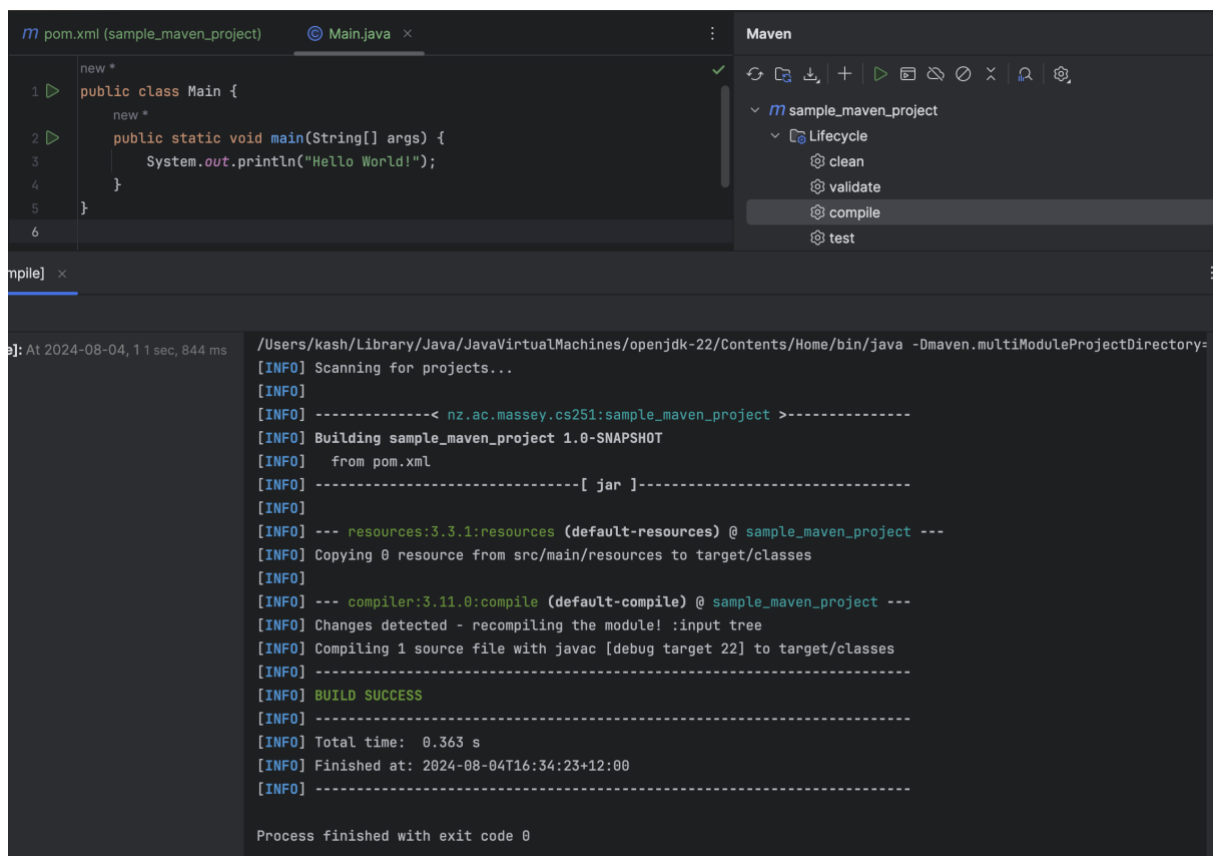


159.251 Software Design and Construction – Tutorial 2

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1. The running Hello World project using Maven and the IDE



```
m pom.xml (sample_maven_project)  Main.java x
1 new *
2 public class Main {
3     new *
4     public static void main(String[] args) {
5         System.out.println("Hello World!");
6     }
7 }

Maven
sample_maven_project
Lifecycle
clean
validate
compile
test

[INFO] At 2024-08-04, 11 sec, 844 ms
/Users/kash/Library/Java/JavaVirtualMachines/openjdk-22/Contents/Home/bin/java -Dmaven.multiModuleProjectDirectory=
[INFO] Scanning for projects...
[INFO] -----< nz.ac.massey.cs251:sample_maven_project >-----
[INFO] Building sample_maven_project 1.0-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO] --- resources:3.3.1:resources (default-resources) @ sample_maven_project ---
[INFO] Copying 0 resource from src/main/resources to target/classes
[INFO] --- compiler:3.11.0:compile (default-compile) @ sample_maven_project ---
[INFO] Changes detected - recompiling the module! :input tree
[INFO] Compiling 1 source file with javac [debug target 22] to target/classes
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 0.363 s
[INFO] Finished at: 2024-08-04T16:34:23+12:00
[INFO] -----
Process finished with exit code 0
```

