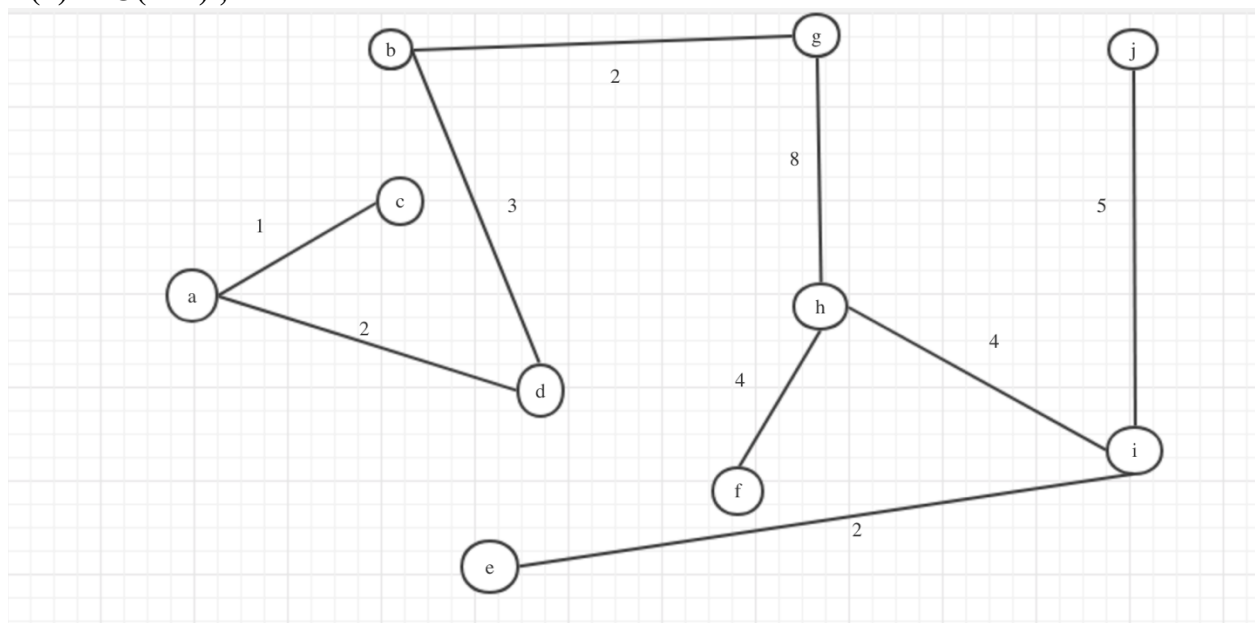
Q4 ==> Please use MST approached propped by Prim & Kruskal to find the MST of the following diagram and then compare their Time Complexity.



**Prim MST:**

**n** is how many nodes.

$T(n) = O(n^2)$  ;



**Kruskal MST:**  
**e** is how many edges.  
**T(n) = O (eloge) ;**

Weight	Src	dst
1	A	C
2	A	D
2	C	D
2	B	G
2	E	I
3	B	D
4	F	H
4	H	I
5	J	I
6	A	B
8	A	E
8	E	H
8	G	H
9	F	I
11	E	F
14	G	I
19	G	J

Stop condition =  $10 - 1 = 9$ ;

