Department of computer engineering
Computer networks laboratory

Todo2: problem #1

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1. **Find the shortest path from Router 0 to Router 6 using Dijkstra's algorithm. Show your steps.**

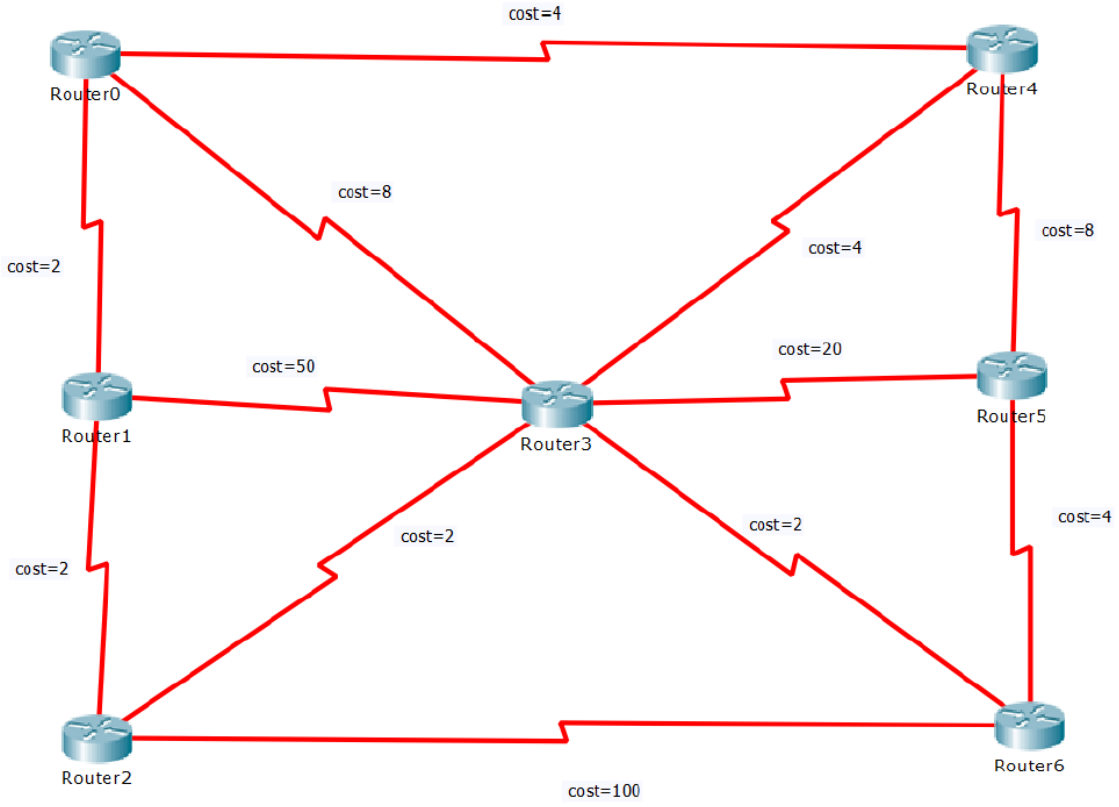

Fig.1

Start point: Router0, Goal: Router6

Node	Cost step 1	Cost step 2	Cost step 3
Router0	0	0	0
Router1	2	2 (R0)	2 (R0)
Router2	Infinity	4 (R1)	4 (R1)
Router3	8	8 (R0)	6 (R2)
Router4	4	4 (R0)	4 (R0)
Router5	Infinity	12 (R4)	12 (R4)
Router6	Infinity	10 (R3)	8 (R3)

Table.1

The final graph is as shown in fig.2

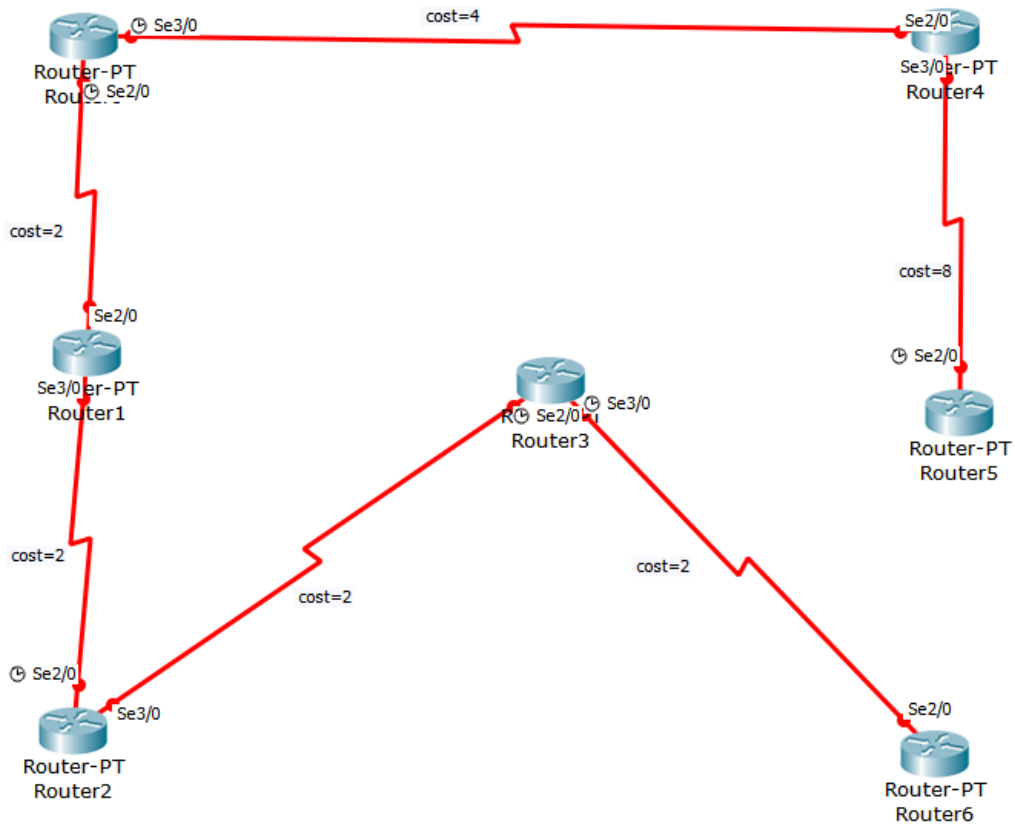

Fig.2

2. What is the cost of the shortest path from Router 0 to Router 6?

The shortest path is R0 → R1 → R2 → R3 → R6

Cost=8.