BUILD AUTOMATION

IT 311
9372

Submitted by:

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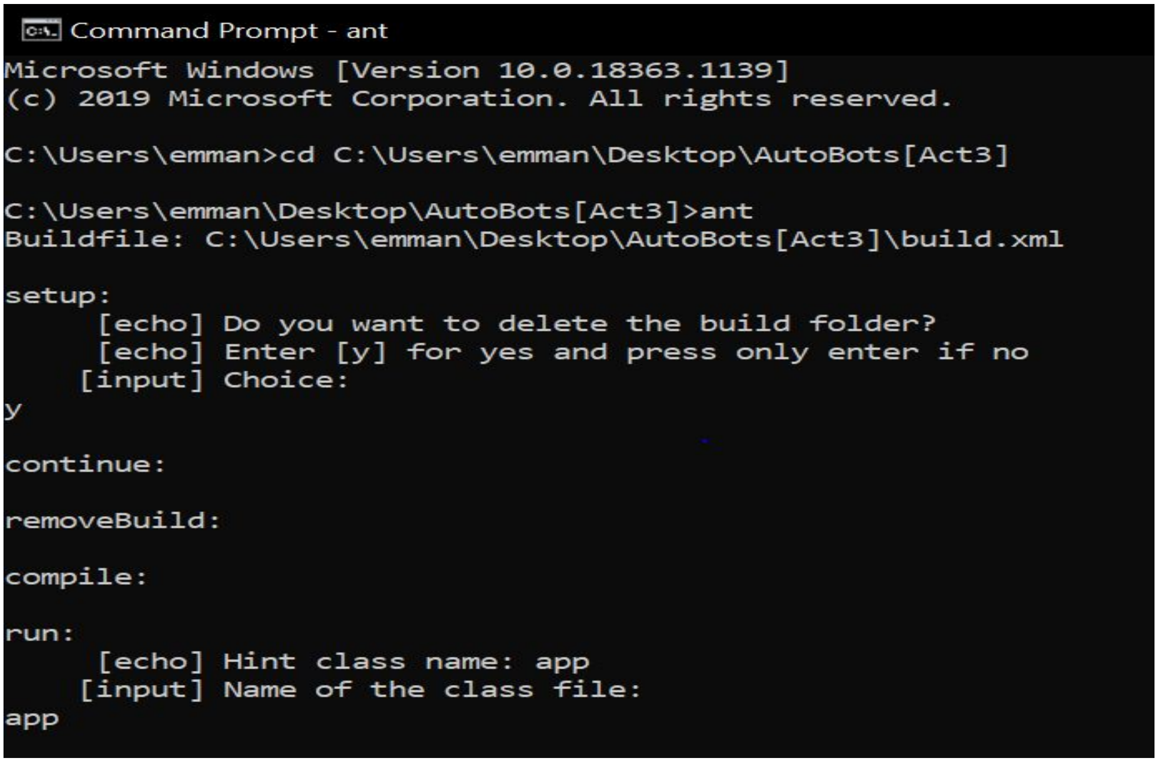
BSIT 3

