

Case Classes and Case Objects



Lesson Objectives

- After completing this lesson, you should be able to:
 - Describe when to use case classes and case objects instead of regular classes and objects
 - Outline the differences between case classes and objects compared to regular classes and objects

What is a Data Class?

- Some classes represent specific data types in a “domain”
- Imagine an online store:
 - Customers
 - Accounts
 - Orders
 - Inventory

What is a Service Class?

- Some classes represent work to be performed in an application
- They know what to do, but they do not hold the data themselves
- When an application calls the service, they pass the data to the service, and the service transforms it in some way
- Examples:
 - Persistence
 - Loggers
 - Calculation engines

Case Classes

- A representation of a data type that removes a lot of boilerplate code
 - Generates JVM-specific convenience methods
 - Makes every class parameter a field
 - Is immutable by default
 - Performs value-based equivalence by default

Case Classes

```
scala> case class Time(hours: Int = 0, minutes: Int = 0)  
defined class Time
```

```
scala> val time = Time(9, 0)  
res0: Time = Time(9, 0)
```

```
scala> time == Time(9)  
res1: Boolean = true
```

```
scala> time == Time(9, 30)  
res2: Boolean = false
```

```
scala> time.hours  
res3: Int = 9
```

Case Objects

- If a case class is an instance-based representation of a data type, a case object is a representation of a data type of which there can only be a single instance
- If you try to create a case class with no parameters, it is stateless and should be a case object

Case Objects

```
scala> case class Time
<console>:1: error: case classes without a parameter list are
use either case objects or case classes with an explicit '()'
case class Time
      ^
```

```
scala> case object Time
defined object Time
```

```
scala> Time.toString
res0: String = Time
```


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