Android Study Jams

Prior Programming Experience Track: Session 1

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Learning Objectives

- Learn the essentials of the Kotlin programming language
- Build a variety of Android apps
- Best practices for Android development
- Discover resources to continue learning

Prerequisites

- Basic computer literacy
- Machine with Android Studio installed
- Internet connection

What’s your favorite programming language and why?

Today's Schedule

TOPIC	TIME
Presentation	16:15 - 16:30
Kotlin Koans	16:30 - 17:30
Break	17:30 - 17:45
Kotlin Koans (continued)	17:45 - 18:15
Celebrate	

Logistics

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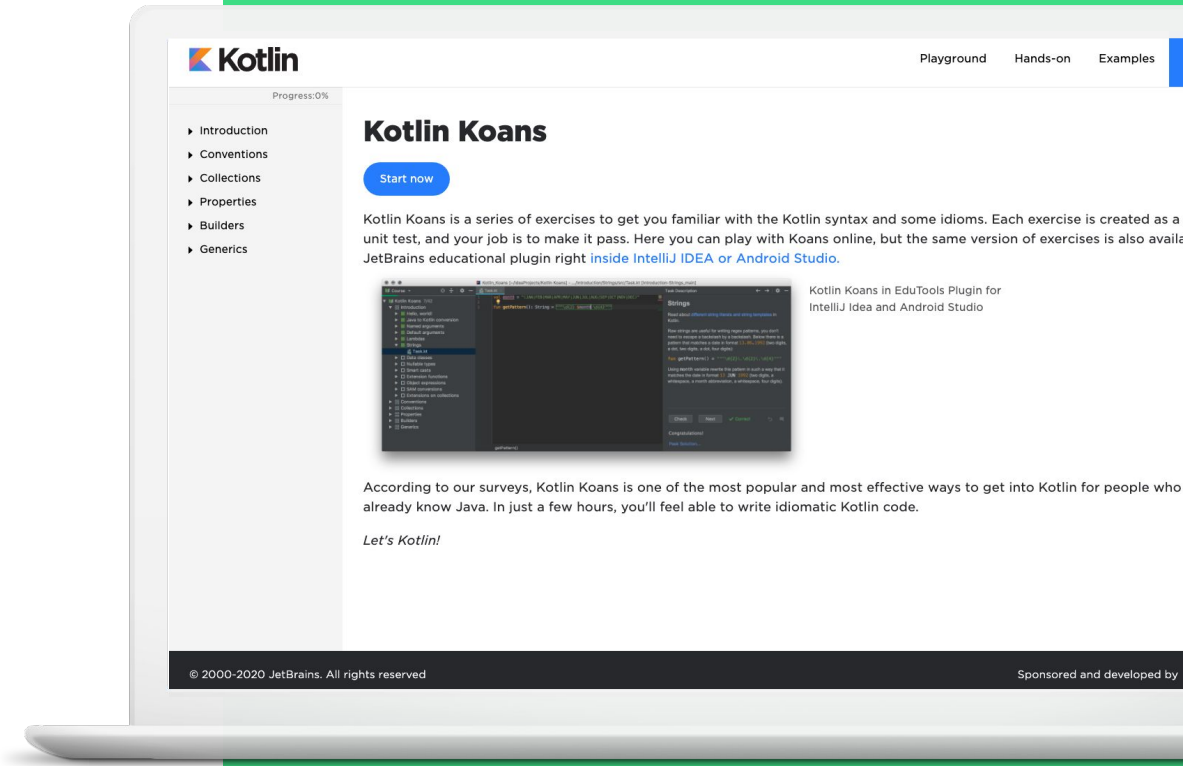
Kotlin Koans



