Category Theory
in Haskell

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What is Category Theory?

"Category Theory to programming is what chemistry is to baking."
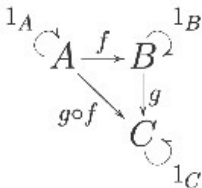
-Ben Deane

Category Theory

Category

- A collection of **objects**
- A collection of **morphism** from one to another object
- **Composition**, a binary operation defined on compatible pairs of morphisms
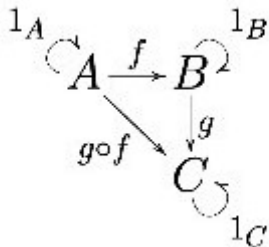- Require **Associativity** and **Identity**

Functor

A type of mapping between categories

```
class Functor f where

  fmap :: (a -> b) -> f a -> f b
```

Categories

Identity Morphism
Composition

Haskell Composition

function1 :: A -> B

function2 :: B -> D

function3 = function1.function2

Thank You