N section

24 March 2025 06:25

Djikstra Algo –

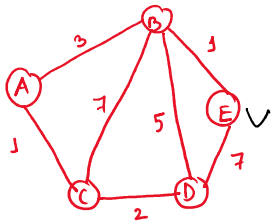
Src Node ⟶ Other nodes. distance.

1. Directed & Undirected Graph.
2. Graph connected.
3. Weighted Graph.
4. No Negative edges

Minimum D(A ⇄ B) = −7.

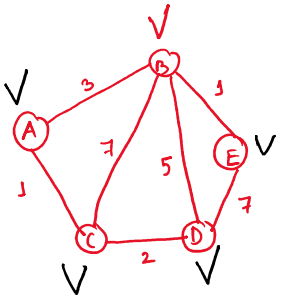
A B = −7
B A = −7
A B = −7
−21

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



Source = C.

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



Selected Nodes (u)	Distance of Nodes from source (v)				
	A	B	C	D	E
	∞	∞	0	∞	∞
C	1	7		2	∞
A		4		2	∞
D		4			5
B					

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

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

path array

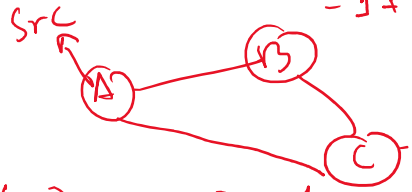
A	B	C	D	E
C	A	C	B	

path(DC) = DC = 2

path(CE) = EBA€ = EB + BA + AC = 1 + 3 + 1 = 5

Path(CA) = AC = 1

Path(CB) = BAC = BA + AC = 3 + 1 = 4



d(AC) = d(AB) + d(BC)