Scala 3, Here I Come!

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Agenda

- What is Scala 3?
- New Syntax
- Select.scala
- Select2.scala
- Actor.scala
- Door.scala
- It.scala
- Cupcakes.scala
- Kvs1.scala
- Kvs2.scala
- NetIO.scala
- Serde.scala
- Kvs3.scala

What is Scala 3?

- Next generation

- Coming out Fall 2020

- Many new features
  - Source code is mostly backward compatible with Scala 2

- VSCode with Dotty Language Server plugin

New Syntax

- Optional
- **New Control Syntax**
- **Significant Indentation**
- Compiler switches allow to go back and forth

Select.scala

- **Anonymous Given Instances**
- **Extension Methods**
- **Main Functions**
- **Given Imports**

Select2.scala

- **Opaque Type Aliases**
- **Given Parameters**

Actor.scala

- A minimum actor implementation taken shamelessly from @li_haoyi
- **Union Types**

Door.scala

- Taken from an Idris example
- **Enumerations**
- **Dependent Function Types**
- **Toplevel Definitions**

It.scala

- Mimics Kotlin's "it"

- **Implicit Function Types**
  - As parameter

Cupcakes.scala

- A minimum DI framework
- New take on the infamous Cake Pattern in Scala 2
- **Implicit Function Types**
    - As return value
- **summon** aka. "the"
- **Intersection Types**
- **Export Clauses**

Kvs1.scala

- Typeclass Oriented Programming (TOP)

- A better way to organize program

- **Parameter Untupling**

Kvs2.scala

- Abstract effects
  - Identity effect
  - Network IO effect
- **Alias Givens**

NetIO.scala

- Socket IO effect
- **Creator Applications**

Serde.scala

- Serialization / deserialization

Kvs3.scala

- Typed key value store
- **Named Type Arguments**

Q&A