

# Unit Testing in Scala

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## SETTING UP THE PROJECT



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# Agenda

- Why testing?
- Why ScalaTest?
- Course prerequisites
- How course is structured?
- Setup course project locally
- Overview of course project

# Why Testing?

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# Benefits of Writing Tests



**Attest  
correctness**



**Safety net during  
refactor**



**Code  
documentation**



**Communication  
with  
stakeholders**

# Why ScalaTest?

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# Popular Scala Testing Libraries

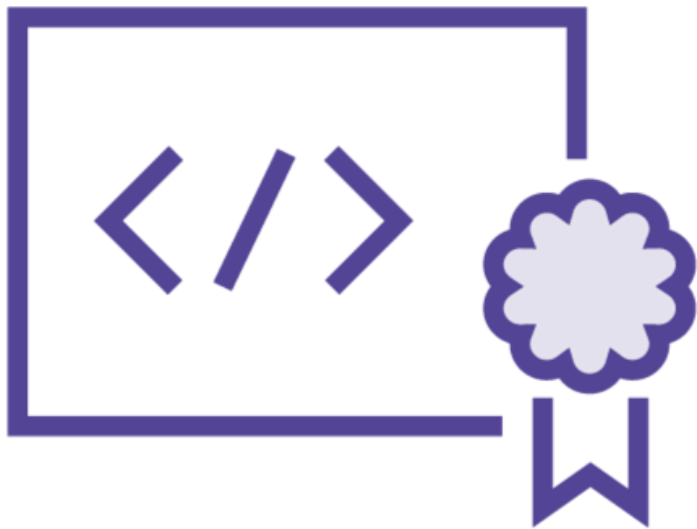


**uTest**

**specs2**

**ScalaTest**

# Why ScalaTest - License



**Apache License 2.0**

# Why ScalaTest - What You Can Test



Scala



ScalaJS



Java



# Why ScalaTest - Libraries You Can Integrate

**Junit**

**TestNg**

**ScalaCheck**

# Why ScalaTest - Build Tools

**Ant**

**Maven**

**sbt**

# Why ScalaTest - Mocking Libraries

**JMock**

**EasyMock**

**Mockito**

**ScalaMock**

# Why ScalaTest - Developer Tools

**Eclipse**

**NetBeans**

**Intelij IDEA**

# Why ScalaTest - Testing Styles

# 08

Testing Styles

xUnit

BDD

RSpec

PropSpec

# Why ScalaTest - Most Used

**Akka**

**sbt**



# What You Will Learn from This Course

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# What You Will Learn

**ScalaTest fundamentals - *Test vs Suite***

**Adding ScalaTest to project**

**Using *FlatSpec* style for testing**

**Using *Assertions* for testing**

**Using *Matcher DSL* for testing**

***Tagging* tests**

***Mocking* tests using ScalaMock**

# Course Prerequisites

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# Learning Prerequisites

## Scala Build Tool: Getting Started NEW!

🎥 Course · Beginner · 1 hr 38m · Jun 12, 2019 · ★★★★★

## Scala Fundamentals

🎥 Course · Intermediate · 2 hr 43m · Dec 27, 2018 · ★★★★★★ (24)

## Scala: The Big Picture

🎥 Course · Beginner · 2 hr 16m · May 1, 2018 · ★★★★★★ (66)

# Logistical Prerequisites

git

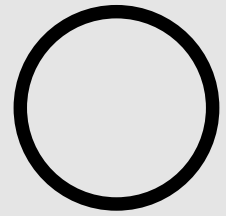
Java

Scala

sbt

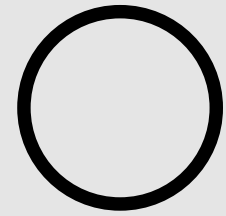
# How Course Is Structured

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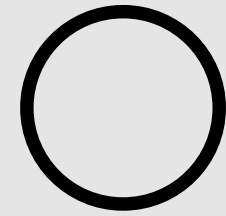
Fundamentals