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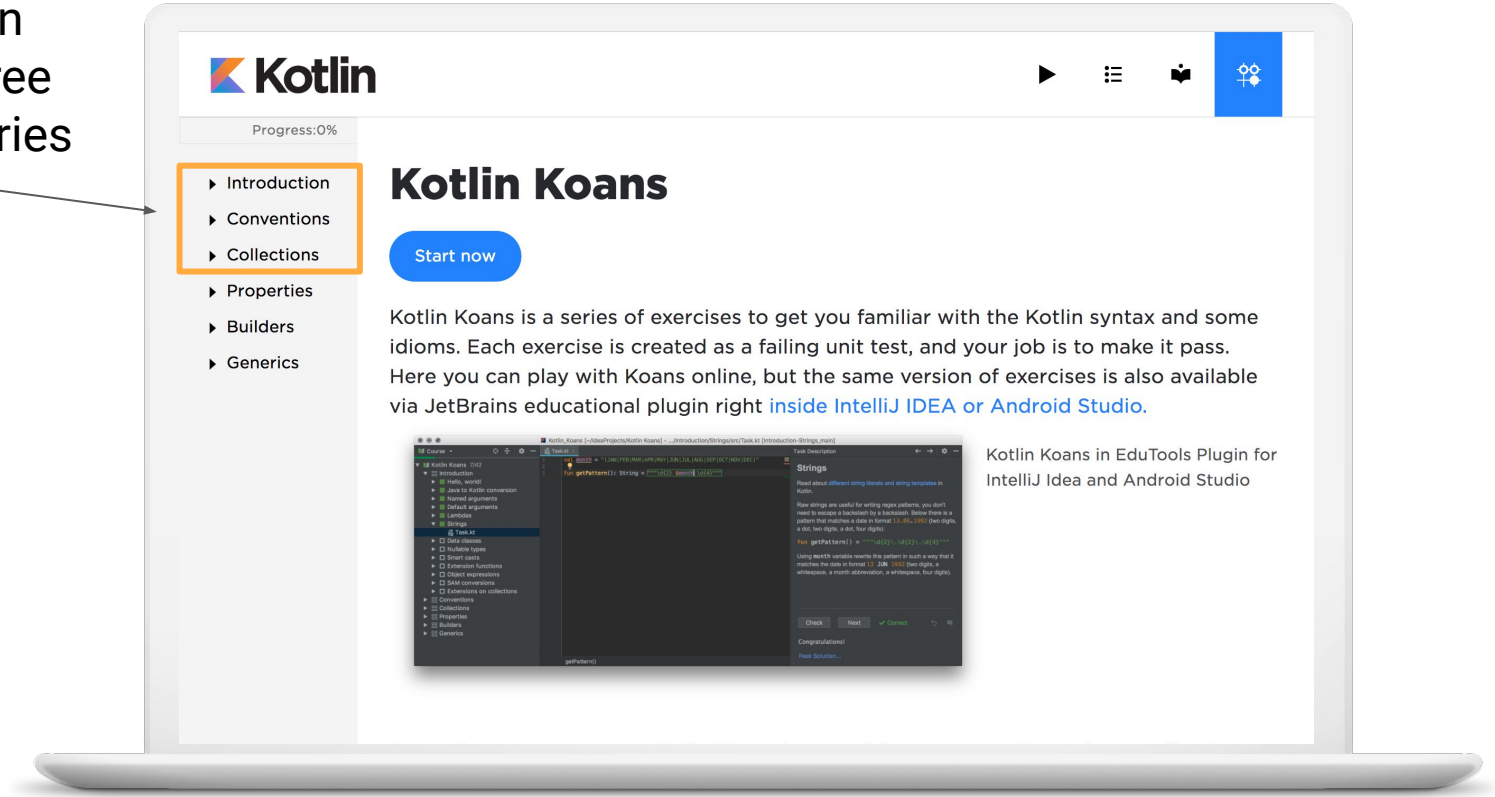
Kotlin Koans

