Stream Programming Summer 2019

Scala from the beginning — 05.03, 2019

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1 Overview

In the last lecture we reviewed similarities between Java and Scala.

In this lecture we had an introduction to Scala programming language from the beginning.

2 Basic informations about Scala

Scala supports Object Oriented Programming, and this paradigm is what we focused on in this lecture. For sample declarations and code snippets please refer to file Lec2-suplement.sc in the repo or Martin Odersky's book[1].

2.1 var vs val

There are two possibilities for declaring variables - `var` and `val`. The difference between them is that `var` allows for new assignment, while `val` doesn't allow to change value after the initialisation. As a rule of thumb - use `var` for variables and `val` for object - the state of an object can still be change, ie. you can change value of a field inside an object.

2.2 Access modifiers

There are three access modifiers in Scala: public, private and protected.

- public - field/method is available globally
- private - field/method is available only in the class where it was declared
- protected - field/method is available in the class where it was declared and inheriting classes

One can also restrict the scope. It is done with [] sign. Please refer to the supplement.

2.3 Constructors

Constructor is a default method used for creating an object. In Scala it is declared either explicitly in class body, or as arguments of class. Beware that in the second option arguments are public. Constructors can be overridden and there can be more than one constructor in a a class, given they have different argument count. Default values are also supported in constructors.

3 Inheritance

Scala supports inheritance in a similar way as Java. A class can inherit only from one class. It is done using keyword `extends`.

References

[1] Odersky Martin, Spoon Lex, Venners Bill. Programming in Scala *artima*, PrePrint Ed:47–62, 2007-2008.