O'REILLY®

Scala Programming Fundamentals Methods, Classes, Traits

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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)
Scala Beyond The Basics
Scala Programming Fundamentals Series

Speaker:

OSCON No Fluff Just Stuff Tour DevNexus

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Other Scala Classes

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

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

Checklist before we proceed...

- 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

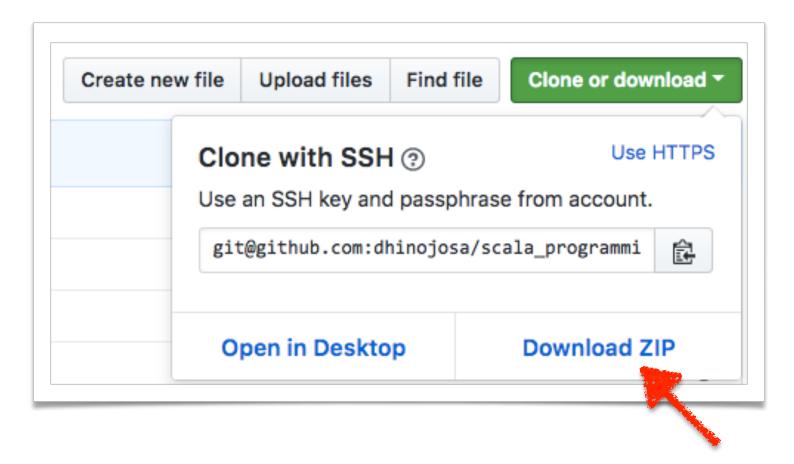
Repository Location, Clone it!

https://github.com/dhinojosa/scala programming fundamentals 1

or use the abbreviation...

https://bit.ly/2DRRxH0

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



Once downloaded...Run SBT

```
~/Development/scala programming fundamentals 1(master*) • sbt
                                                                     danno@Air-Dan
```

You should see something like this...

```
danno@Air-Dan
-/Development/scala programming fundamentals 1(master*) » sbt
[info] Loading settings from plugins.sbt ...
[info] Loading global plugins from /Users/danno/.sbt/1.0/plugins
[info] Updating ProjectRef(uri("file:/Users/danno/.sbt/1.0/plugins/"), "global-plugins")...
[info] Done updating.
[info] Loading settings from plugins.sbt ...
[info] Loading project definition from /Users/danno/Development/scala programming fundamenta
ls 1/project
[info] Updating ProjectRef(uri("file:/Users/danno/Development/scala programming fundamentals
1/project/"), "scala programming fundamentals 1-build")...
[info] Done updating.
[info] Loading settings from build.sbt ...
[info] Set current project to scala programming fundamentals 1 (in build file:/Users/danno/D
evelopment/scala programming fundamentals 1/)
[info] sbt server started at local:///Users/danno/.sbt/1.0/server/bda9329352d9lba3bbe0/sock
sbt:scala programming fundamentals 1>
```

You'll need to update your project...

```
danno@Air-Dan
~/Development/scala programming fundamentals 1(master*) » sbt
[info] Loading settings from plugins.sbt ...
[info] Loading global plugins from /Users/danno/.sbt/1.0/plugins
[info] Updating ProjectRef(uri("file:/Users/danno/.sbt/1.0/plugins/"), "global-plugins")...
[info] Done updating.
[info] Loading settings from plugins.sbt ...
[info] Loading project definition from /Users/danno/Development/scala programming fundamental
ls 1/project
[info] Updating ProjectRef(uri("file:/Users/danno/Development/scala programming fundamentals
1/project/"), "scala programming fundamentals 1-build")...
[info] Done updating.
[info] Loading settings from build.sbt ...
[info] Set current project to scala programming fundamentals 1 (in build file:/Users/danno/D
evelopment/scala programming fundamentals 1/)
[info] sbt server started at local:///Users/danno/.abt/1.0/server/bda9329352d91ba3bbe0/sock
sbt:scala programming fundamentals 1> update
[info] Updating ...
[info] Done updating.
[success] Total time: 1 s, completed May 4, 2018 11:39:38 AM
sbt:scala programming fundamentals 1>
```

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_programming_fundamentals_1
 from
 https://github.com/dhinojosa/
 scala_programming_fundamentals_1

