O'REILLY®

Scala Beyond the Basics

Daniel Hinojosa

About Me... Daniel Hinojosa

Programmer, Developer, Consultant, Instructor, and Speaker

Testing in Scala (Book)

Beginning Scala Programming (Video)

Speaker: A Few OSCONs No Fluff Just Stuff Tour DevNexus

dhinojosa@evolutionnext.com
@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

Project Setup

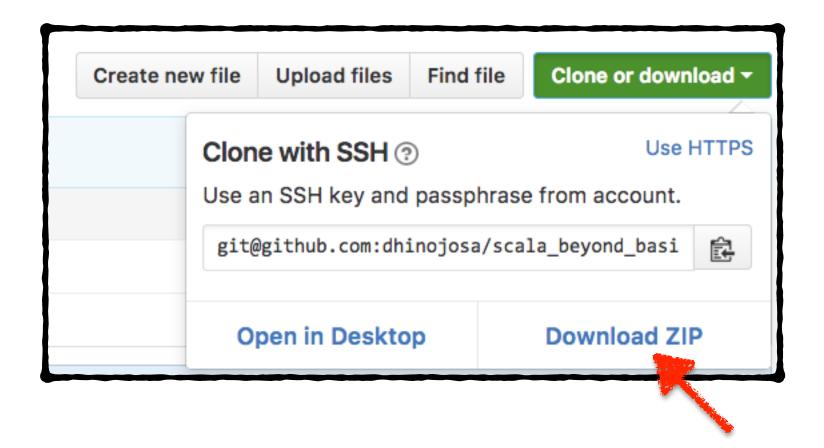
Checklist before setup...

- 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(branch:master*) » sbt
```

You should see something like this...

```
~/Development/scala beyond basics(branch:master*) » sbt
[info] Loading project definition from /Users/danno/Developmen
t/scala beyond basics/project
[info] Set current project to scala beyond basics (in build fi
le:/Users/danno/Development/scala_beyond_basics/)
```

You'll need to update your project...

```
~/Development/scala beyond basics(branch:master*) » sbt
[info] Loading project definition from /Users/danno/Developmen
t/scala_beyond_basics/project
[info] Set current project to scala beyond basics (in build fi
le:/Users/danno/Development/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
```

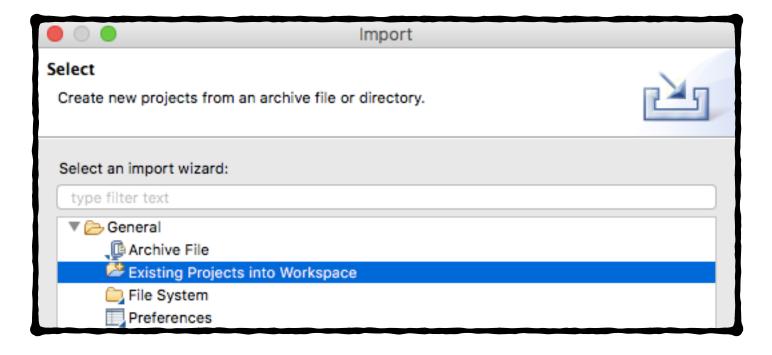
- Run sbt at the command line
- Once in the sbt console, run update
- Wait for the download to complete

Setup for Eclipse

Run the Eclipse Plugin in SBT

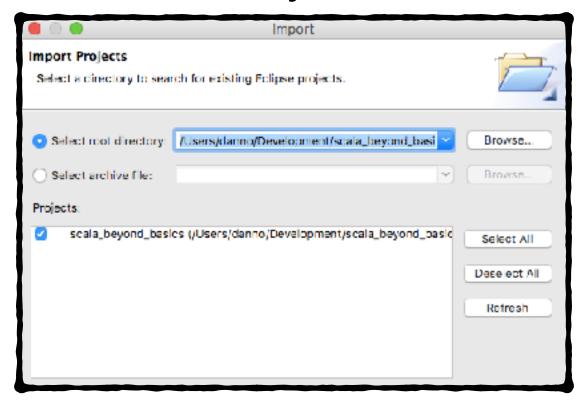
```
> eclipse with-source=true with-javadoc=true execution-environ
ment=JavaSE-1.8
```

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, srgitest, scala com/ora/stalabeyond/basics/Alivanced-astern/latchingSpac.scala - Ecilipse
           표 🗵 🖫 🕲 Qu 🔌 · Qu + 선 + D + Qu + 🐠 😂 세 + 현 + 등 + 선 수 수 는 수
                                          🔝 wild shit - 🥳 Advancari@attarridatrhing@par scale 🟋
                                                                                                          - Pl 🛬 Outline 👸
                                                       x andute exten
🌉 - scale_layerd_basics (scale_layerd_basics musts
  Servimelni/voda
                                                                                                                     Com.ors.scalabeyon/ba
T i i na glandina da
                                                                                                                   ► 'in import ééclarations

▼ the current substrayunities to

    ⊕ AdvancadPattarnMarch

                                                       """ran in a list where you care about an severte
     F Advanced implicit to pecucials
                                                        let's try two using :: fora"" stripkargin)

→ Skiharnes/Patien MikishingSpes wasa

                                                       wal for an end at $61 a 16cf (48, 48).
▼ MiScala Library container ( 7.11.8).
                                            18.
                                                       fat should be (18)
  F 🚰 mysorieriany.societima y. i. 11.8 x24160-3
                                            19
                                                       and should be (19)
  F ∰ org.scala-lang.scala-reflect_2.11.6v201603
                                             10
                                                       //Try it with just fat:: and only and what did it
P MHeterenoed Libraries
                                            9.1
F Music System Library (UIVESC-1.0)
                                            92
                                            4.3
                                                     5"( """ran do a list where you have about an seven!
in the same
                                            9.4
                                                            | now with List() form"", stripMargin) {
P Staryet
                                                       val List(fst, ind) = List(40, 10)
  is build abt
                                                       fit should be(40)
  prefeoustes.txt
                                                       and should be (10)
  in scala_beyond_basics.imi
                                            5.0
                                            10
                                          140
                                                     it( """can do a List where you care about an wexact
                                          0101
                                                             lot's try three using as fere"!".stripHar;
                                           192
                                                       well fot as and so and se Nell - Dist(40, 10, 60)
                                          11/2
                                                       fet should be (10)
                                          104
                                                       and should be (10)
                                           116
                                                       trd chould be(iii)
                                                       //Try it with just fotunged only and what did it
                                           100
                                                     St( ""can do a List where you care about an rexact
                                          0110
                                                            | let's try three using the List() form ::
                                           111
                                                       wel List(fat, and, trd] = List(40, 10, 60]
                                                       fot should be (40)
                                                            Writable
                                                                           Smart Insert 357 : 28
```

