

1. RUNNING A SCRIPT

To run this script open Terminal and run these commands:

```
javac SpotBugs.java  
java SpotBugs
```

These commands need to be executed from the same directory where the script and .txt paths file are located. After running these commands output in the Terminal will be build state of every project and creates and opens reports.

1.1 CONDITIONS

Because of the fact that SpotBugs is a newer tool, for this script to work properly these conditions need to be supported:

- Java installed, minimum version 8
- Android Studio installed, or Gradle
- SpotBugs supports Gradle minimum version 5, so make sure all projects are built by that version
- all projects need to be created by Android Studio and built at least once
- Android SDK path need to be correct in every project
- create *paths.txt* file with correct paths to all projects that ae being tested
- this particular script only works on Unix operation systems

In case any of these conditions are not supported the script won't spot working, but in that case there are different outputs that say where the problem occurred.

2. SCRIPT OUTPUT

As a script output, two kinds of reports are made: HTML and CSV report. But, before that, there are outputs in the Terminal that look like this:

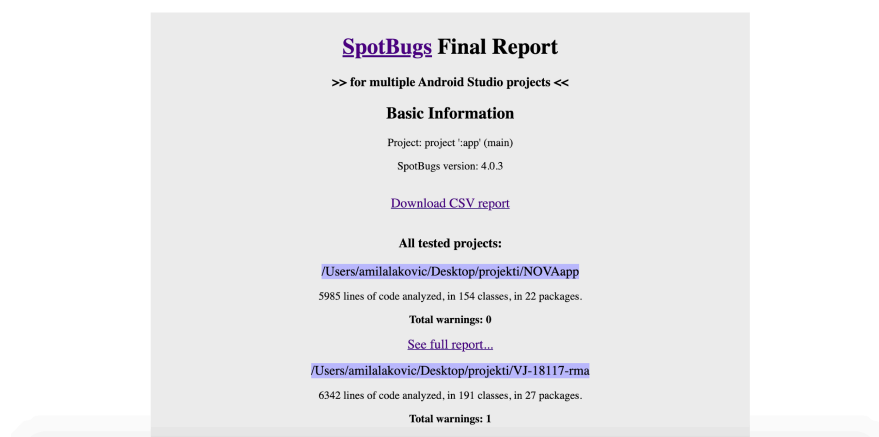
```
diplomski — zsh — 78x45
amilalakovic@Amilas-MacBook-Pro diplomski % javac SpotBugs.java
amilalakovic@Amilas-MacBook-Pro diplomski % java SpotBugs
Starting a Gradle Daemon (subsequent builds will be faster)
> Task :app:preBuild UP-TO-DATE
> Task :app:preDebugBuild UP-TO-DATE
> Task :app:checkDebugManifest UP-TO-DATE
> Task :app:generateDebugBuildConfig UP-TO-DATE
> Task :app:compileDebugAidl NO-SOURCE
> Task :app:compileDebugRenderscript NO-SOURCE
> Task :app:javaPreCompileDebug UP-TO-DATE
> Task :app:mainApkListPersistenceDebug UP-TO-DATE
> Task :app:generateDebugResValues UP-TO-DATE
> Task :app:generateDebugResources UP-TO-DATE
> Task :app:mergeDebugResources UP-TO-DATE
> Task :app:createDebugCompatibleScreenManifests UP-TO-DATE
> Task :app:processDebugManifest UP-TO-DATE
> Task :app:processDebugResources UP-TO-DATE
> Task :app:compileDebugJavaWithJavac UP-TO-DATE
> Task :app:compileDebugSources UP-TO-DATE
> Task :app:mergeDebugShaders UP-TO-DATE
> Task :app:compileDebugShaders UP-TO-DATE
> Task :app:generateDebugAssets UP-TO-DATE
> Task :app:mergeDebugAssets UP-TO-DATE
> Task :app:processDebugJavaRes NO-SOURCE
> Task :app:mergeDebugJavaResource UP-TO-DATE
> Task :app:checkDebugDuplicateClasses UP-TO-DATE
> Task :app:transformClassesWithDexBuilderForDebug UP-TO-DATE
> Task :app:mergeExtDexDebug UP-TO-DATE
> Task :app:mergeDexDebug UP-TO-DATE
> Task :app:validateSigningDebug UP-TO-DATE
> Task :app:signingConfigWriterDebug UP-TO-DATE
> Task :app:mergeDebugJniLibFolders UP-TO-DATE
> Task :app:mergeDebugNativeLibs UP-TO-DATE
> Task :app:stripDebugDebugSymbols UP-TO-DATE
> Task :app:packageDebug UP-TO-DATE
> Task :app:assembleDebug UP-TO-DATE
> Task :app:compileJava NO-SOURCE
> Task :app:processResources NO-SOURCE
> Task :app:classes UP-TO-DATE
> Task :app:spotbugsMain UP-TO-DATE

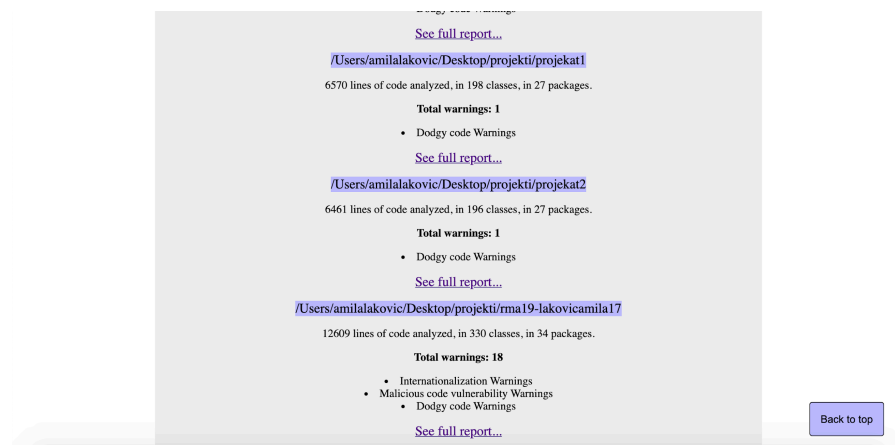
BUILD SUCCESSFUL in 11s
25 actionable tasks: 25 up-to-date
SUCCESSFULLY EXECUTED COMMAND, see if build is successful!!!
```

