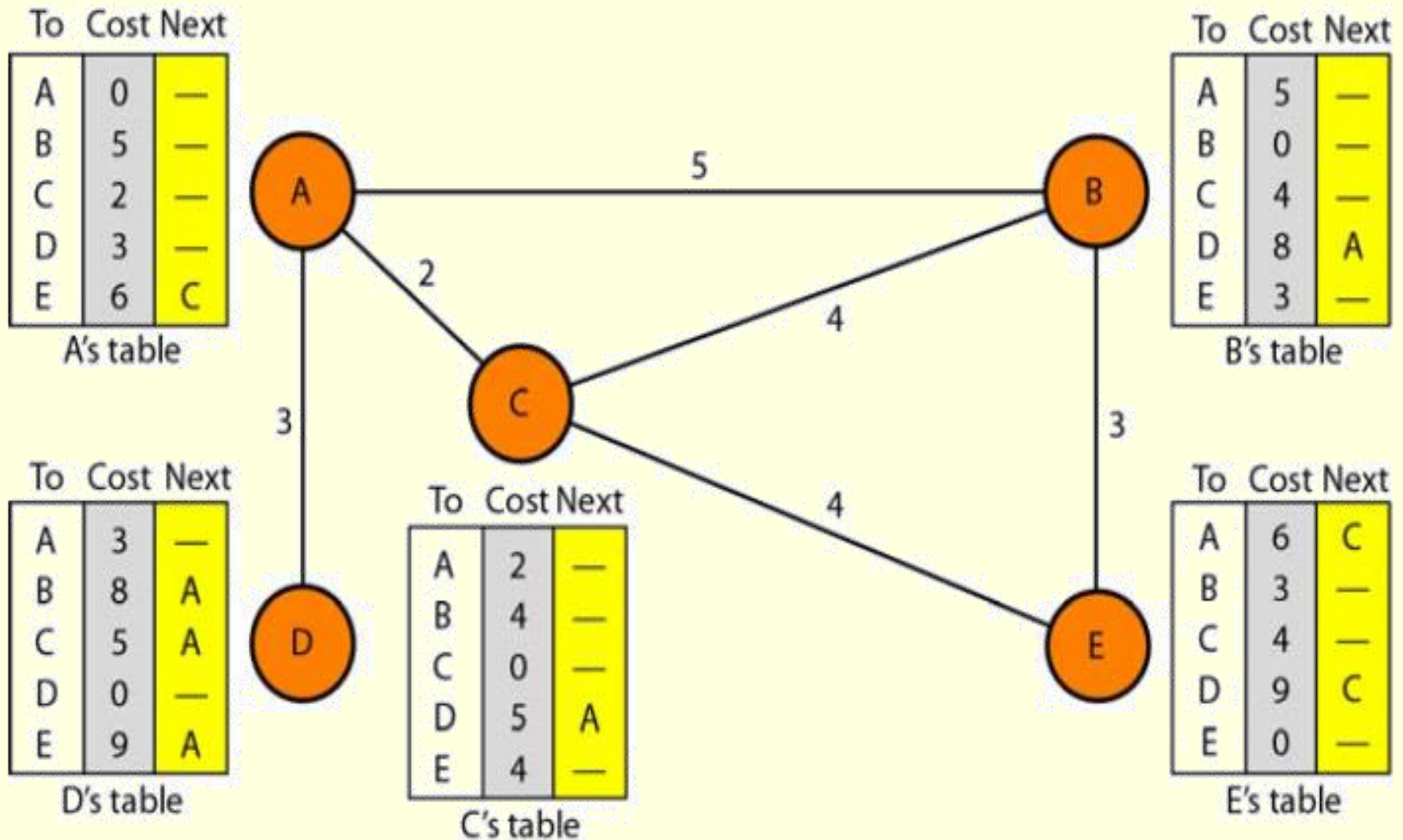


Routing table

- Why router ?
- Routing table
 - ✓ Static
 - Enter information manually
 - Update ?
 - ✓ Dynamic
 - Updated periodically
- Optimization ?
 - ✓ Which of the available pathways is the optimum pathway?
 - ✓ What is the definition of the term optimum?

