

Discrete Optimization

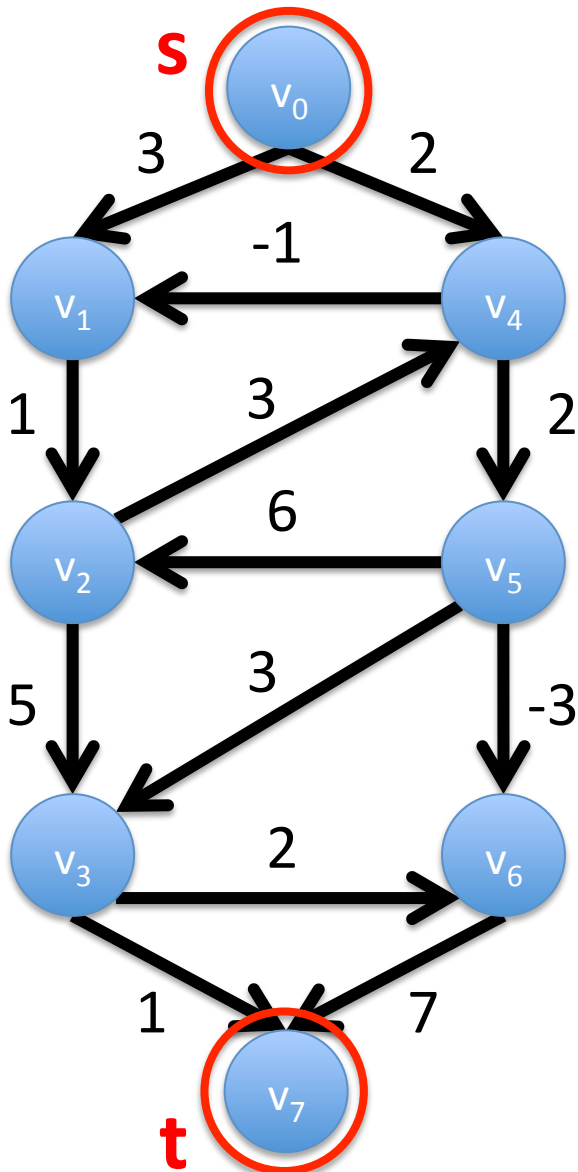
Assignment 1

Shortest paths

The Shortest Path Problem

Find the shortest path from s to t

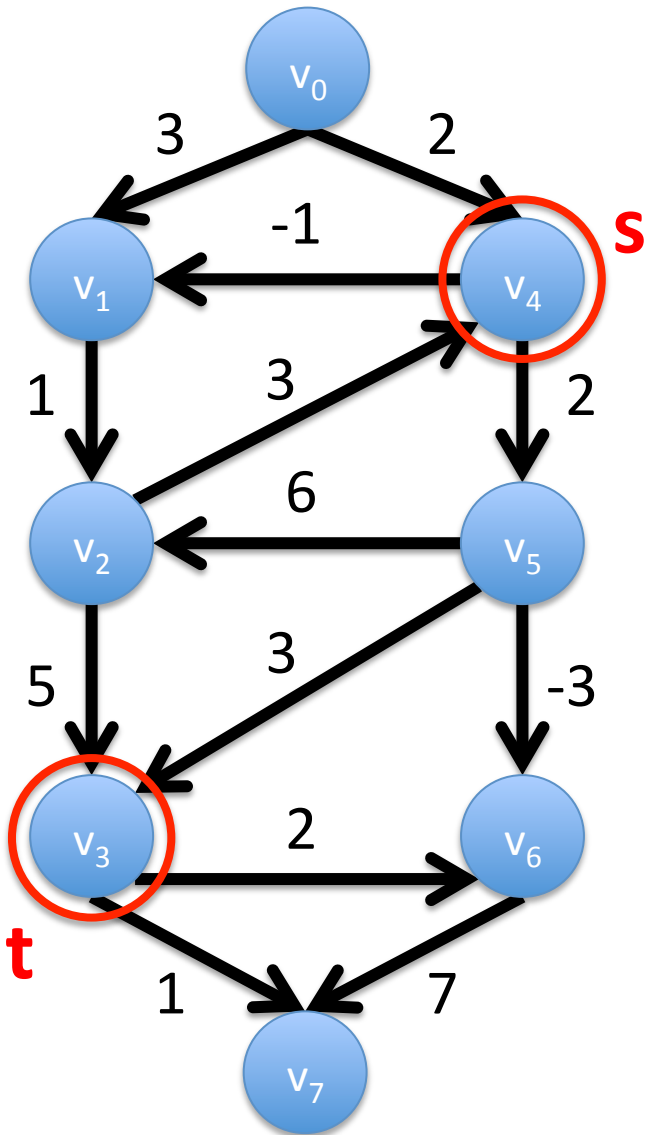
Length of path =
 Σ Length of arcs



The Shortest Path Problem

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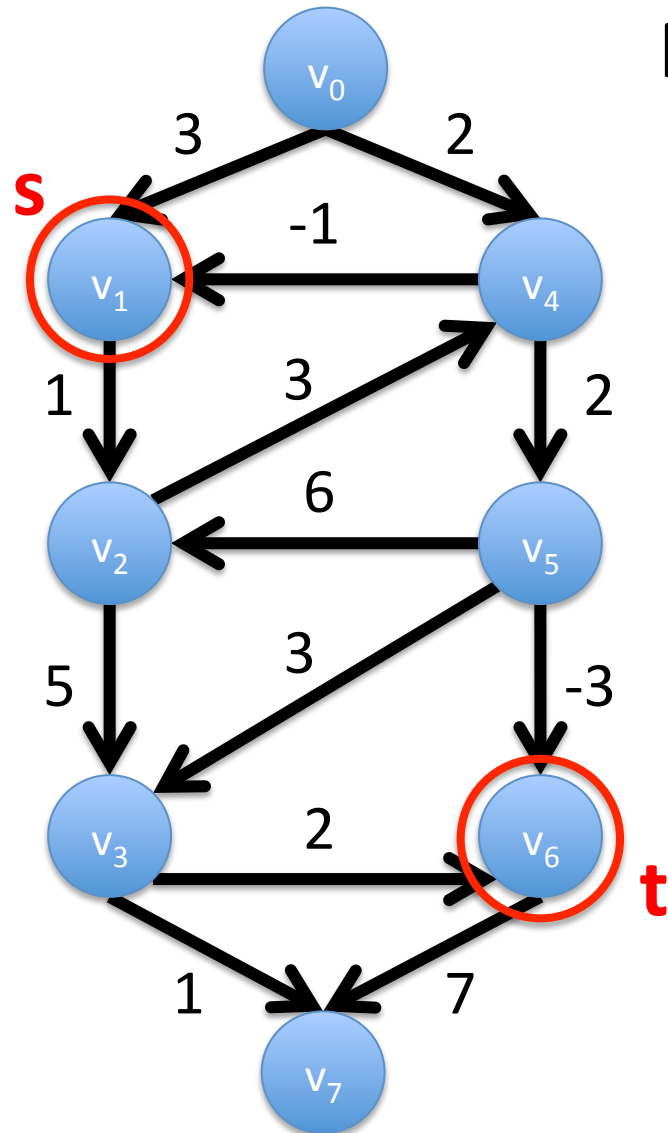
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The Shortest Path Problem

Find the shortest path from s to t

Length of path =
 Σ Length of arcs



Task

- 5 test graphs (from 100 to 100000 nodes)
- Compute several shortest paths
- Implement any algorithm you like
- Some graphs have special properties!

Submission

- Submit by e-mail: ecp.ma2827@gmail.com
Instructions: <https://project.inria.fr/2015ma2827/>
- We want solutions to 5 tests, code producing those, report in PDF format
- Working in pairs is allowed. Teams should be registered (ecp.ma2827@gmail.com) before 7th April, 2017

Use Python!

- We recommend Python 2.7 and Numpy
- Third-party implementations of graph algorithms are not allowed
- If you desperately need other language then talk to us (ecp.ma2827@gmail.com)