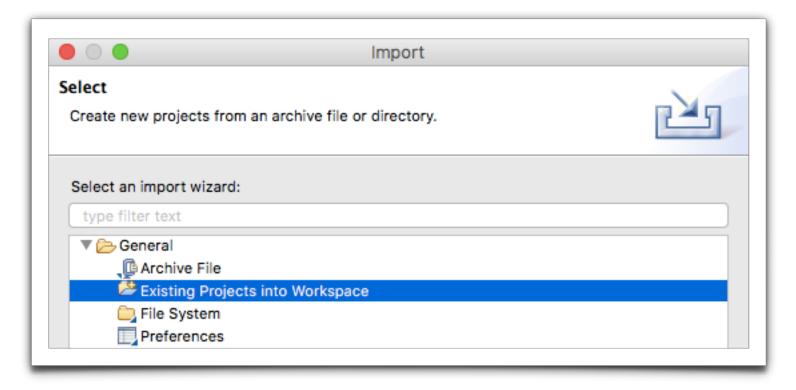
- Run sbt at the command line
- Once in the sbt console, run update
- Wait for the download to complete

Setup for Eclipse

Run the Eclipse Plugin in SBT

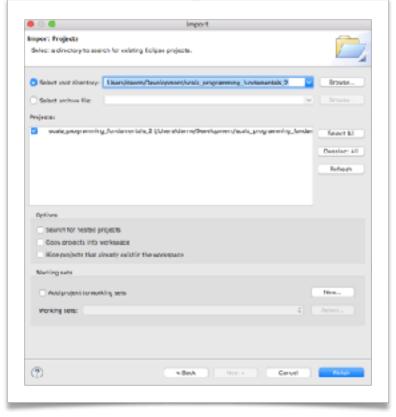
```
sbt:scala_programming_fundamentals_1> eclipse
```

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

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

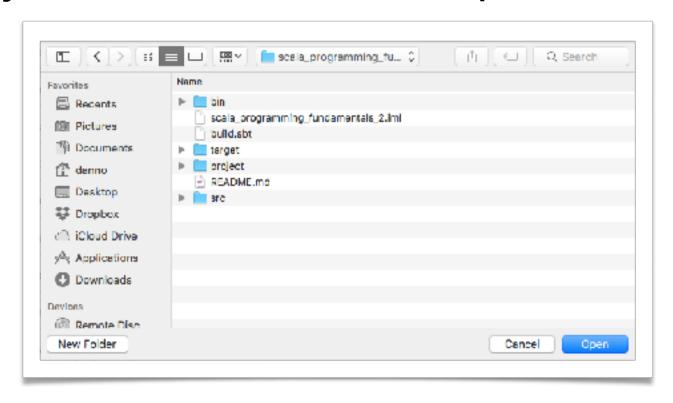
Setup for IntelliJ

From IntelliJ Intro Screen, or from the splash screen, select Import Project



Locate the

scala_programming_fundamentals_1 project and click OK, accept defaults



Project is now ready...

```
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    scala programming fundamentals 2 - Develop

                                                    package conterescoloprogrammingfundamentals
    ► Bit settings
                                                    import org.scalatest. (FunSvice, Matchers)
    Is project Iscala programming fundamentals ?
                                                    class FunctionsSpec extends FunSvite with Matchers (
    W. Bulleton
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                                                          a function really is an energysous
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                                                         everride def apply(v1: String): Int = v1.length
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         r lim scala
           Til com.ora.scalaprogrammingfundamen
                                                        f.apgly("Hello") should be(5)
                CollectionsSpec
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                                                      test("The above can be whittled down to the following:") {
    target
                                                        wal f = (s: String) -> s.length
         .cache-tes/s
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       [irfc] The new values will be used by no settings or tasks.
       [irfc] Reapplying settings...
       [irfc] Set current project to scala_programming_fundamentals_2 (in build
       file:/Users/darng/Development/scala_programming_fundamentals_2/)
       [irfc] Applying State transformations org.jettrains.sbt.CreateTasks from /Users/damnc/Library/Application
        Support/IntelliJIdea2017.3/Scala/launcher/sbt-structure-1.0.jar
       [irfc] Reapplying settings...
       [irfc] Set current project to scala programming fundamentals 2 (in build
       file:/Users/danno/Development/scala_programming_fundamentals_2/)
       [irfc] Writing structure to /private/var/folders/_x/2x6ld3jx3xg2x6pr1y29t7540000gn/T/stt-structure.xxl...
       [irfc] Done.
       [success] Total time: 2 s, completed Mar 29, 2038 8:06:30 PM
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```

Bringing in our Project

Methods, Classes, Instances, Traits (Live Coding)

Thank You