2. The running Hello World project using Maven and the terminal:

```
sample_maven_project — -zsh — 212x64
Last login: Sun Aug  4 16:42:49 on ttys000
(base) kash@Kashs-MBP ~ % cd /Users/kash/IdeaProjects/sample_maven_project

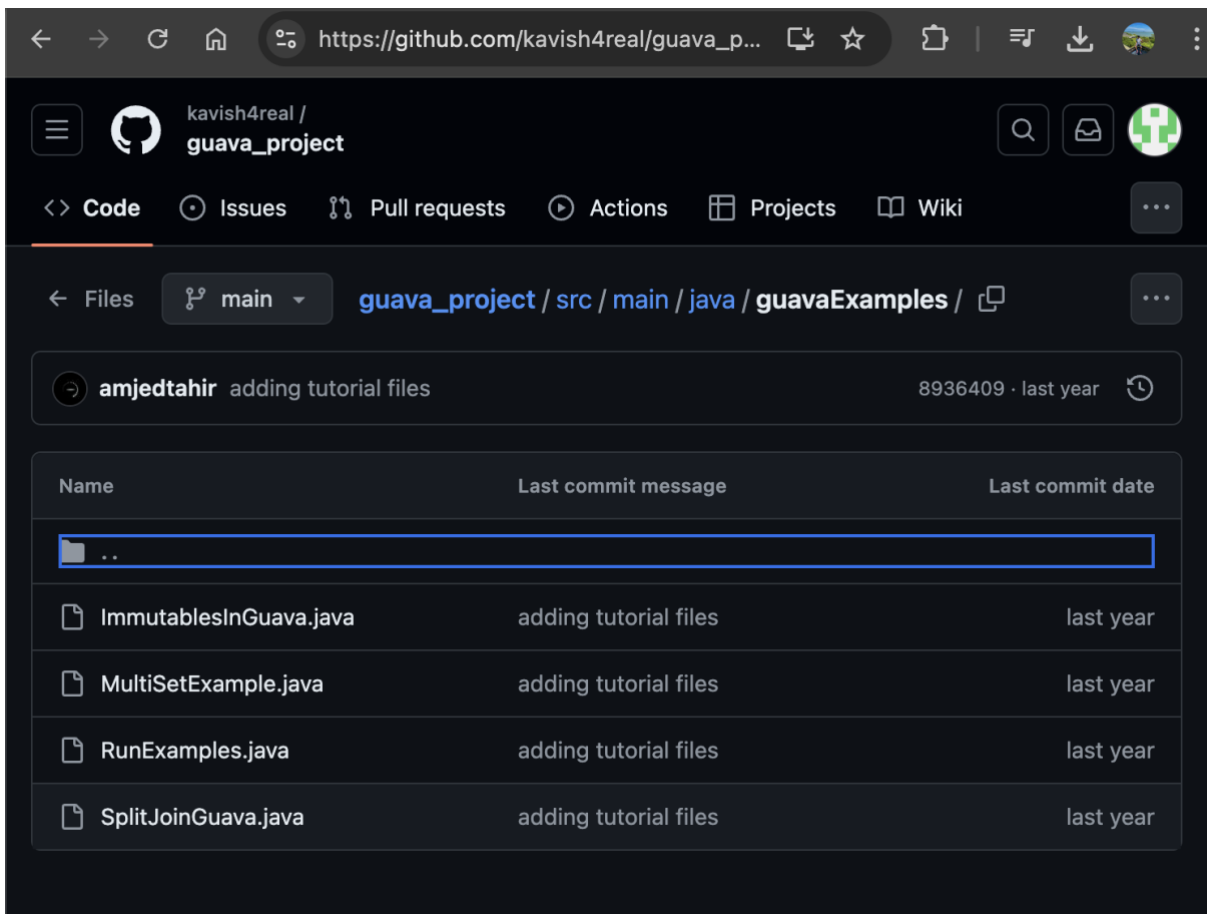
((base) kash@Kashs-MBP sample_maven_project % mvn compile
[INFO] Scanning for projects...
[INFO] -----< nz.ac.massey.cs251:sample_maven_project >-----
[INFO] Building sample_maven_project 1.0-SNAPSHOT
[INFO]    from pom.xml
[INFO] -----[ jar ]-----
[INFO] --- resources:3.3.1:resources (default-resources) @ sample_maven_project ---
[INFO] Copying 0 resource from src/main/resources to target/classes
[INFO] --- compiler:3.13.0:compile (default-compile) @ sample_maven_project ---
[INFO] Nothing to compile - all classes are up to date.
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time:  0.215 s
[INFO] Finished at: 2024-08-04T17:26:17+12:00
[INFO] -----
(base) kash@Kashs-MBP sample_maven_project % mvn exec:java -Dexec.mainClass=Main

[INFO] Scanning for projects...
[INFO] -----< nz.ac.massey.cs251:sample_maven_project >-----
[INFO] Building sample_maven_project 1.0-SNAPSHOT
[INFO]    from pom.xml
[INFO] -----[ jar ]-----
[INFO] --- exec:3.3.0:java (default-cli) @ sample_maven_project ---
Hello World!
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time:  0.200 s
[INFO] Finished at: 2024-08-04T17:28:32+12:00
[INFO] -----
(base) kash@Kashs-MBP sample_maven_project %
```

