

Functors



Functors

Higher-kinded type class that provides a map method

```
import cats.Functor
import cats.instances.list._

val listFunctor = Functor[List] // fetches the implicit instance
val incrNumbers = listFunctor.map(List(1,2,3))(_ + 1) //fundamental method: map
```

```
import cats.syntax.functor._ // adds the map extension method
val tree: Tree[Int] = Branch(40, Branch(5, Leaf(10), Leaf(30)), Leaf(20))
val processedTree = tree.map(_ + 1)
```

Useful for general APIs

```
def do10x[F[_]](container: F[Int])(implicit functor: Functor[F]) = container.map(_ * 10)
```

Use cases: data structures meant to be transformed in sequence

- specialized data structures for high-performance algorithms
- any "mappable" structures under the same high-level API (see above)

Cats rock

