Definition (Category **Pos**). The category **Pos** is defined by:

1. *Objects*: The objects of this category are all posets.
2. *Morphisms*: The morphisms from a poset X to a poset Y are the monotone maps from X to Y.
3. *Identity morphism*: The identity morphism for the poset X is the identity map Id_X.
4. *Composition operation*: The composition operation is composition of maps.