# O'REILLY®

#### Scala Beyond the Basics

Daniel Hinojosa

### About Me... Daniel Hinojosa

Programmer, Developer, Consultant, Instructor, and Speaker

#### **Notable Content:**

Testing in Scala (Book)
Beginning Scala Programming (Video)
Java & TDD (Video Training)

#### Speaker: A Few OSCONs No Fluff Just Stuff Tour DevNexus

<u>dhinojosa@evolutionnext.com</u> @dhinojosa



#### Structure of the Class

- All LiveCoding
- Performed in IntelliJ and Eclipse
- Commits and Pushing performed throughout the class
- Your Choice :
  - Watch
  - Code with Me
- Definitely Ask Questions

#### Other Classes

- Learn the Basics of Scala in 3 hours
- Setting Up Scala Projects
- Scala Beyond the Basics
  - Implicits
  - Pattern matching
- Scala Programming Fundamentals
  - IDES, Classes, Methods, Traits
- Scala Programming Fundamentals
  - Sealed, Collections, and Functions

### **Project Setup**

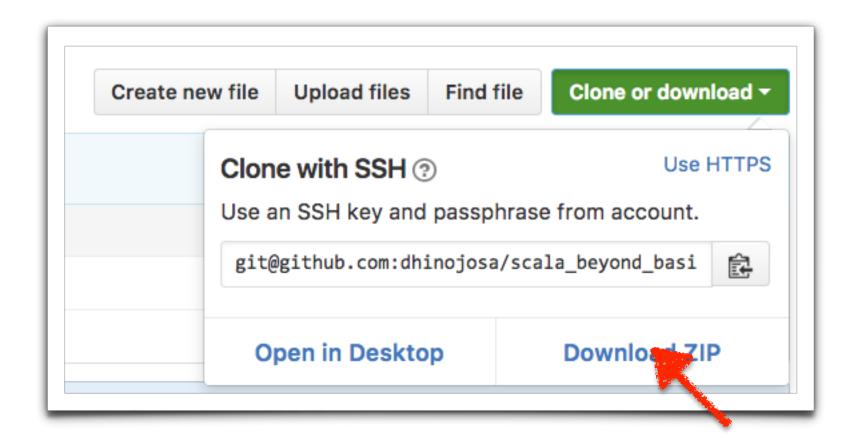
#### Checklist before setup...

- We provided pre-setup configuration already.
- Be sure JAVA\_HOME is set and that the following works:
  - javac -version
  - java -version
- Be sure SBT is setup and ensure that the following works
  - sbt sbtVersion

#### Repository Location, Clone it!

https://github.com/dhinojosa/scala beyond basics

#### But, if don't know Git too well...



#### Once downloaded...Run SBT

```
~/Development/scala_beyond_basics(master) » sbt
```

#### You should see something like this...

```
-/Development/scala beyond basics(master) » sbt
Java HotSpot(TM) 64-Bit Server VM warning: ignoring option MaxPerm
rt was removed in 8.0
[info] Loading settings from plugins.sbt ...
[info] Loading project definition from /Users/danno/Development/sc
ics/project
[info] Loading settings from build.sbt ...
[info] Set current project to scala beyond basics (in build file:/
velopment/scala beyond basics/)
[info] sbt server started at 127.0.0.1:5901
sbt:scala beyond basics>
```

#### You'll need to update your project...

```
(~/Development/scala beyond basics(master) * sbt
Java HotSpot(TM) 64-Bit Server VM warning: ignoring option MaxP
rt was removed in 8.0
[info] Loading settings from plugins.sbt ...
[info] Loading project definition from /Users/danno/Development
ics/project
[info] Loading settings from build.sbt ...
[info] Set current project to scala beyond basics (in build fil
velopment/scala beyond basics/)
[info] sbt server started at 127.0.0.1:5901
sbt:scala beyond basics> update
```

#### **Updating Your Project**

- This will download Scala and all your dependencies into your ~/.ivy2
- This may take a while depending on your connection speed.
- If you have any problems, there might be issues with network connection, or proxy based issues

#### Proxy Issues

 If you have problems because of any proxy server, add the following to your environment variables and change username and password accordingly

```
export JAVA_OPTS="$JAVA_OPTS \
-Dhttp.proxyHost=yourserver \
-Dhttp.proxyPort=8080 \
-Dhttp.proxyUser=username \
-Dhttp.proxyPassword=password"
```

#### Lab: Let's get setup!

Clone or download

```
scala_beyond_basics from
https://github.com/dhinojosa/
scala_beyond_basics
```

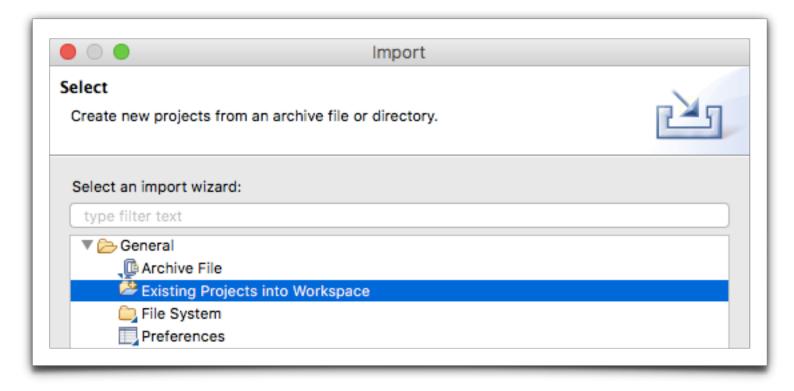
- Run sbt at the command line
- Once in the sbt console, run update
- Wait for the download to complete

