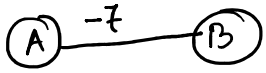
S section

24 March 2025 06:25

Djikstra Algo –

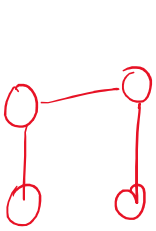
Src Node ⟶ Other nodes. distance.

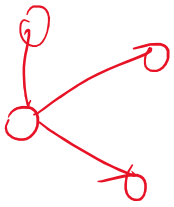
- Directed & Undirected Graph.
- Graph connected.
- Weighted Graph.
- No Negative edges



Minimum D(A to B) = -7

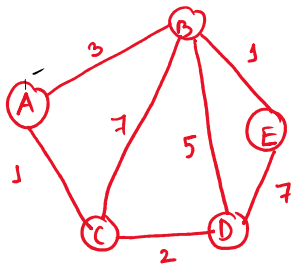
AB = -7
BA = -7
AB = -7
-21





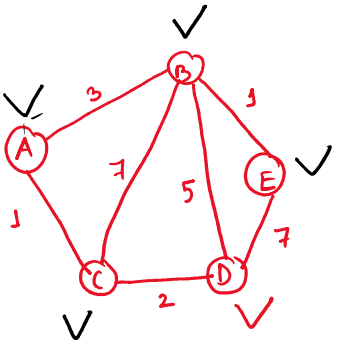
Djikstra – distance of every other node from a single source.

edge weight



Source = C.

Node C ⟶ A
C ⟶ D
C ⟶ B
C ⟶ E
} Min^m Distance.



u ↓ Selected Node | V ⟶ Distance of nodes from src.

u	A	B	C	D	E
	∞	∞	0	∞	∞
C	1	∞		2	∞
A		4		2	∞
D		4			9
B					5
E					

d(src to E).
= d(src to B) + d(B to E).
= 4 + 1 = 5

d(src to v)
= d(src to u) + d(u to v).

d(src to B)
= d(src to A) + d(A to B). 3
= 4.

d(src to E)
= d(src to D) + d(D to E). 7
= 9.

H/W Src (i) A (ii) B (iii) E.