Work on first three categories



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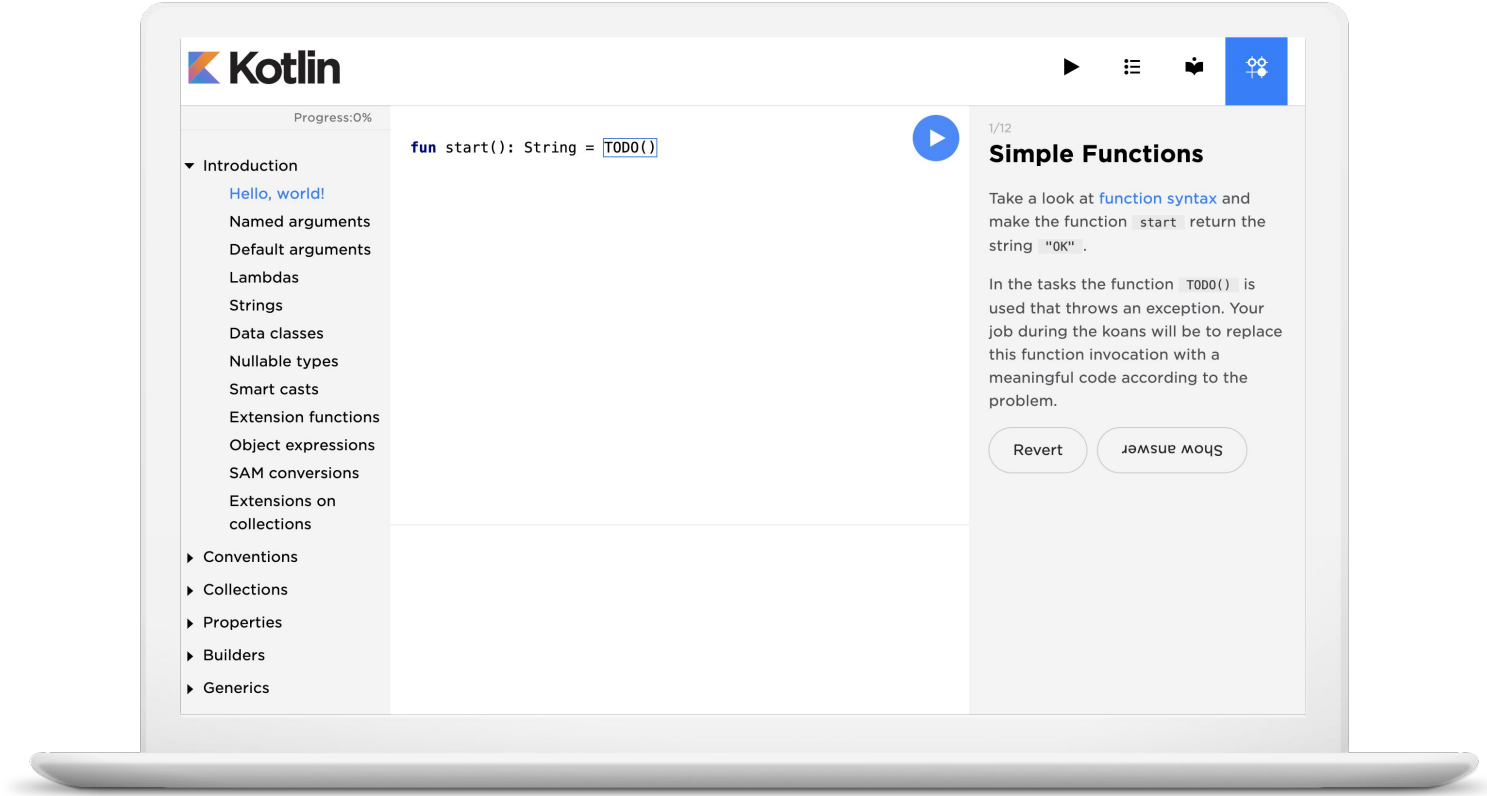
Kotlin Koans