3. The running guavaExamples in the terminal:

```
tutorial2 -- -zsh -- 212x64
Downloading from central: https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/3.0.0/j2objc-annotations-3.0.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/3.0.0/j2objc-annotations-3.0.0.jar (12 kB at 114 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/com/google/guava/listenablefuture/9999.0-empty-to-avoid-conflict-with-guava/listenablefuture-9999.0-empty-to-avoid-conflict-with-guava.jar (2.2 kB at 19 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/com/google/code/findbugs/jsr305/3.0.2/jsr305-3.0.2.jar (20 kB at 162 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/checkerframework/checker-qual/3.42.0/checker-qual-3.42.0.jar (231 kB at 865 kB/s)
[INFO] --- resources:3.3.1:resources (default-resources) @ Maven_Tutorial ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory /Users/kash/guava_project/tutorial2/src/main/resources
[INFO] --- compiler:3.13.0:compile (default-compile) @ Maven_Tutorial ---
[INFO] Recompiling the module because of changed source code.
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is platform dependent!
[INFO] Compiling 4 source files with javac [debug target 8] to target/classes
[WARNING] bootstrap class path is not set in conjunction with -source 8
[WARNING] not setting the bootstrap class path may lead to class files that cannot run on JDK 8
[WARNING] source value 8 is obsolete and will be removed in a future release
[WARNING] target value 8 is obsolete and will be removed in a future release
[WARNING] To suppress warnings about obsolete options, use -Xlint:-options.
[INFO] BUILD SUCCESS
[INFO] Total time: 3.263 s
[INFO] Finished at: 2024-08-04T18:33:00+12:00
[INFO]
(base) kash@Kashs-MBP tutorial2 % mvn exec:java -Dexec.mainClass=guavaExamples.RunExamples
[INFO] Scanning for projects...
[INFO]
[INFO] < n2.sc.massey.cs.251:Maven_Tutorial >
[INFO] Building Maven_Tutorial 1.0.0
[INFO] from pom.xml
[INFO]
[INFO] --- exec:3.3.0:java (default-cli) @ Maven_Tutorial ---
Welcome to the Guava example project. When you have added the dependency, you will see their examples
IMMUTABLES EXAMPLES
Is red a colour we recognise? true
Is yellow a colour we recognise? true
Is indigo a colour we recognise? false
Is magenta a colour we recognise? false
I couldn't add in my new colour. This list is immutable!
MULTISET EXAMPLES
Is the [1, 3, 4, 3, 1] list the same as the [1, 1, 3, 3, 4] list? false
Is the [1 x 2, 3 x 2, 4] multiset the same as the [1 x 2, 3 x 2, 4] multiset? true
SPLIT AND JOIN EXAMPLES
I need to join a sentence with some nasty elements
Using String.split() method: [1, 2, , 3, 4, , 4, , 2]
Using Guava Splitter class: [1, 2, 3, 4, 4, 2]
[INFO] BUILD SUCCESS
[INFO] Total time: 0.226 s
[INFO] Finished at: 2024-08-04T18:33:28+12:00
[INFO]
(base) kash@Kashs-MBP tutorial2 %
```

4. The guavaExamples project in the remote repository (GitHub)



The screenshot shows the GitHub interface for the repository 'kavish4real / guava_project'. The breadcrumb path is 'guava_project / src / main / java / guavaExamples'. A commit by 'amjedtahir' with the message 'adding tutorial files' is selected. Below the commit information, a table lists the files in the directory.

Name	Last commit message	Last commit date
..		
ImmutableInGuava.java	adding tutorial files	last year
MultiSetExample.java	adding tutorial files	last year
RunExamples.java	adding tutorial files	last year
SplitJoinGuava.java	adding tutorial files	last year

URL: https://github.com/kavish4real/guava_project