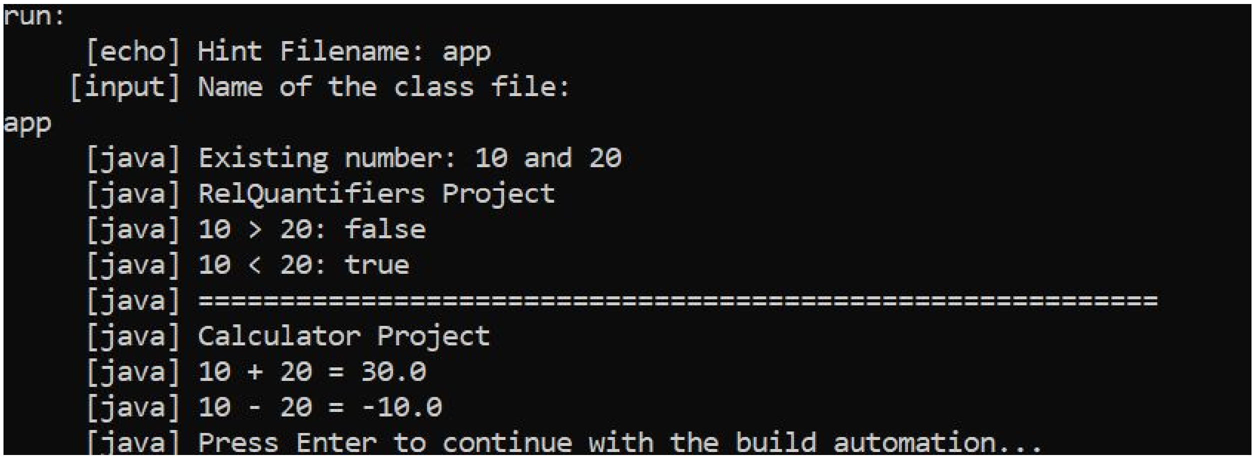
Documentation



```
Microsoft Windows [Version 10.0.18363.1139]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\emman>cd C:\Users\emman\Desktop\AutoBots[Act3]

C:\Users\emman\Desktop\AutoBots[Act3]>ant
Buildfile: C:\Users\emman\Desktop\AutoBots[Act3]\build.xml

setup:
     [echo] Do you want to delete the build folder?
     [echo] Enter [y] for yes and press only enter if no
    [input] Choice:
y

continue:

removeBuild:

compile:

run:
     [echo] Hint class name: app
    [input] Name of the class file:
app
```

Figure 1: Compile using Apache Ant

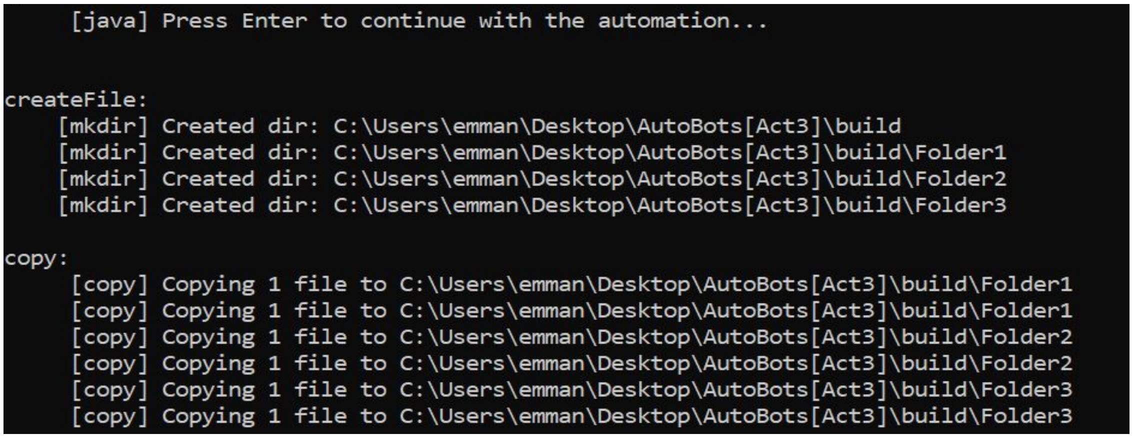
The example figure 1 above shows that the build.xml file in the directory called “autobots[act3]” is being compiled using the apache ant software. The first thing that this build file will do is to ask the user if he/she wants to delete the build folder or not. Next is to ask the user input again on what name of the java class is to be compiled using the apache ant software.In this given example the name of the java class that will be executed is called “app”.



```
run:
     [echo] Hint Filename: app
    [input] Name of the class file:
app
     [java] Existing number: 10 and 20
     [java] RelQuantifiers Project
     [java] 10 > 20: false
     [java] 10 < 20: true
     [java] ===========================================================
     [java] Calculator Project
     [java] 10 + 20 = 30.0
     [java] 10 - 20 = -10.0
     [java] Press Enter to continue with the build automation...
```