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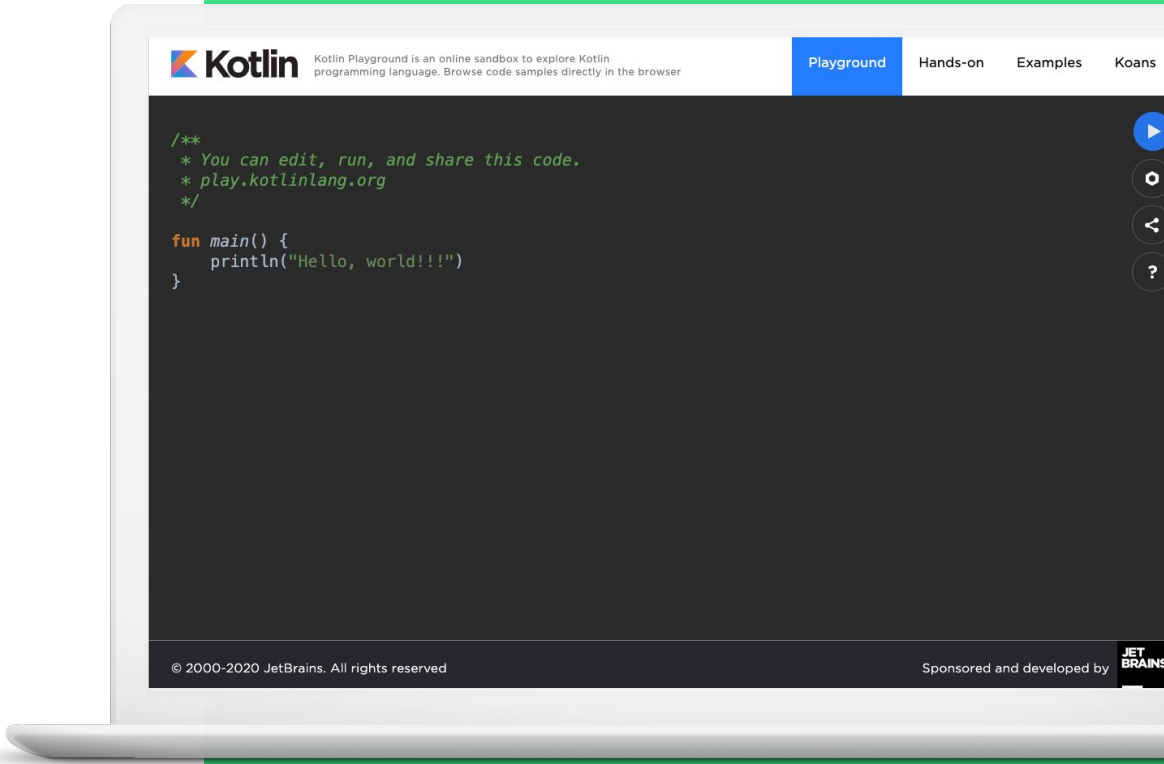
Kotlin Playground



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Let’s get started

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Start here: g.co/android/studyjams

Collect your first badge!

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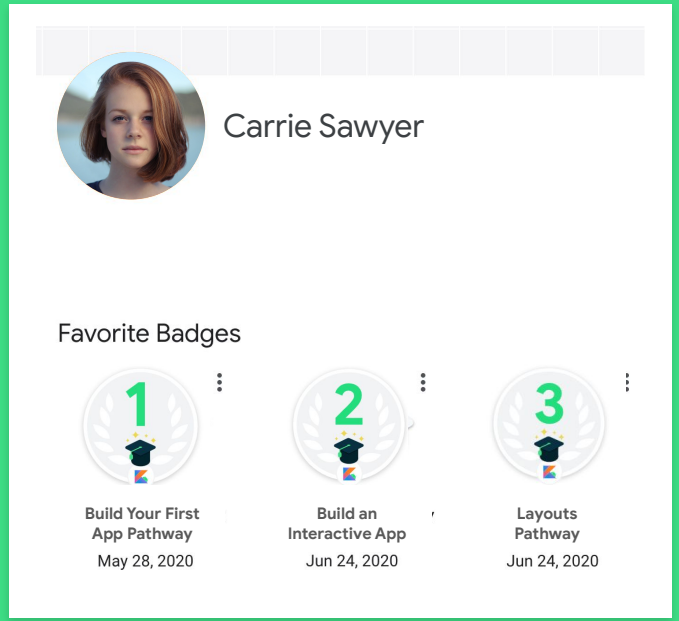
Create a Developer Profile