Module 03



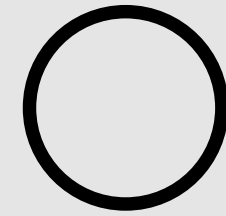
Assertions

Module 04



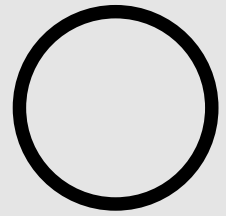
Matchers

Module 05



Fixtures/  
Asynchronous

Module 06




Mocking/  
Tagging




Module 07

# How to Access Project Source Code

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[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)

hhimanshu / **Unit-Testing-In-Scala**

Unwatch 1

★ Star 0

🍴 Fork 0

Code

Issues 0

Pull requests 0

Actions

Projects 0

Wiki

Security

Insights

Settings

Project for Pluralsight Course

Manage topics

12 commits

1 branch

0 packages

0 releases

1 contributor

Branch: master

New pull request

Create new file

Upload files

Find file

Clone or download

hhimanshu Updated README.md

Latest commit 77fb7df 23 hours ago

project	Setup project with latest sbt and scala version. Ran the code to make...	9 days ago
src/main/scala	remove the test, it will come in the next module	23 hours ago
.gitignore	Setup project with latest sbt and scala version. Ran the code to make...	9 days ago
README.md	Updated README.md	23 hours ago
build.sbt	Lower down the scala version requirement	23 hours ago

README.md

fork the repo

<https://github.com/hhimanshu/Unit-Testing-In-Scala>



# Clone the Repository

```
git clone git@github.com:<username>/Unit-Testing-In-Scala.git
```

# Verify

```
cd Unit-Testing-In-Scala
```

```
sbt "runMain BankOfScala"
```

# Verify

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## Requesting Currency

Cost of converting 120.0 USD -> 175 NZD

Withdrawn \$175 from 29d5f98f-d7c4-4277-832c-88e1ab22d3f6 -> Bob,Martin,bob@martin.com with product=Core Checking has current balance of \$10991

The 120.0 USD will be posted to your nearest branch in 2 days.

Cost of converting 100.0 CAD -> 110 NZD

Withdrawn \$110 from 29d5f98f-d7c4-4277-832c-88e1ab22d3f6 -> Bob,Martin,bob@martin.com with product=Student Checking has current balance of \$13064

The 100.0 CAD will be posted to your nearest branch in 2 days.

---

## Statistics

Total Money Deposited to Bank: \$416559

Total Money Borrowed by Customers: \$-88831

Number of Transactions By Account: HashMap(DepositsA -> 62, LendingA -> 20)

[success] Total time: 1 s, completed Nov 30, 2019, 12:14:33 PM

# Overview of Course Project

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# A Working Bank

## Scala Fundamentals

by Harit Himanshu

Scala is one of the most popular functional programming languages that run on the JVM. This course takes you on a deep dive into Scala concepts such as object-oriented programming, closures, creating control structures, traits, and implicits.