Distance Vector Routing



Initialization of tables in distance vector routing

To Cost Next

A	0	—
B	5	—
C	2	—
D	3	—
E	∞	—

A's table

To Cost Next

A	5	—
B	0	—
C	4	—
D	∞	—
E	3	—

B's table

To Cost Next

A	3	—
B	∞	—
C	∞	—
D	0	—
E	∞	—

D's table

To Cost Next

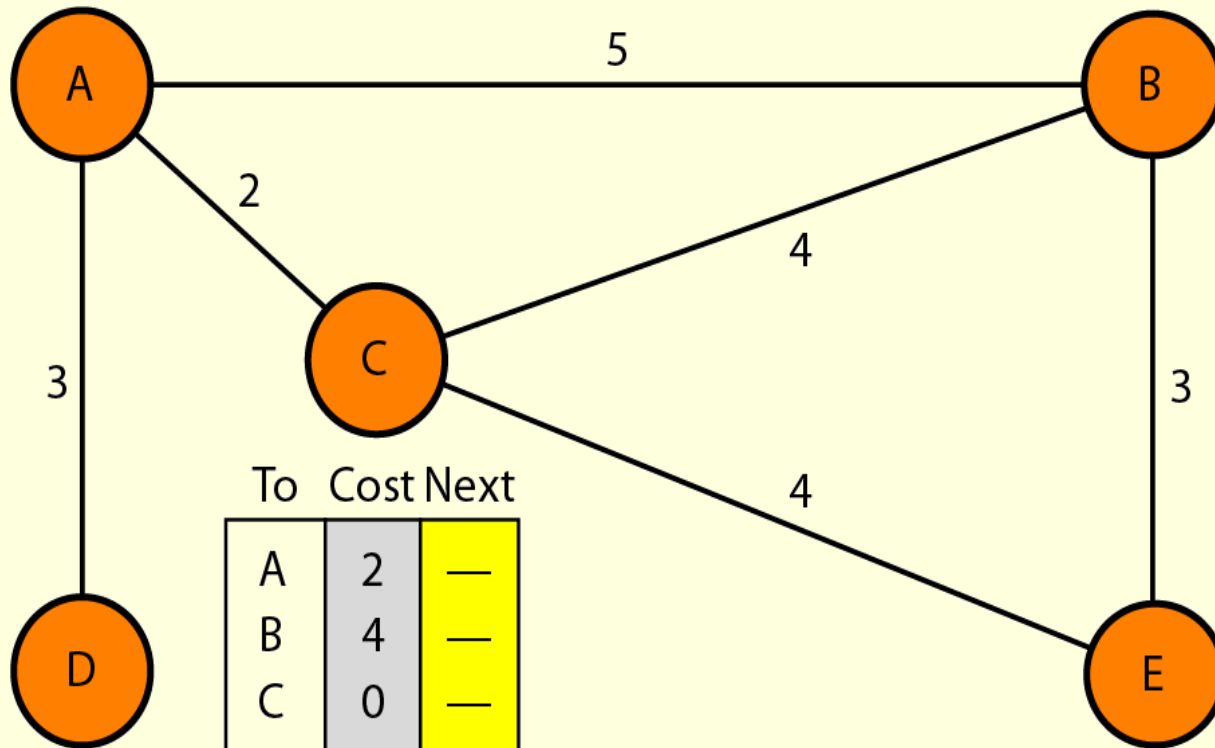
A	2	—
B	4	—
C	0	—
D	∞	—
E	4	—