Figure 2: Compiled java classes

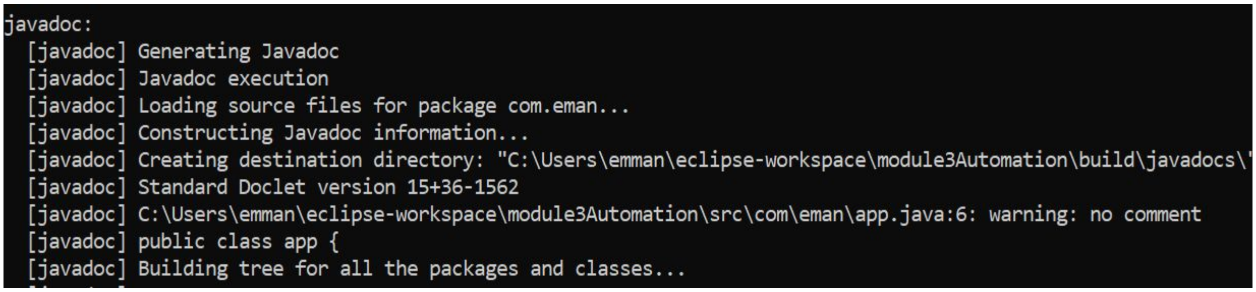
On the figure 2 above it shows that after the user inputting the name of the main java class, the program will then now run its task in Relquantifiers and Calculator class.



```
     [java] Press Enter to continue with the automation...


createFile:
    [mkdir] Created dir: C:\Users\emman\Desktop\AutoBots[Act3]\build
    [mkdir] Created dir: C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder1
    [mkdir] Created dir: C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder2
    [mkdir] Created dir: C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder3

copy:
     [copy] Copying 1 file to C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder1
     [copy] Copying 1 file to C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder1
     [copy] Copying 1 file to C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder2
     [copy] Copying 1 file to C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder2
     [copy] Copying 1 file to C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder3
     [copy] Copying 1 file to C:\Users\emman\Desktop\AutoBots[Act3]\build\Folder3
```

Figure 3: create and copy directory/files.

