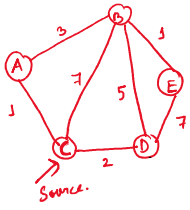


Solve using Dijkstra considering C as source point.



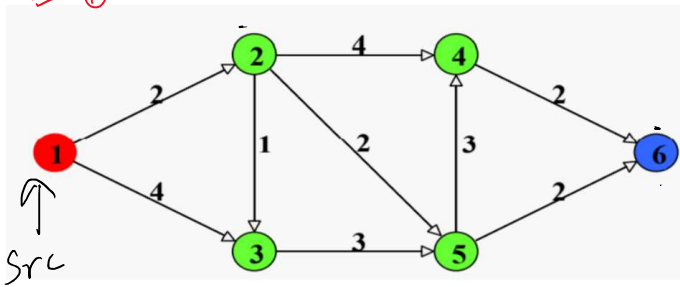
Selected Node	A	B	C	D	E
C	∞	∞	0	∞	∞
A	1	7		2	∞
D		4		2	9
B		4			5

$$\begin{aligned}
 d(\text{src to B via D}) &= d(\text{src to D}) + d(\text{D to B}) \\
 &= 2 + 5 \\
 &= 7.
 \end{aligned}$$

$$\begin{aligned}
 d(\text{src to E via D}) &= d(\text{src to D}) + d(\text{D to E}) \\
 &= 2 + 7 = 9.
 \end{aligned}$$

$$\begin{aligned}
 d(\text{src to E via B}) &= d(\text{src to B}) + d(\text{B to E}) \\
 &= 4 + 1 = 5
 \end{aligned}$$

$$\begin{aligned}
 \text{src to 4} + 4 \text{ to 6} \\
 = 6 + 2 = 8
 \end{aligned}$$



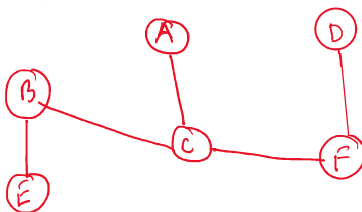
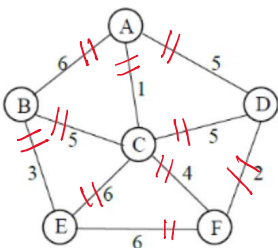
$$d(\text{src to 2 via 1}) = \text{src to 1} + 1 \text{ to 2}$$

$$\begin{aligned}
 d(\text{src to 3 via 2}) &= d(\text{src to 2}) + d(2 \text{ to } 3) \\
 &= 2 + 1 = 3
 \end{aligned}$$

$$\begin{aligned}
 \text{src to 4 via 2} &= \text{src to 2} + 2 \text{ to 4} \\
 &= 2 + 4 = 6
 \end{aligned}$$

Selected Node	1	2	3	4	5	6
	0	∞	∞	∞	∞	∞
1		2	4	∞	∞	∞
2			3	6	4	∞
3				6	4	∞
5				6		4+2=6
4						6

MST using Prim's algo.



Node From	Node To	Weight
A	B	6
A	D	5 loop
A	C	1 ✓
C	B	5 ✓
C	D	5
C	E	6
C	F	4 ✓
E	F	6
D	F	2 ✓
B	E	3 ✓

MST wt = 15