This is in an ideal case, but there are cases that are not ideal. In that case the output in Terminal is where there might be the problem, and it doesn't stop running. In most cases, the problem is that for some reason SpotBugs can't be executed.

2.1 FINAL HTML REPORT

This report is created and opened when the script is finished running and it looks like this:



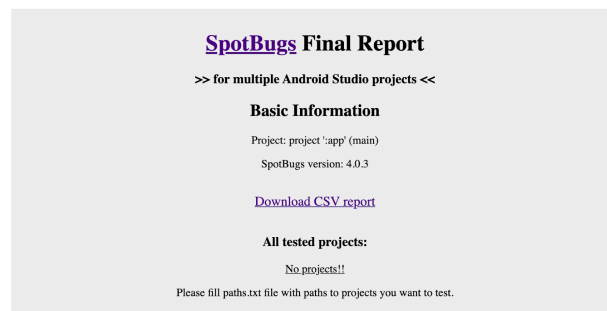


All projects that are being tested are listed here and on “*See full report...*” you can see original SpotBugs report for that project.

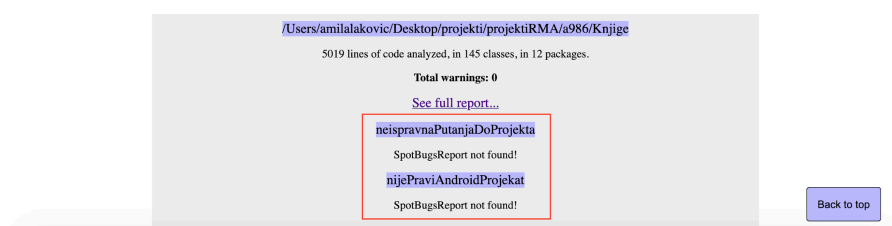
On the “*Back to top*” button user can go back to the top of the report in case there are a lot of projects that are being tested.

This is also in the ideal case, but there are two other cases that can happen.

First case is when *paths.txt* file is empty. In that case HTML report looks like this:



Second case is when there has been a problem in some projects and SpotBugs report isn’t made. In that case, script doesn’t stop running, only the outputs are different.



2.2 FINAL CSV REPORT

With “*Download CSV report*” on HTML report you can download CSV report and open it in Microsoft Excel.

This report looks like this, in an ideal case:

Project	High Priority Warnings [HPW]	Medium Priority Warnings [MPW]	HPW/Average HPW	MPW/Average MPW
/Users/amilalakovic/Desktop/projekti/NOVAapp	0	0	0	0
/Users/amilalakovic/Desktop/projekti/VJ-18117-rma	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projekat1	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projekat2	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/rma19-lakovicamila17	18	0	5.59	0
/Users/amilalakovic/Desktop/projekti/rma19-imamovicnasiha80	16	0	4.97	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a203	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a310/ProjekatKnjige	3	0	0.93	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a373	2	0	0.62	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a394	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a491	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a499	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a570/rmaspirala1	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a573/S1_17537	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a580	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a603/spiralasefer1	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a630/Spirala	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a667/Spirala1/Spirala12	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a703/Spirala1	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a720/Spirala17702NB	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a723	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a731	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a769	0	0	0	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a783	2	0	0.62	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a785/rma18corovic17758/Biblioteka	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a914/Biblioteka23	2	0	0.62	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a929/dinbostandzic17992	3	0	0.93	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a935/Spirala1	2	0	0.62	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a950	1	0	0.31	0
/Users/amilalakovic/Desktop/projekti/projektiRMA/a986/Knjige	0	0	0	0
Total PW	58	0		
Average PW	3.22	0		

In this case it is shown all the High Priority Warnings (HPW) and Medium Priority Warnings (MPW), and average of those warnings.

This report also supports the same special cases (no projects in *paths.txt* and problem in some projects). Those two cases are shown on these two pictures.

Project	High Priority Warnings [HPW]	Medium Priority Warnings [MPW]	HPW/Average HPW	MPW/Average MPW
NO PROJECTS!!				
Please fill paths.txt file with paths to projects you want to test.				

/Users/amilalakovic/Desktop/projekti/projektiRMA/a950	1	0	0.31	0	
/Users/amilalakovic/Desktop/projekti/projektiRMA/a986/Knjige	0	0	0	0	
neispravnaPutanjaDoProjekta	/	/	/	/	SpotBugsReport not found!
nijePraviAndroidProjekat	/	/	/	/	SpotBugsReport not found!