



THE KOTLIN PROGRAMMING LANGUAGE

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WHAT IS KOTLIN?



WHAT IS KOTLIN?



- JVM-targeted

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- JVM-targeted
- Statically typed

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- Object-oriented

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- Docs available today

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- JVM-targeted
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- Programming language
- Docs available today
- Public beta in Q1 2012

OUTLINE



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- Motivation

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- Design goals

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- Design goals
- Feature overview

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- Basic syntax

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- Pattern matching

MOTIVATION



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DESIGN GOALS



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- Full Java interoperability

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- **Compiles** as fast as **Java**

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- **Compiles** as fast as Java
- **Safer** than Java

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- **Compiles** as fast as **Java**
- **Safer** than **Java**
- More **concise** than **Java**

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- Full **Java** interoperability
- **Compiles** as fast as **Java**
- **Safer** than **Java**
- More **concise** than **Java**
- Way **simpler** than **Scala**

FEATURE OVERVIEW 1/2



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- Static null-safety guarantees

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- Traits (interfaces with default impl)

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- Extension functions

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- Traits (interfaces with default impl)
- First-class delegation
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- Extension functions
- Inline-functions (zero-overhead closures)

FEATURE OVERVIEW 2/2



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- Tuples

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- Tuples
- Modules and build infrastructure

FEATURE OVERVIEW 2/2



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- Operator overloading

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- Tuples
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- Pattern matching
- Range expressions
- String templates
- Singletons
- Operator overloading
- Full-featured **IDE** by JetBrains

CODE EXAMPLES



HELLO, WORLD!



```
package hw.simple
```

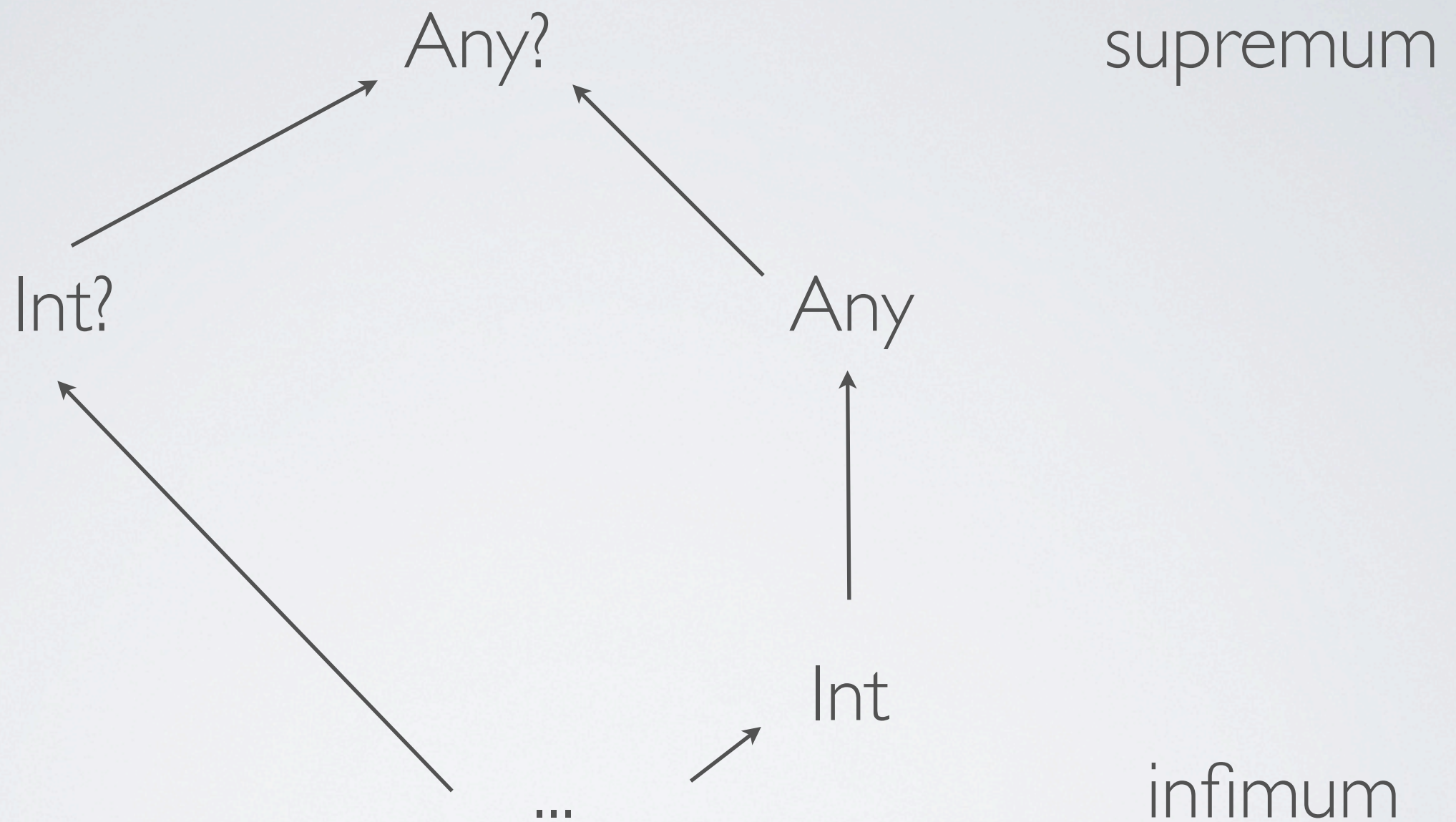
```
fun main(args : Array<String>) : Unit {  
    println("Hello, World!");  
}
```

```
fun println(str : String) /* : Unit */ {  
    System.out?.println(str);  
}
```

HELLO, <NAMES>!



TYPES HIERARCHY



Complete lattice