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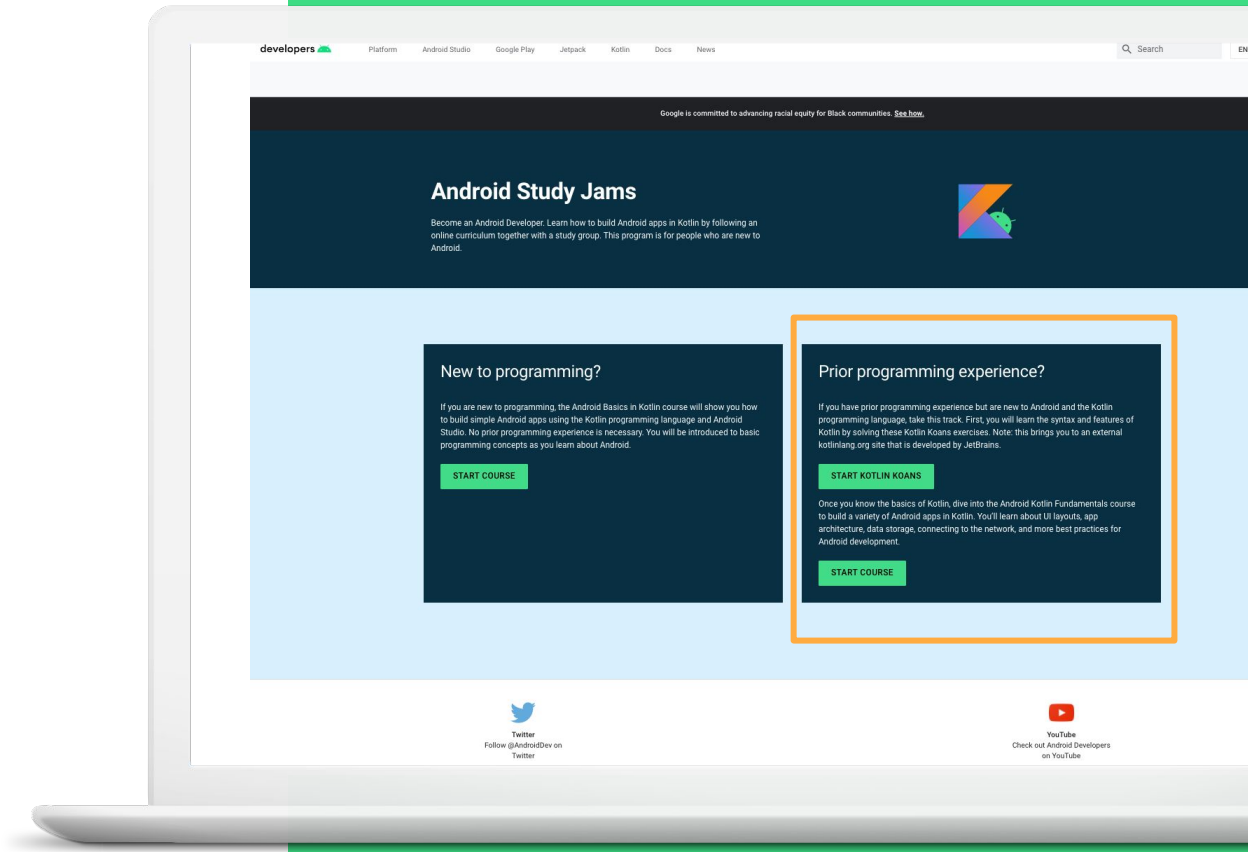
Prior Programming Experience track:

Start Kotlin Koans



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Concept Overview

What is Kotlin?

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Kotlin is a modern programming language that helps developers be more productive.

Benefits of Kotlin

- Expressive & Concise
- Safer Code
- Interoperable with Java
- Structured Concurrency

Android Development is Kotlin-First

What does this code do?

```
fun main() {
    println("Hello world!")
}
```

What does this code do?

```
fun main() {
    println("Hello world!")
}

>>> Hello world!
```

What do you notice about Kotlin?

```
fun main() {
    println("Hello world!")
}
```


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Parameters and Return Type

```
fun add(a: Int, b: Int): Int {
    return a + b
}

fun display(): Unit {
    println("Welcome")
}
```

mutable variable

```
var counter: Int = 5
```

immutable variable

```
val name: String = "Rebecca"
```

What's interesting about these variable declarations?

```
var length = 5

val message = "Welcome"
```

```
if (score < 20) {
    println("Low")
} else if (score < 70) {
    println("Medium")
} else {
    println("High")
}
```

```
when (x) {
    0 -> endGame()
    1 -> moveNext()
    2 -> skipTurn()
}
```

Classes

```
// This is the Square class
// definition
class Square(val side: Int)

// This is a Square instance
val s = Square(10)
println(s.side)
```

side

Collections

```
val numList = listOf(1, 2, 3)

val numSet = setOf(4, 5, 6)

val numMap = mapOf("a" to 10, "b" to 20, "b" to 30)
```