 Start Course



Bookmark



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Download Course

Function Literal Forms

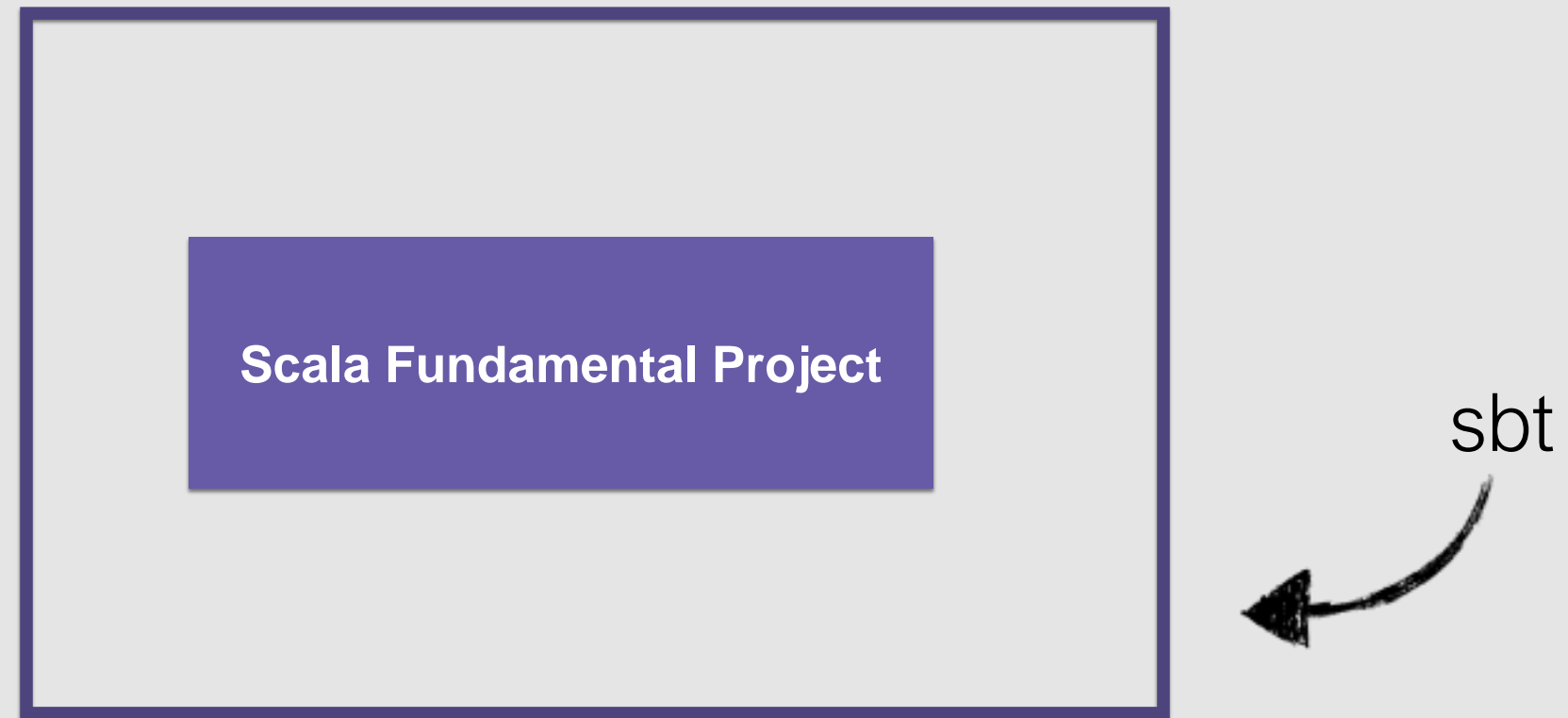
```
(x: Int) => x + 1
```

```
(x: Int) => x + y
```

