A Mayer-Vietoris sequence is a powerful tool to compute homology groups of topological spaces. A similar exact sequence arises in a theory of distributive homology. Precisely, for any multispindle $X$, that is a set with a bunch of operations $\star_1, \ldots, \star_k$ that are idempotent, self- and mutually distributive, one can relate its distributive homology with homology groups of orbits $X \star_1 x, \ldots, X \star_k x$ for any $x \in X$. In particular, we can compute distributive homology for any finite distributive lattice.

I my talk I will describe the construction of distributive homology and state the Mayer-Vietoris sequence with a few consequences. If time permits, I will present a few steps of the proof. (Received January 31, 2012)