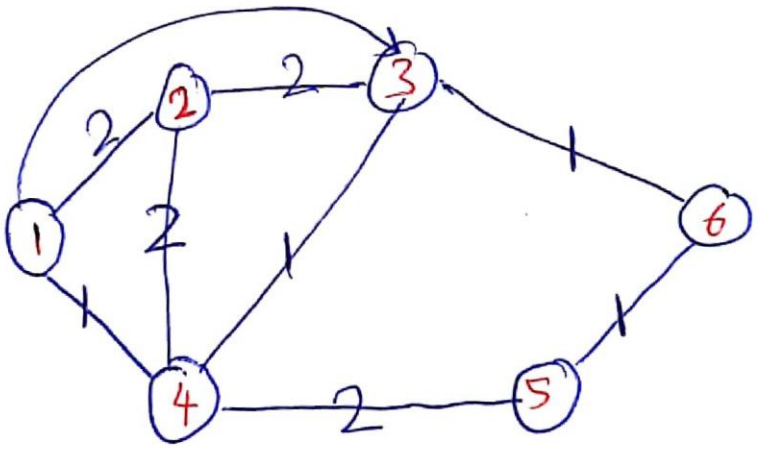
Dijkstra ALgorithm (OSPF as example)

① Network Topology

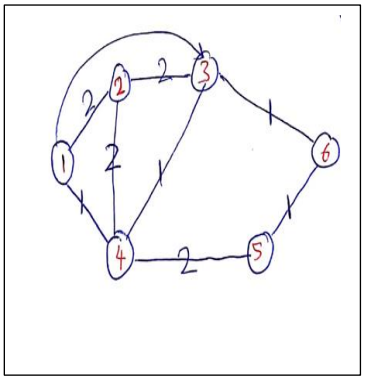


given
- Nodes
- S → D
- Costs

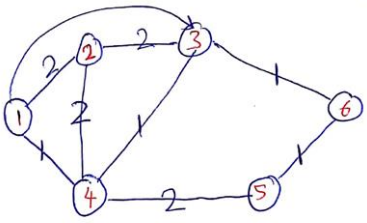
Q Find the shortest path

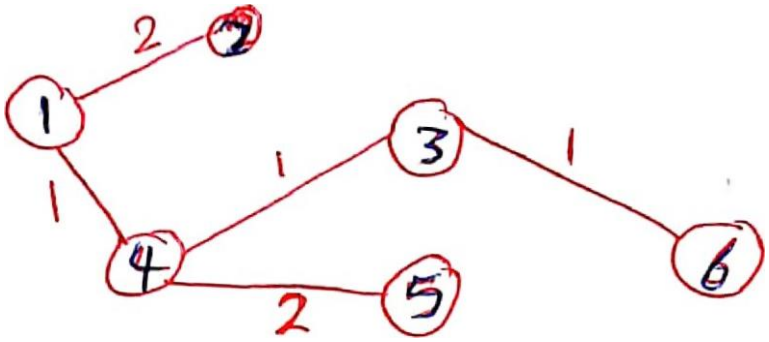
② Routing table

Step	m	D_2	P	D_3	P	D_4	P	D_5	P	D_6	P
Initial	{1}	2	1-2	5	1-3	1	1-4	∞	–	∞	–
2	{1,4}	2	1-2	2	1,4,3	1	1-4	3	1,4,5	∞	–
3	{1,2,4}	2	1-2	2	1,4,3	1	1-4	3	1,4,5	∞	–
4	{1,2,3,4}	2	1-2	2	1,4,3	1	1-4	3	1,4,5	∞	1,4,5
5	{1,2,3,4,5}	2	1-2	2	1,4,3	1	1-4	3	1,4,5	3	1,4,3,6
6	{1,2,3,4,5,6}	2	1-2	2	1,4,3	1	1-4	3	1,4,5	3	1,4,3,6



(3) Routing Tree





(4) : Central R. T

	1	2	3	4	5	6
1		2	4	4	4	4
2	1		1	1	1	1
3	4	4		4	4	6
4	1	1	3		5	3
5	4	4	4	4		4
6	3	3	3	3	3	