

Functional Collections



Functional Sets

```
val aSet = Set(1,2,3)
```

Sets have an apply method

```
set(2) // true  
set(42) // false
```

Sets are invokable like functions

Outrageous idea: Sets ARE functions!

Functional Collections

Sequences are partial functions $\text{Int} \Rightarrow A$

- invokable like a function
- only applicable to a subset of Int : numbers within bounds

```
val aSeq: Seq[Int] = Seq(1,2,3,4)
val anElement = aSeq(2) // 3
val aNonExistingElement = aSeq(100) // throws NoSuchElementException
```

Maps are partial functions $K \Rightarrow V$

- invokable like a function
- only applicable to a subset of K : keys present in the map

```
val aPhonebook: Map[String, Int] = Map(
  "Alice" -> 123456,
  "Bob" -> 987654
)
val alicesPhone = aPhonebook("Alice")
val danielsPhone = aPhonebook("Daniel") // throws a NoSuchElementException
```

Scala rocks