C's table

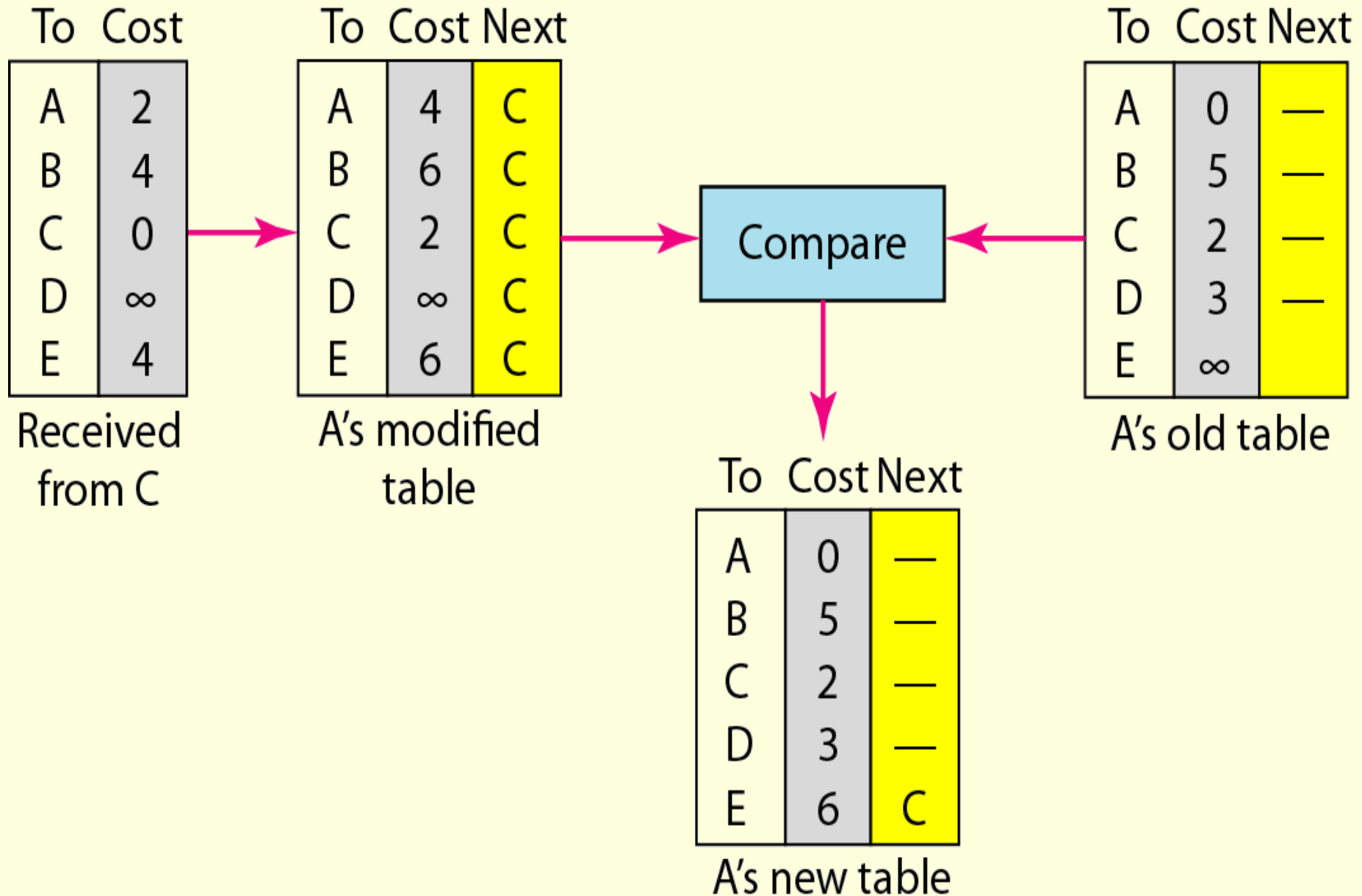
To Cost Next

A	∞	—
B	3	B
C	4	C
D	∞	—
E	0	D

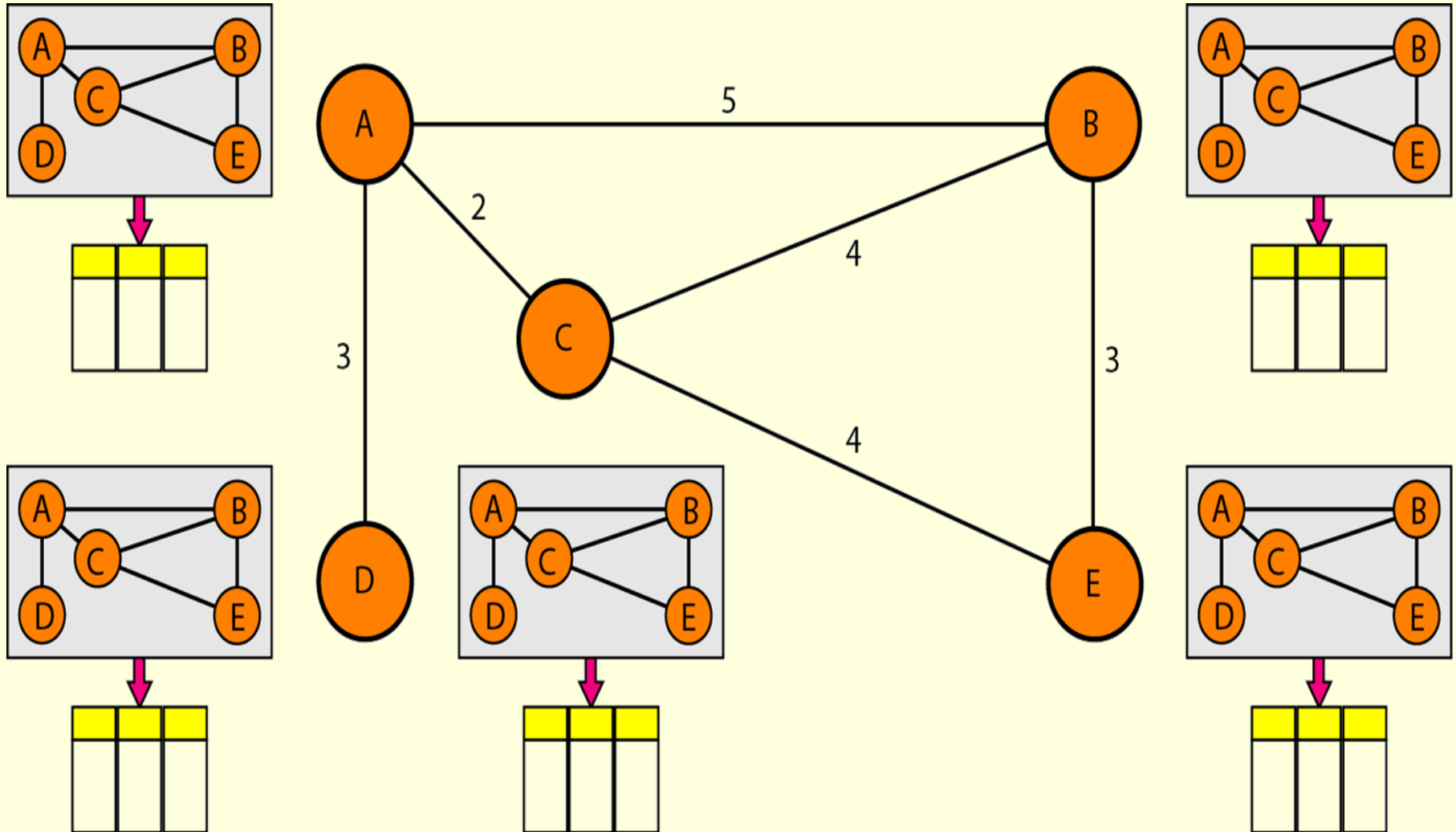
E's table



