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**SBT (Scala Build Tool)**

**Guidelines and Best Practices**

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# Introduction

Short description about document….

# Multiproject build

A build definition that consists of multiple project configurations is termed as a multiproject build. These are extremely useful when your project is a combination of two or more modules. If they depend on one another, you could also specify the dependencies so that whenever a change is made to one project, it is reflected in the projects that depend on it.

Let’s understand how to configure and work with multiproject build.

Create following project structure in your Eclipse:



At the end of project structure creation you’ll have following list of directory and package structure in your IDE :

MultiProjectSBT – Name of our Base Project

subproject1 – Name of sub-module 1

subproject2 – Name of sub-module 2

Source packages :

src/main/scala (under MultiProjectSBT)

subproject1/src/main/scala (under subproject1)

subproject2/src/main/scala (under subproject2)

Packages :

com.main.test (under MultiProjectSBT)

com.sp1.test (under subproject1)

com.sp2.test (under subproject2)

Base project’s build.sbt is available directly under MultiProjectSBT directory whereas every submodule have their independent build.sbt.

Source code :



Copy HelloMain.scala into com.main.test package of MultiProjectSBT

Copy Human.scala, Friend.scala, Animal.scala into com.sp1.test package of subproject1

Copy FriendTraitClient.scala into com.sp2.test package of subproject2



SBT configuration files :

Copy and paste following build.sbt as seen in below image:





We have configured two module i.e. sp1 and sp2 into our parent build.sbt (i.e. the one under MultiProjectSBT directory) . Here ‘dependsOn’ configuration describe that sp2 module is dependent on sp1, It means you can’t build sp2 without building sp1 module.



Finally we should have following build.properties into MultiProject’s project folder:





All the source codes and configuration files are now at it place, Let’s begin building the project.

**General build procedure**

Open command prompt and change to directory (e.g C:\Scala\_SBT\MultiProjectSBT), Type following commands :

*C:\Scala\_SBT\MultiProjectSBT> sbt*

*>clean*

*>compile*

*>run*



To list all the projects in given build, You can type following command on sbt interactive shell

>projects



If you can able to execute above command without any error that means your project is configured properly.

Let’s package the build by typing clean, compile, package in sequence at the sbt interactive shell as can be seen in following image.



After successful packaging, Check the project structure in the eclipse IDE(see below screen). You should have three project artifacts (jar files) created under your project structure.



subproject1\_2.11-1.0.jar (under subproject1 directory)

subproject2\_2.11-1.0.jar (under subproject2 directory)

multiprojectsbt\_2.10-0.1-SNAPSHOT.jar (under project base directory)

In order to understand the dependency of sp2 module on sp1, Delete ‘dependsOn(sp1)’ and try compiling the project, You should get error as seen below.



It shows, sp2 must have an access to all the scala class dependency in order to build correctly.

# USer Guidelines FOr user for maven

Following are the guidelines for Lead:

1. Details ………….

# Gragle guidelines

Following are the guidelines for Confluence User and Administrator: