Week 8 Preparation

Instructions to the students: The preparation problems are not assessed, but we strongly recommend that you try to solve them before your applied class this week. These preparation problems test your basic knowledge of the contents taught in the seminar of the previous week. The problems in the applied class assume that you have this basic knowledge and will build on top of it. You might find it helpful to try these problems before doing the quiz that is due this week.

Problems

Problem 1. Use the space-efficient version of Bellman-Ford to determine the shortest paths from vertex s to all other vertices in this graph. Afterwards, indicate to which vertices s has a well defined shortest path, and which do not by indicating the distance as $-\infty$. Draw the resulting shortest path tree containing the vertices with well defined shortest paths. For consistency, you should relax the edges in the following order: $s \to a$, $s \to b$, $a \to c$, $b \to a$, $b \to d$, $c \to b$, $c \to d$, $c \to e$, $d \to f$, $e \to d$ and $f \to e$.