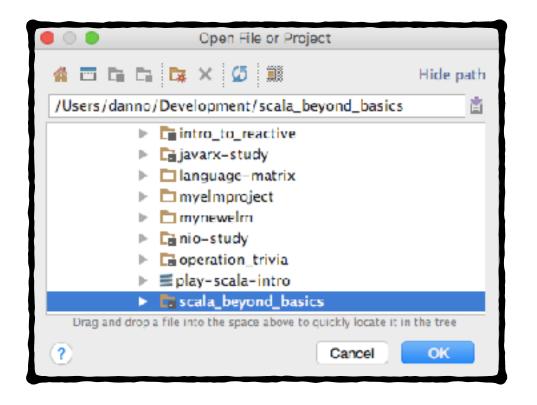
Select the Root Directory of the Project using Browse, Ensure that the Project is Found, hit Finish

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...

```
AdvancedPatternMatchirgSpec.scala - scala_beyond basics - [-/Development/scala_beyond basics]
pes simple rattern Matches also works with a scalaucollection.immutable.streams/imple rattern Matches should also have guards just ir case 🕶 🔰 🐞 🙉 📋 🧣 👺 🚉 🔄
 Projec:
                                                 AdvancedPatternMatchingSpec.scala × (% PartialFunction.class × % Regex.dass ×
 * scala_beyond_basics ~/Development/scala_be
                                                         AdvancedPatternMatchingSpec
   ▶ ☐ idea
   ▶ □ settings
                                                          import org.scalatest.(FunSpec, Matchers)
   bin
   project
                                                          import scala, annotation, tailrec

▼ □ snc
                                                          import scala.util.matching.Regex
      v main
            □ scala
                                                          class AdvancedPatterrMatchingSpec extends FunSpec with Matchers [

    ▼ □ test

         v scala
                                                  10
                                                            describe("Simple Pattern Matches") {

▼ □ com.ora.rcalabeyondbasics

                                                  11
                                                              (t("can be as simple as an assignment") (
                 AdvancedImplicitsSpec
                                                                val x: Int = 40 // x will take on the value of 40
                                                  12
                 AdvancedPatternMatchingSpec
                                                  13
                                                                x should be(48)

    □ tarpet

                                                  1.4
      ache-tests.
                                                  15
      classpath
                                                 16
                                                              it("can also be more meaningful as something like a tuple") [
                                                                val (x, y) = (100, "Foo")

    gitignore

                                                 17
                                                 18
                                                                x should be(186)
      _project
                                                                y should be("Fee")
                                                 19
      ☐ build.sbt
                                                 28
                                                                //Use a REPL to prove the type
      prerequisites.txt
                                                 21
      scala beyond basics.iml
                                                 22
   External Libraries
                                                 23
                                                              it( """has the ability to have a value name and an @
                                                 24
                                                                    I to not only capture the individual items but the whole item!
                                                 25
                                                                val t@(z, y) = (100, "Foo")
                                                 26
                                                                x should be(100)
                                                 27
                                                                y should be ("Foo")
                                                 28
                                                                t should be((100, "Foo"))
                                                 29
                                                                //Use a REPL to prove this it
                                                 30
                                                                //Change it to an array
                                                 31
                                                  22
              9 Version Cantrol

    □ Terminal

                                                                                                                             ○ Event Log
                                                                                                         LF: UTF-8: Ct: master: % [T]
```

Day 1: Pattern Matching (Live Coding)

Day 2: Implicits and Typeclasses (Live Coding)

Thank You