Shortest Paths

- Will the algorithm be correct if… (if not always correct, provide a counterexample)?
  - Graph is directed?
  - Graph edges are weighted with positive weights?
  - Graph edges are all the same negative weight?
- What is the time complexity of the algorithm if graph is given as an adjacency list?

Dijkstra's Algorithm

Prove any other path that is not P must have a longer distance.

Dijkstra's Algorithm

What is the runtime of each part of Dijkstra's algorithm?