

# Grafové algoritmy

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Denis Kramár

Vysoké učení technické v Brně  
Fakulta informačních technologií

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- Algoritmus Dijkstra
- Pseudokód
- Dijkstra obrázok
- Zdroje

- Slúži na určenie najkratšej vzdialenosti medzi počiatočným vrcholom a iným vrcholom v grafe
- Podstata algoritmu je v kontinuuálnom výpočte najkratšej vzdialenosti a vylúčenie dlhších vzdialeností pri aktualizácii

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## Algoritmus 1: DIJKSTRA

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```
1 function Dijkstra(Graph, source):  
2   foreach vertex v in Graph do  
3     dist[v] := infinity  
4     previous[v] := undefined  
5   dist[source] := 0  
6   Q := the set of all nodes in Graph  
7   while Q is not empty do  
8     u := node in Q with smallest dist[]  
9     remove u from Q  
10    foreach neighbor v of u do  
11      alt := dist[u] + dist_between(u, v)  
12      if alt j dist[v] then  
13        dist[v] := alt  
14        previous[v] := u  
15  return previous[]
```

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Bae: Come over

Dijkstra: But there are so many routes to take and I don't know which one's the fastest

Bae: My parents aren't home

## Dijkstra:

## Dijkstra's algorithm

### Graph search algorithm

Not to be confused with *Dijkstra's projection algorithm*.

Dijkstra's algorithm is an algorithm for finding the shortest paths between nodes in a graph, which may represent, for example, road networks. It was conceived by computer scientist Edsger W. Dijkstra in 1956 and published three years later.<sup>[1][2]</sup>

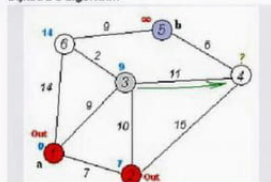
The algorithm exists in many variants; Dijkstra's original variant found the shortest path between two nodes,<sup>[2]</sup> but a more common variant fixes a single node as the "source" node and finds shortest paths from the source to all other nodes in the graph, producing a **shortest-path tree**.

found on devrant.com

文A



### Dijkstra's algorithm



posted by shouryachats



GITTA: [http://www.gitta.info/Accessibiliti/en/html/Dijkstra\\_learningObject1.html](http://www.gitta.info/Accessibiliti/en/html/Dijkstra_learningObject1.html)



Math MIT: <https://math.mit.edu/~rothvoss/18.304.3PM/Presentations/1-Melissa.pdf>



9GAG: <https://9gag.com/gag/a8o10z0>

Ďakujem za pozornosť!