

Lecture 1: Course Introduction

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Lecturer

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- Background: KBTU, DAR ecosystem

Prerequisites

- At least 2 programming courses.
- Not part of this courses: simple language constructs (loops, data types, classes, etc.), OOP
- Notebook (recommended)
- Linux Ubuntu or MacOS (recommended)

Course overview

- Scala programming language
- Functional programming?
- Actor model – akka toolkit
- RabbitMQ – message broker
- Docker

Resources and Tools

- Functional Programming Principles in Scala (<https://www.coursera.org/learn/progfun1/>)
- IntelliJ Idea (<https://www.jetbrains.com/idea/>) Community or Ultimate edition (use Student card to register for one-year license)

Books and tutorials

- Scala for the Impatient. *Cay Horstmann*
- Programming in Scala. *Martin Odersky*
- Twitter Scala School (https://twitter.github.io/scala_school/)
- Scala tour (<https://docs.scala-lang.org/tour/>)

Course goal

- Develop a backend system using actor model.
- Microservices
- Cluster
- Highly-available, resilient and scalable backend system