Updating in distance vector routing

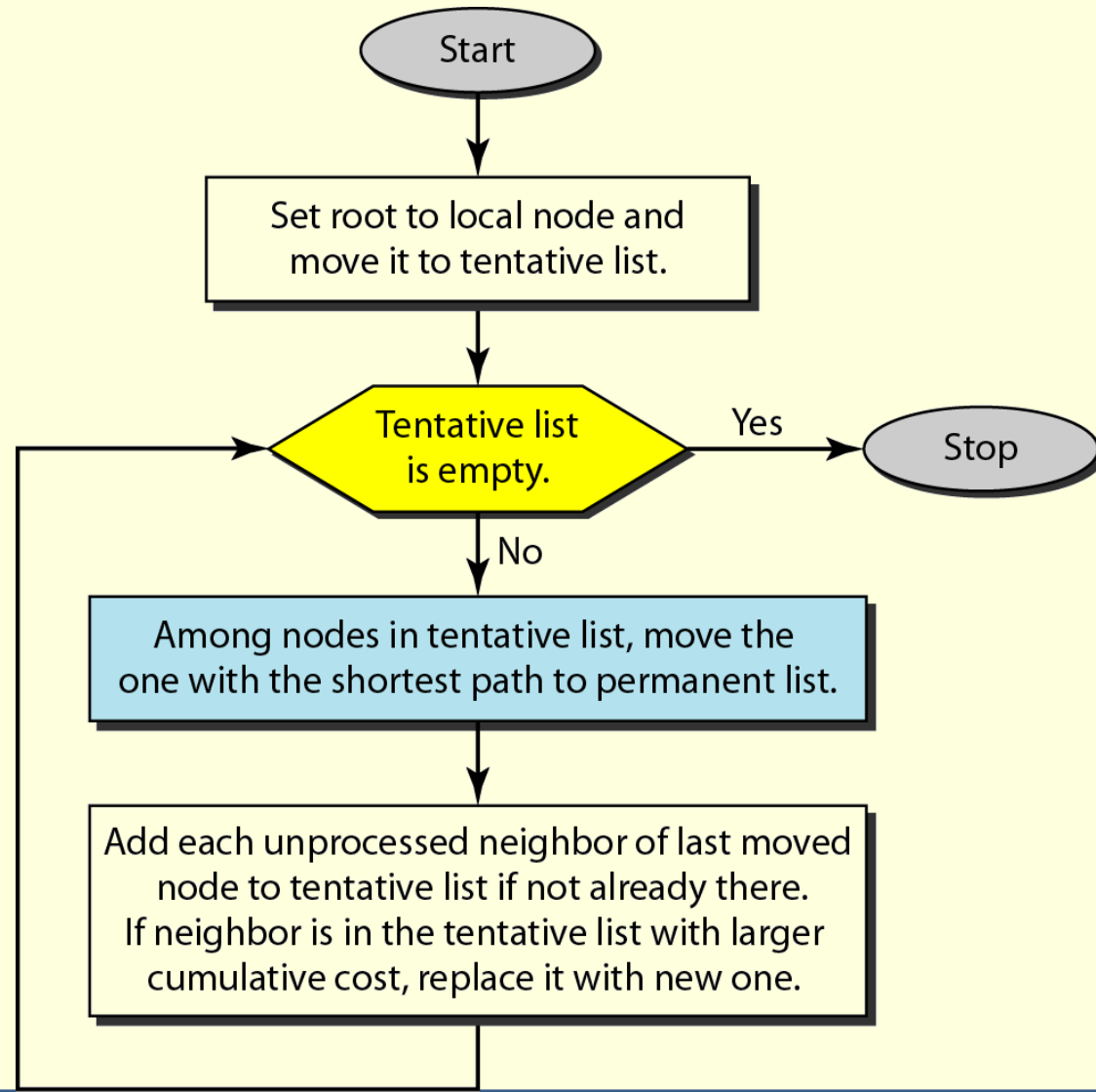


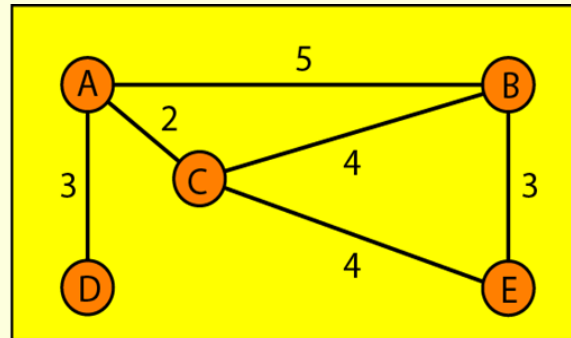
Concept of link state routing type, condition, and cost



