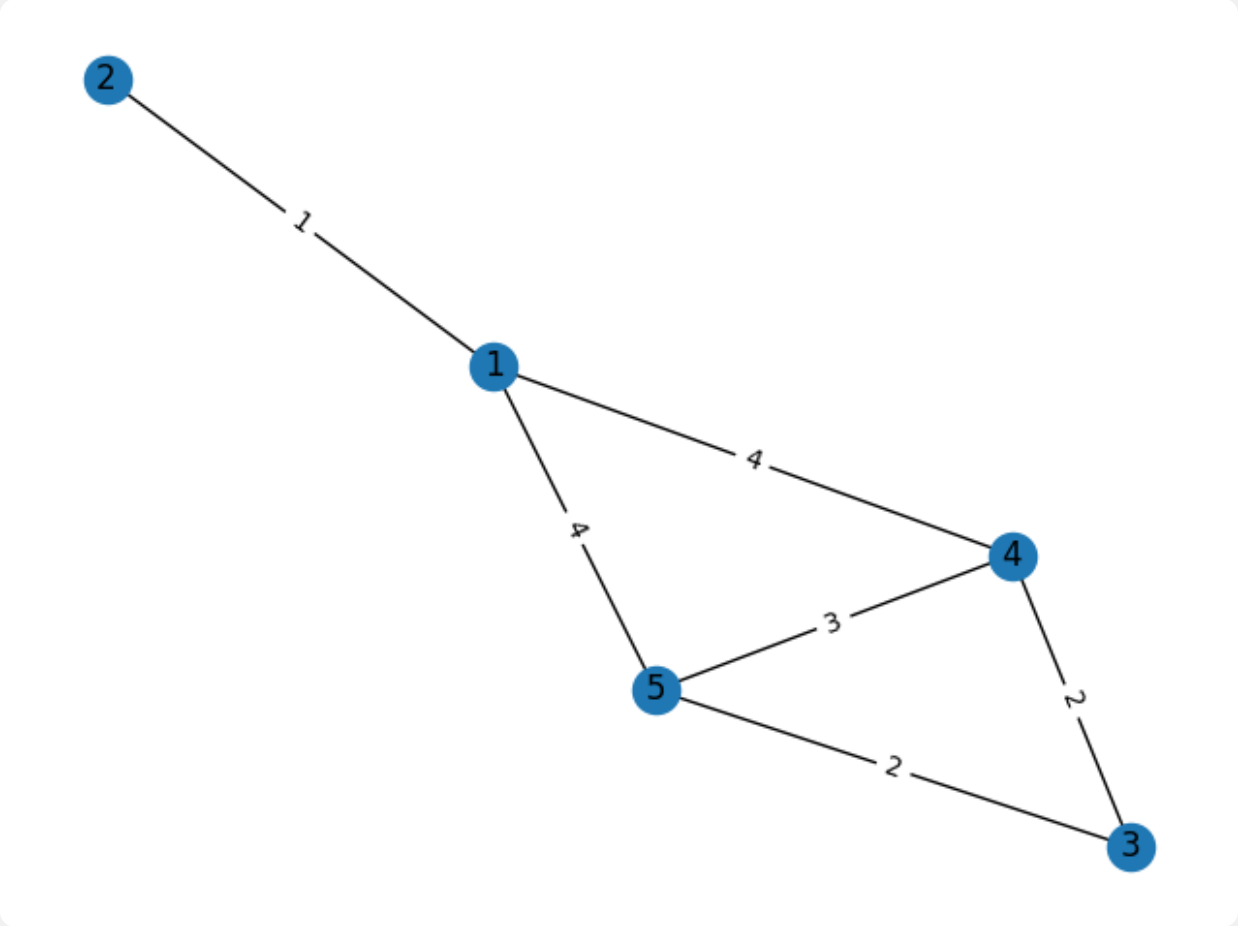
Routing Exercise



Consider the network in the figure and assume that:

- The adopted routing is LS
- The order of the generation of messages follows the numeric order of routers
- The order of the arrival of messages follows the numeric order of routers

Write down the list of generated messages and the final routing table. You can omit messages that are received but do not alter the routing table of the receiving router.

Generated Messages

Source Node	Destination Node	LSP Received	Routing Table	Network View
2	1	Neighbor: 1, Link Cost: 1	Path: 1, Cost: 0 Path: 1->2, Cost: 1 Path: 1->4, Cost: 4 Path: 1->5, Cost: 4	[1, 5]

3	4	**Neighbor** / **Link Cost** 4 / 2 5 / 2	**Path** / **Cost** 4->1 / 4 4->3 / 2 4 / 0 4->5 / 3	[4, 5]
3	5	**Neighbor** / **Link Cost** 4 / 2 5 / 2	**Path** / **Cost** 5->1 / 4 5->3 / 2 5->4 / 3 5 / 0	[5]
1	4	**Neighbor** / **Link Cost** 1 / 1	**Path** / **Cost** 4->1 / 4 4->1->2 / 5 4->3 / 2 4 / 0 4->5 / 3	[4, 5]
1	5	**Neighbor** / **Link Cost** 1 / 1	**Path** / **Cost** 5->1 / 4 5->1->2 / 5 5->3 / 2 5->4 / 3 5 / 0	[5]
4	1	**Neighbor** / **Link Cost** 4 / 2 5 / 2	**Path** / **Cost** 1 / 0 1->2 / 1 1->4->3 / 6 1->4 / 4 1->5 / 4	[1, 5]
4	3	**Neighbor** / **Link Cost**	**Path** / **Cost**	[3, 5]

		1 | 1	3 | 0 3->4 | 2 3->5 | 2	
1	2	**Neighbor** | **Link Cost** 4 | 2 5 | 2	**Path** | **Cost** 2->1 | 1 2 | 0	[2]

Final Routing Tables

Node 1

Destination	Path	Cost
1	[1]	0
2	[1, 2]	1
3	[1, 4, 3]	6
4	[1, 4]	4
5	[1, 5]	4

Node 2

Destination	Path	Cost
1	[2, 1]	1
2	[2]	0
3	[2, 1, 4, 3]	7
4	[2, 1, 4]	5
5	[2, 1, 5]	5

Node 3

Destination	Path	Cost
1	[3, 4, 1]	6
2	[3, 4, 1, 2]	7
3	[3]	0
4	[3, 4]	2
5	[3, 5]	2

Node 4

Destination	Path	Cost
1	[4, 1]	4
2	[4, 1, 2]	5
3	[4, 3]	2
4	[4]	0
5	[4, 5]	3

Node 5

Destination	Path	Cost
1	[5, 1]	4
2	[5, 1, 2]	5
3	[5, 3]	2
4	[5, 4]	3
5	[5]	0