Stuck? Ask for help

Go to g.co/android/studyjams and start Kotlin Koans

Introduction, Conventions, Collections

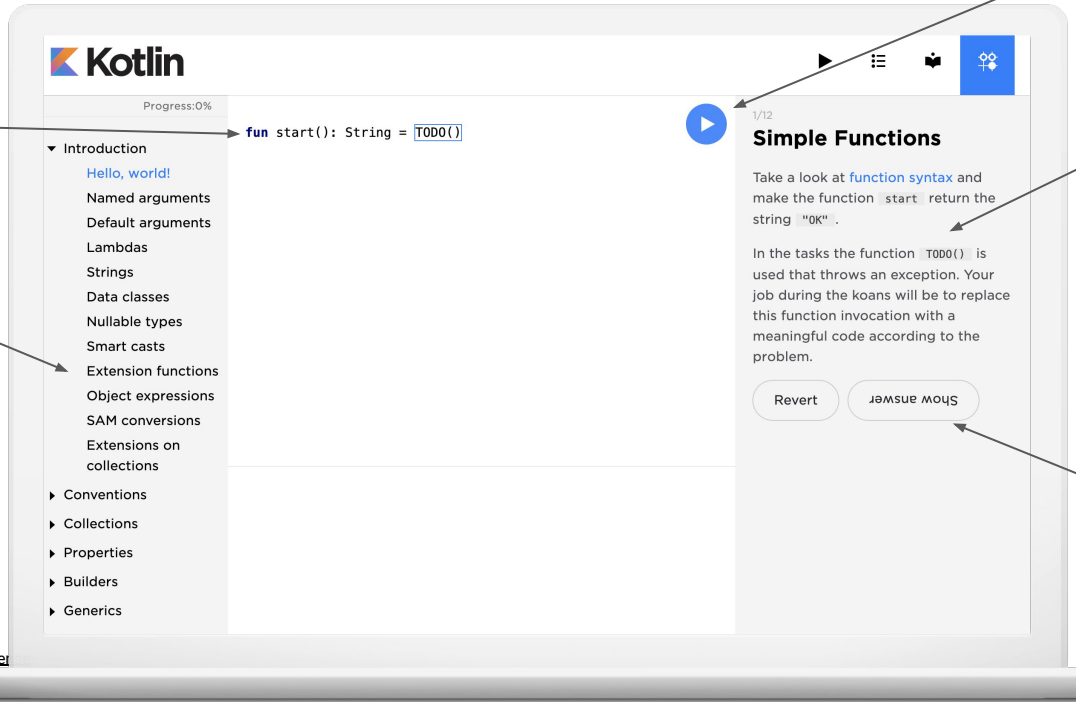
Run Code & Check Output

Check Error Messages

Re-read Instructions

Exercises

Show Answers



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Break

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Stuck? Ask for help

Introductions, Conventions, Collections

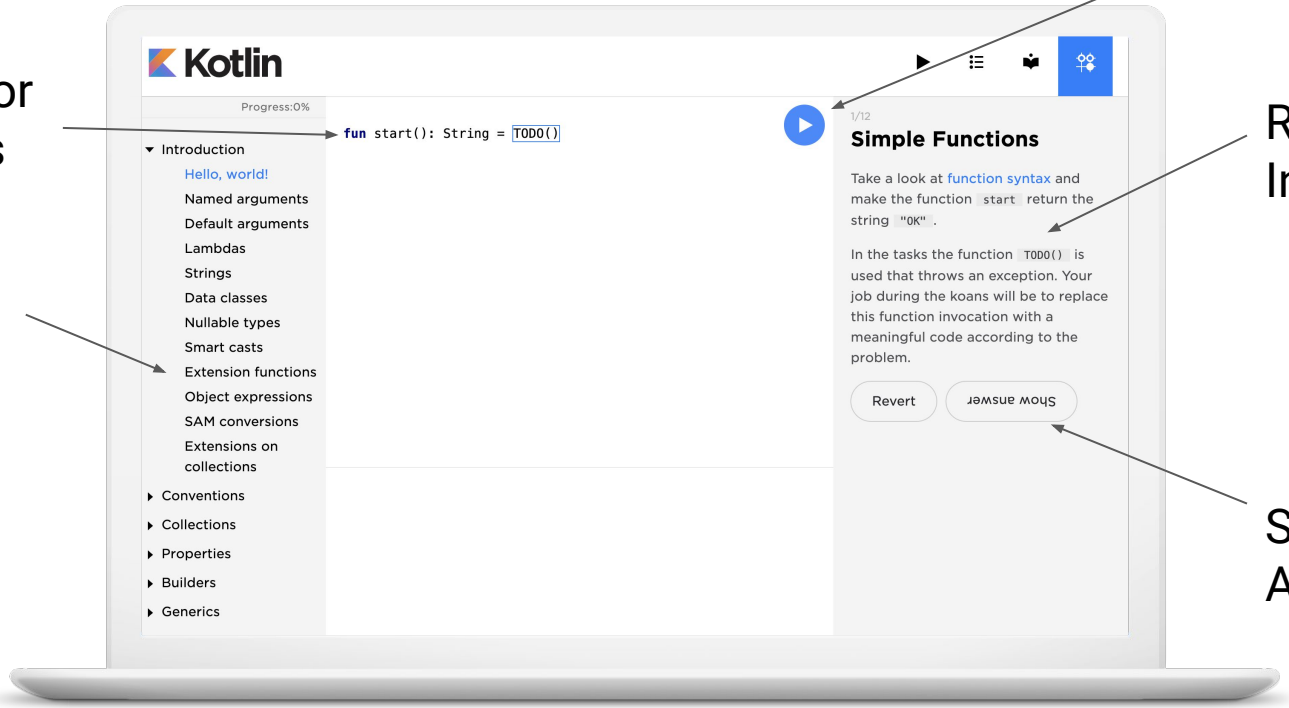
Check Error Messages

