

0.1 Monads

Definition 1. A monad on a category \mathcal{C} consists of an endofunctor $T : \mathcal{C} \rightarrow \mathcal{C}$, and natural transformations $\eta : 1_{\mathcal{C}} \rightarrow T$ and $\mu : T^2 \rightarrow T$ that satisfy these two equations

$$\begin{aligned}\mu \circ \mu_T &= \mu \circ T\mu \\ \mu \circ \eta_T &= 1 = \mu \circ T\eta\end{aligned}$$