Bound Variable

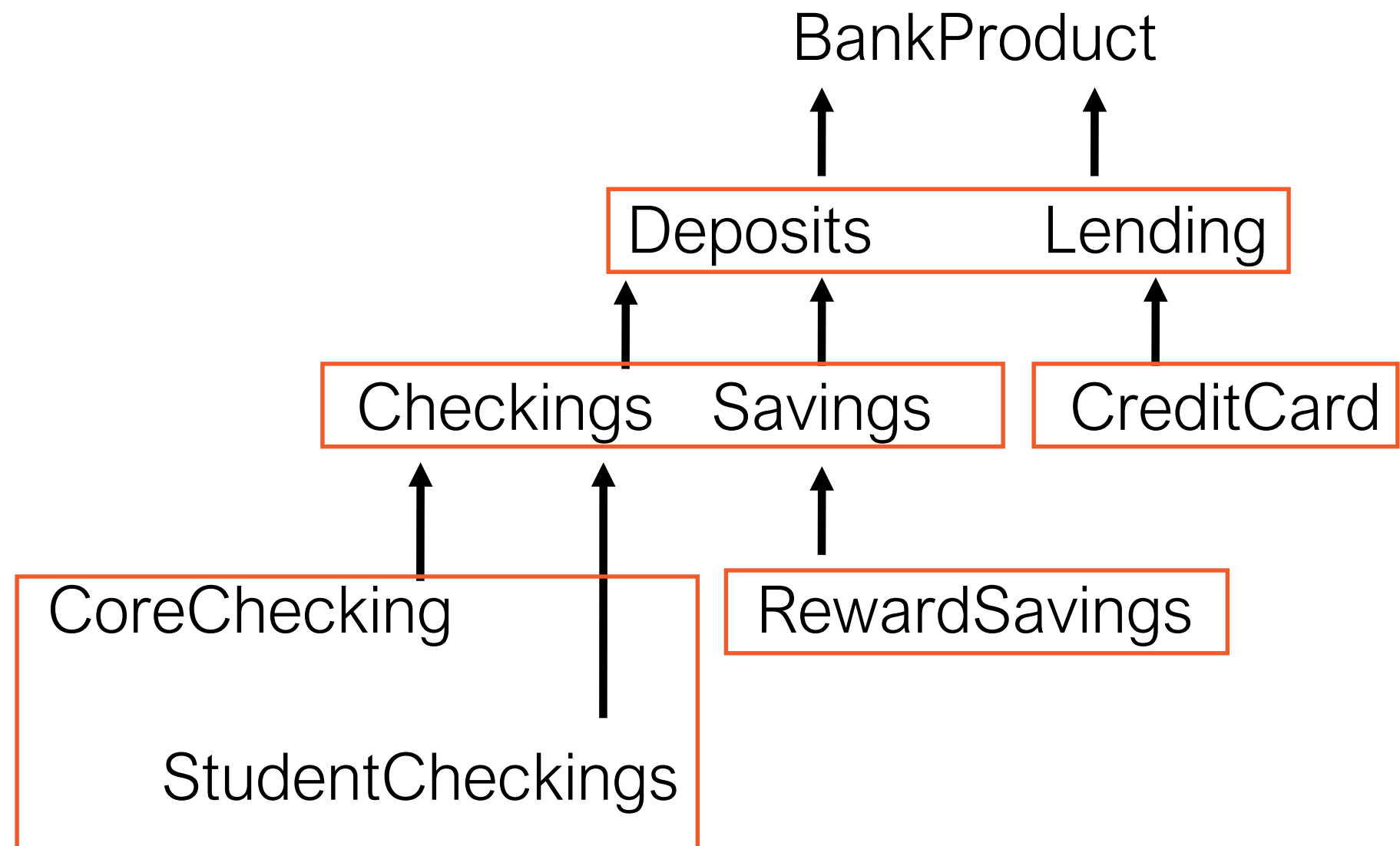
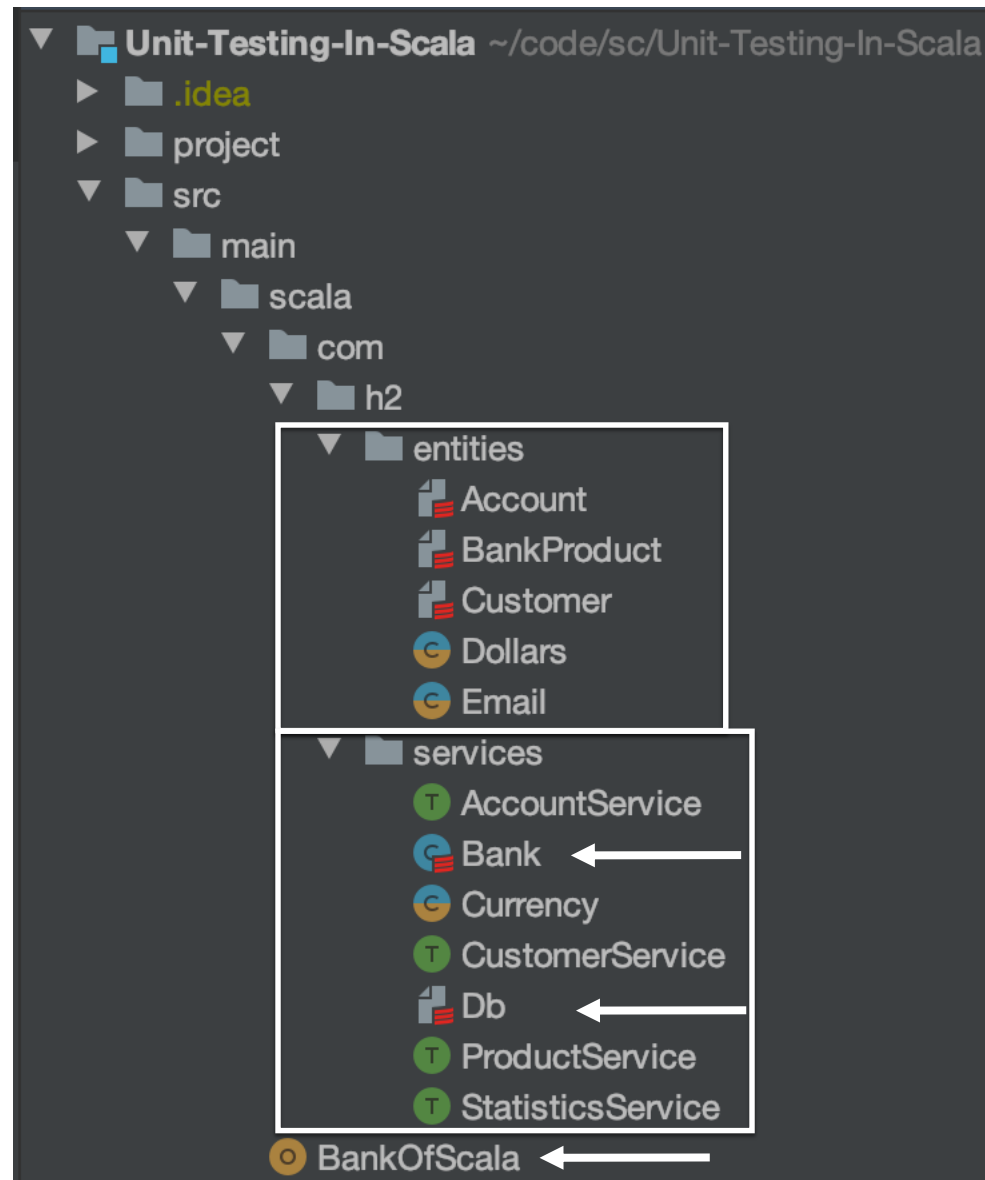
Free Variable