Exercises

Run Code & Check Output

Re-read Instructions

Show Answers



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Welcome back

And congrats!

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What did you notice about Kotlin?

Share what you've learned with #AndroidStudyJams

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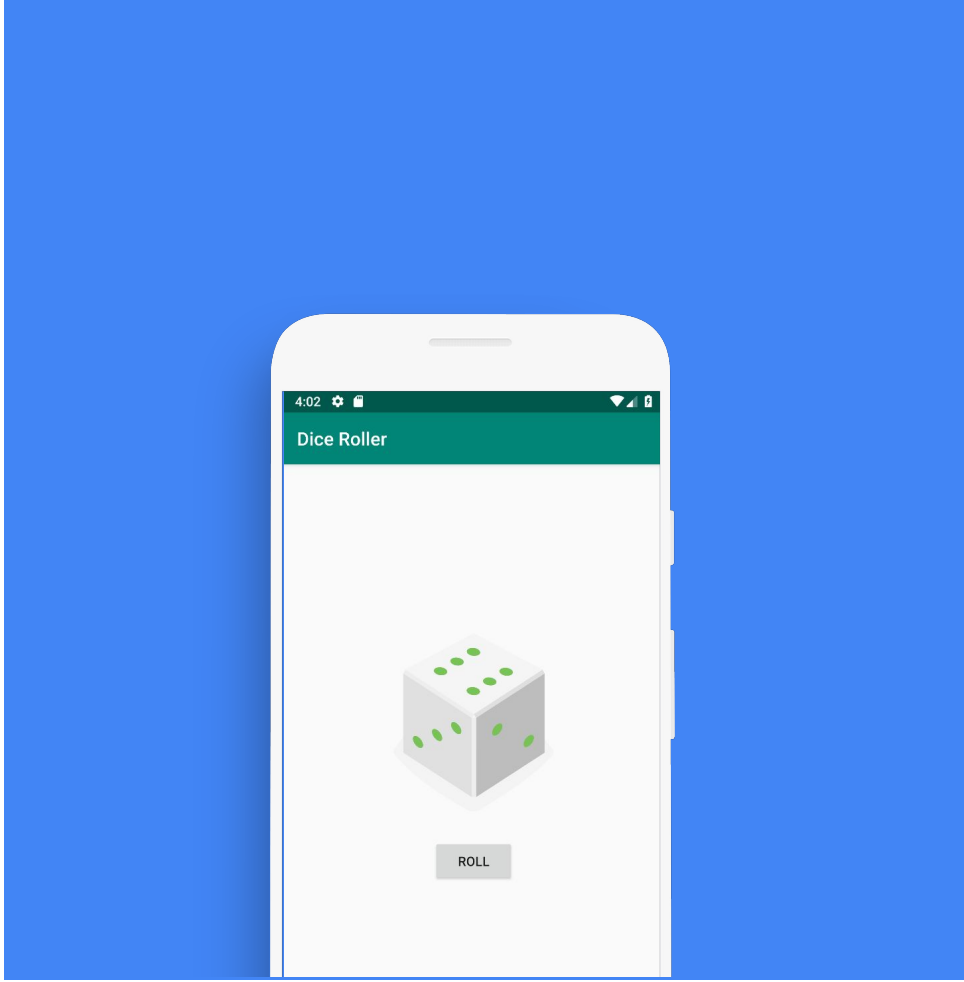
Stay tuned for Session 2



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