#### Setup for Eclipse

#### Run the Eclipse Plugin in SBT

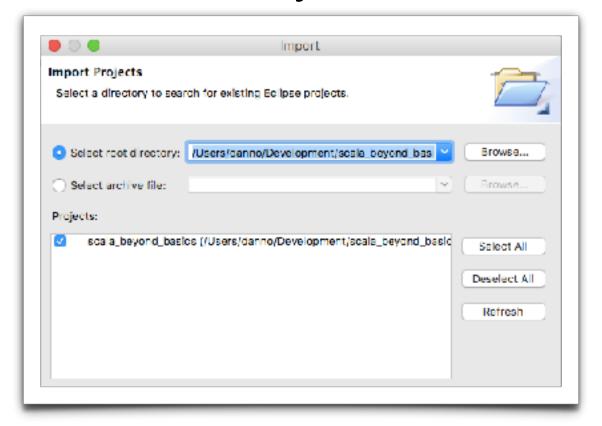
```
sbt:scala_beyond_basics> eclipse
```

#### Import Existing Project



File > Import Project >
Select Existing Projects Into Workspace > Next

#### Select Root Directory



Select the Root Directory of the Project using Browse, Ensure that the Project is Found, hit Finish

#### Project is now ready

```
workspace - Scala - scala, beyond, basics/src/testiscala.icom/cra/scalabeyondbasics/AdvancedPatternMatchingSpec.scala - Eclipse
                  iii build.sbt iii AdvancedPstteniMatchingSoec.scala 35
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    import declarations

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                                                          let's try two using :: form"".stripMargir)

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                                                       //Try it with just fat : and only and what did it
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                                             91

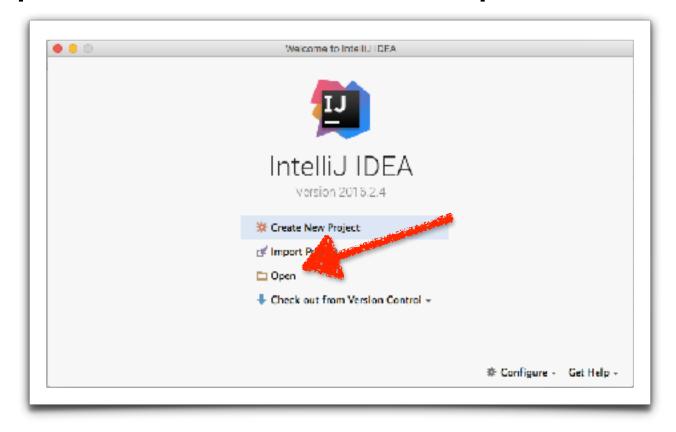
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```

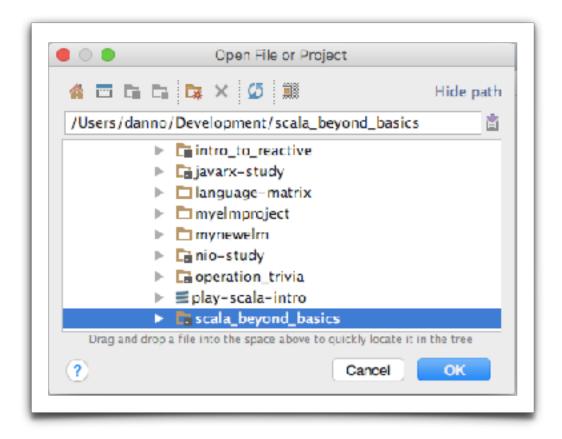
Select the Root Directory of the Project using Browse, Ensure that the Project is Found, hit Finish

### Setup for IntelliJ

### From IntelliJ Intro Screen, or from the splash screen, select Open



### Locate the scala\_beyond\_basics project and click OK



#### Project is now ready...

```
AdvancedPatternMetchingSpec.scala - scala_beyond_basics - [-/Development/scala_beyond_basics]
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    project

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                                                            import scala.util.matching.Regex

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                                                             describe("Simple Pattern Hatches") (
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                                                                it("can be as simple as an assignment") {
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                   AdvancedFatternMatchingSpec
                                                   13
                                                                  w should be (48)
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        .cache-tests
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        .classpath
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                                                                it("can also be more meaningful as something like a tuple") {
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                                                                  val (x, y) = (180, "Foe")

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                                                                  x should be (186)
        project ...
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                                                                  y should be ("Foo")
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                                                                  //Vise a REPL to prove the type
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                                                                  y should be ("Foo")
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                                                                  //Vee a REPL to prove this it
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## Day 1: Pattern Matching (Live Coding)

## Day 2: Implicits and Typeclasses (Live Coding)

#### Thank You