

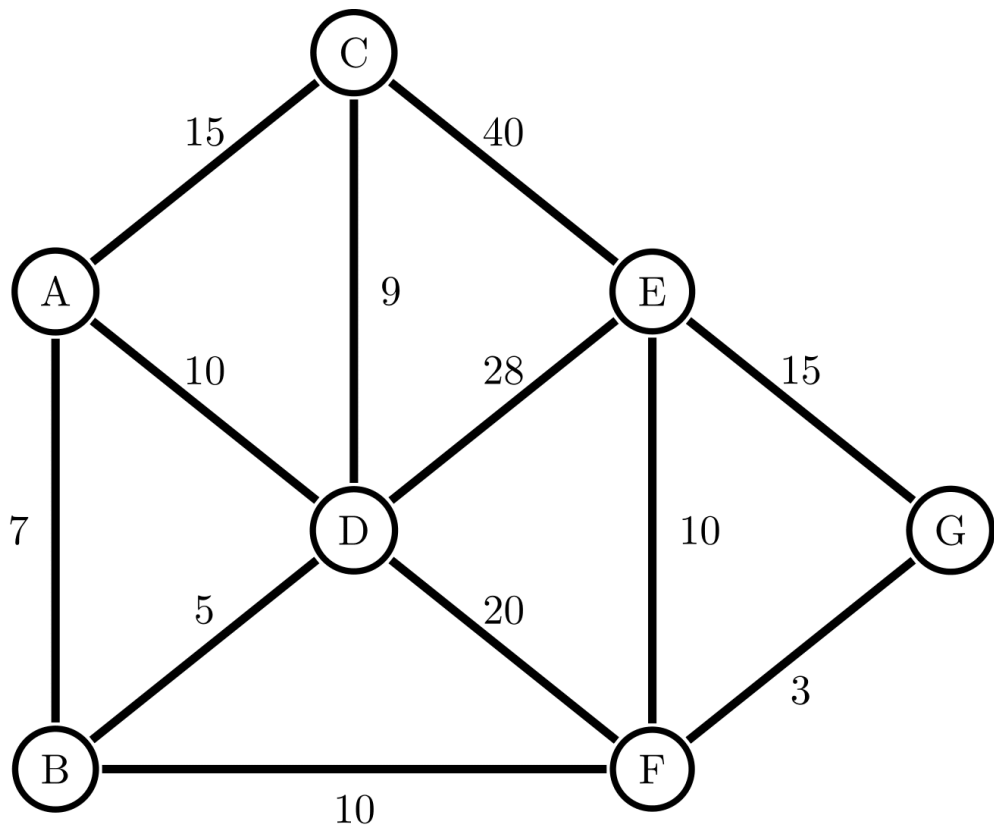
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# Dijkstra's algorithm → Applying the algorithm

Hard 7 minutes

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Below is a weighted undirected graph:



Find all the shortest paths from the node *E* to all other nodes of the graph using Dijkstra's algorithm. As an answer, print edges of the shortest path tree. Edges' order does not matter. The last line of your answer should contain the shortest distance from *E* to every node of a graph (nodes are sorted in alphabetical order, the shortest distance from *E* to *E* is 0).

Below is an example that clarifies the expected output format:

```
1 | A B
2 | B C
3 | C D
4 | 0 2 3 5
```

Here, the first three lines correspond to three edges of the shortest path tree (an edge from *A* to *B*, an edge from *B* to *C*, and an edge from *C* to *D*), while the last line corresponds to the shortest distance from the starting node to every node of a graph. The starting node is *A*, the shortest distance from *A* to *A* is 0, from *A* to *B* - 2, from *A* to *C* - 3, from *A* to *D* - 5.

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Enter a short text

E F  
F G  
F B  
B D  
D C  
B A  
27 20 34 25 0 10 13

Correct.

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