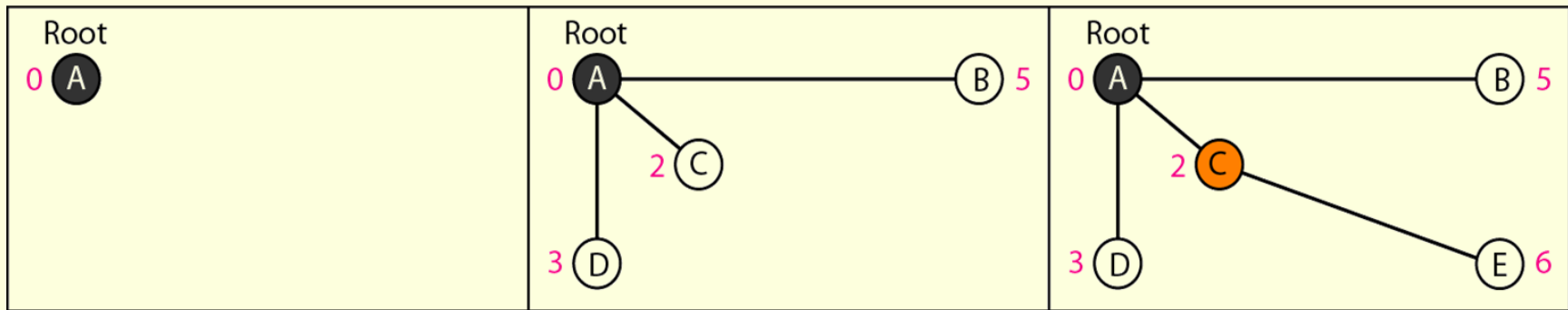
Formation of Shortest Path Tree

Dijkstra Algorithm





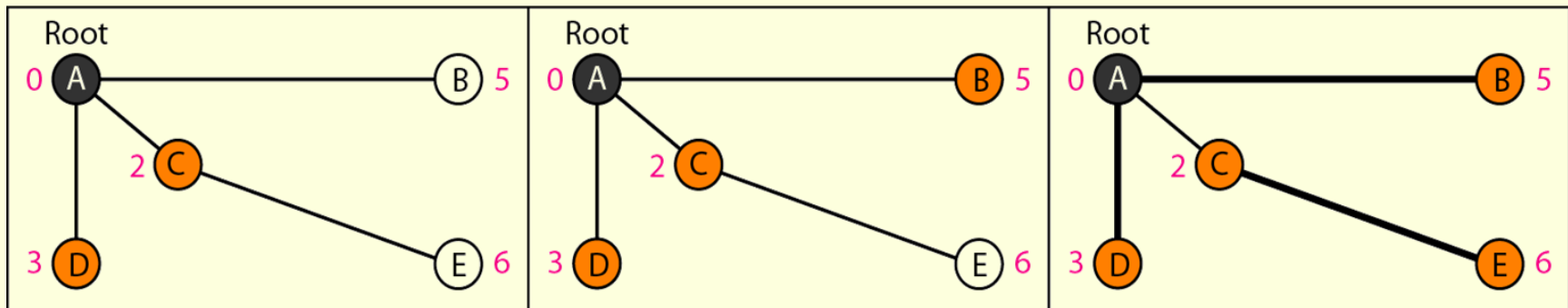
Topology



1. Set root to A and move A to tentative list.

2. Move A to permanent list and add B, C, and D to tentative list.

3. Move C to permanent and add E to tentative list.



4. Move D to permanent list.

5. Move B to permanent list.

6. Move E to permanent list (tentative list is empty).

<i>Node</i>	<i>Cost</i>	<i>Next Router</i>
A	0	—
B	5	—
C	2	—
D	3	—
E	6	C

