Exercise 16.6 Let $G = (V, E)$ be an undirected graph with distinct nonnegative edge weights $w : E \to \mathbb{R}$. For a spanning tree T, we say that the *bottleneck weight of* T is the maximum weight edge in T, $\max_{e \in T} w(e)$.

Exercise 16.6.1. Prove that the MST is also a minimum bottleneck weight spanning tree of G.

Solution. □

Exercise 16.6.2. Design and analyze a $O(m+n)$-time algorithm for computing a minimum bottleneck weight spanning tree of G. (This is faster than any of our algorithms for MST.)[4]

[4]Here's step 1: compute the median edge weight in $O(m)$ time.

Solution. □