# A Working Bank - with sbt

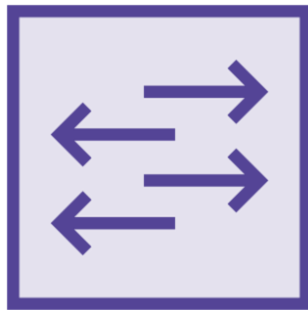


★ Updated Scala and sbt

# Course Project Overview



# Course Project Overview



Account

Customer

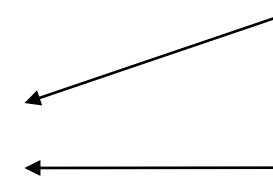
BankProduct

AccountCategory

Seq[Transactions]

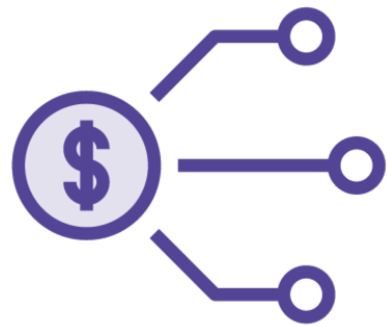
DepositsA

LendingA





# Course Project Overview



Transaction

Customer

Dollar

Transaction Type

In

Out

AccountCategory

DepositsA

LendingA

# Course Project Overview



CustomerDB

ProductsDB

AccountsDB

CustomerService

ProductService

AccountService

StatisticsService

Currency



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