# Scala

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Checktalk #9

#### Características

- Multiparadigma: OO + FP
- Estáticamente tipado
- Corre en la JVM
  - Compila a bytecode
  - Interoperable con Java
  - Puede usar las mismas librerías

#### **Flexibilidad**

- Inferencia de tipos: <a href="https://scalafiddle.io/sf/ypyxek4/3">https://scalafiddle.io/sf/ypyxek4/3</a>
- Parametros default: <a href="https://scalafiddle.io/sf/ypyxek4/4">https://scalafiddle.io/sf/ypyxek4/4</a>
- Parametros implícitos: <a href="https://scalafiddle.io/sf/l5QtmpB/l">https://scalafiddle.io/sf/l5QtmpB/l</a>

## Object oriented

- OO Puro: <a href="https://scalafiddle.io/sf/BybFaIa/l">https://scalafiddle.io/sf/BybFaIa/l</a>
- Classes: <a href="https://scalafiddle.io/sf/Pxzrjig/l">https://scalafiddle.io/sf/Pxzrjig/l</a>
- Traits: <a href="https://scalafiddle.io/sf/Pxzrjig/2">https://scalafiddle.io/sf/Pxzrjig/2</a>
- Objects (singletons): <a href="https://scalafiddle.io/sf/Pxzrjig/3">https://scalafiddle.io/sf/Pxzrjig/3</a>

## **Functional programming**

- Pattern matching: <a href="https://scalafiddle.io/sf/mE7iH2C/1">https://scalafiddle.io/sf/mE7iH2C/1</a>
- Funciones de alto orden: <a href="https://scalafiddle.io/sf/mE7iH2C/3">https://scalafiddle.io/sf/mE7iH2C/3</a>
- Partially applied functions: <a href="https://scalafiddle.io/sf/mE7iH2C/4">https://scalafiddle.io/sf/mE7iH2C/4</a>
- Colecciones: <a href="https://scalafiddle.io/sf/vaFjfx7/1">https://scalafiddle.io/sf/vaFjfx7/1</a>
- Lazy evaluation: <a href="https://scalafiddle.io/sf/XRNFIS2/2">https://scalafiddle.io/sf/XRNFIS2/2</a>
- Tail recursion (opt): <a href="https://scalafiddle.io/sf/MFXG19q/1">https://scalafiddle.io/sf/MFXG19q/1</a>

## Ejemplo

Árbol binario: <a href="https://scalafiddle.io/sf/CViT3q4/2">https://scalafiddle.io/sf/CViT3q4/2</a>

- singleton
- default params
- case class
- pattern matching
- partially applied func

Resultado: https://scalafiddle.io/sf/CViT3q4/4