

Definition (Category of M -algebras)

Let $\langle M, \mathbf{un}, \mathbf{mu} \rangle$ be a monad on a category \mathbf{C} . The *category of M -algebras* \mathbf{C}^M of the monad M is specified by:

1. *Objects*: M -algebras;
2. *Morphisms*: M -algebra morphisms;
3. *Identities*: given an M -algebra $\langle X, a \rangle$, its identity morphism is \mathbf{Id}_X ;
4. *Composition*: is induced by the composition of morphisms in \mathbf{C} .