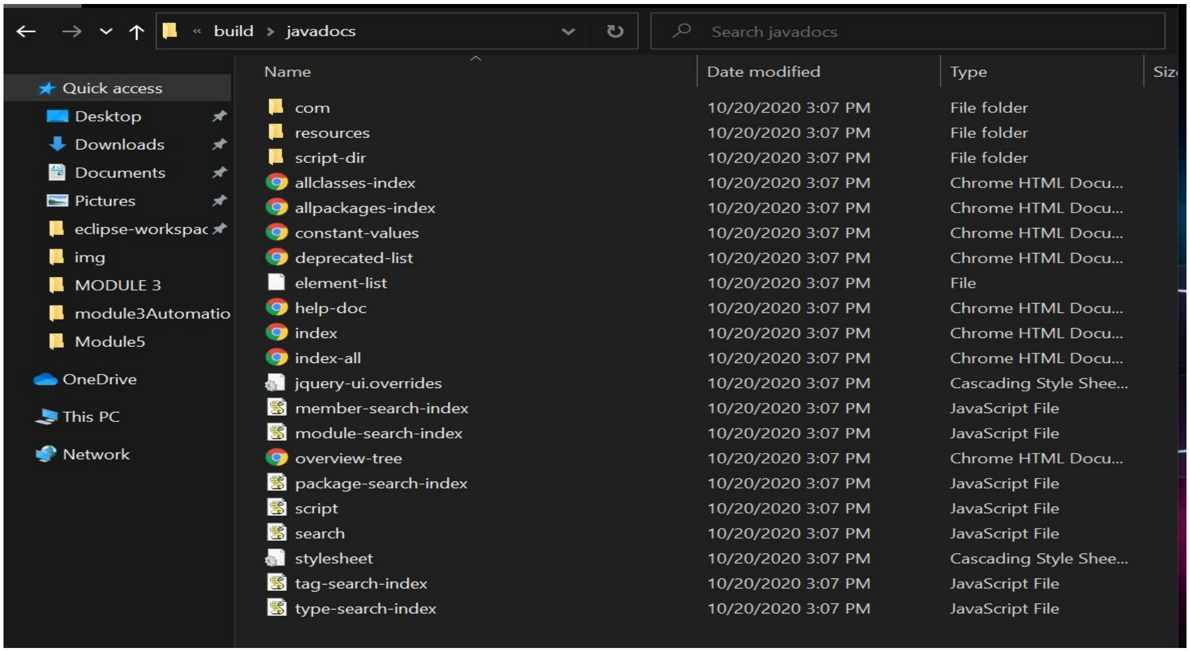
On the figure 3 above, after the java classes have been executed the automated building process will then now do its task. In this given example the command “mkdir” that was used by the build.xml file creates 4 directory automatically(build, folder1, folder2, and folder3). The folder called “build” was placed in the project root directory while the other 3 folders were placed inside the build folder.After creating multiple directories the command “copy” is next to be executed which task is to copy all the compiled java classes and store them in different directories(folder1, folder2, and folder3)



```
javadoc:
  [javadoc] Generating Javadoc
  [javadoc] Javadoc execution
  [javadoc] Loading source files for package com.eman...
  [javadoc] Constructing Javadoc information...
  [javadoc] Creating destination directory: "C:\Users\emman\eclipse-workspace\module3Automation\build\javadocs\"
  [javadoc] Standard Doclet version 15+36-1562
  [javadoc] C:\Users\emman\eclipse-workspace\module3Automation\src\com\eman\app.java:6: warning: no comment
  [javadoc] public class app {
  [javadoc] Building tree for all the packages and classes...
```

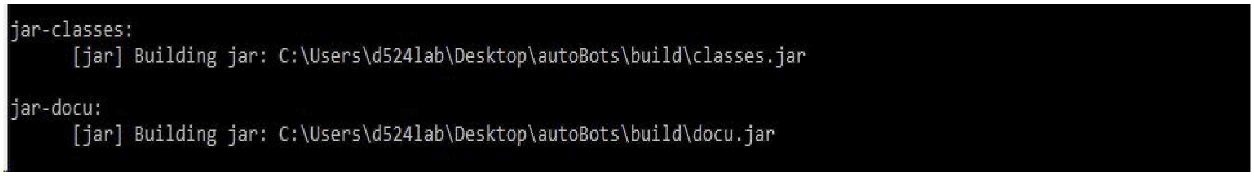
Figure 4: create documentation of the class/es.

On figure 4 shown above, after the creating and copying files and directory, a documentation for every java class is being created and located in the “build\javadocs” directory. An example creation of documentation is shown below (Figure 5).



Name	Date modified	Type	Siz
com	10/20/2020 3:07 PM	File folder	
resources	10/20/2020 3:07 PM	File folder	
script-dir	10/20/2020 3:07 PM	File folder	
allclasses-index	10/20/2020 3:07 PM	Chrome HTML Docu...	
allpackages-index	10/20/2020 3:07 PM	Chrome HTML Docu...	
constant-values	10/20/2020 3:07 PM	Chrome HTML Docu...	
deprecated-list	10/20/2020 3:07 PM	Chrome HTML Docu...	
element-list	10/20/2020 3:07 PM	File	
help-doc	10/20/2020 3:07 PM	Chrome HTML Docu...	
index	10/20/2020 3:07 PM	Chrome HTML Docu...	
index-all	10/20/2020 3:07 PM	Chrome HTML Docu...	
jquery-ui.overrides	10/20/2020 3:07 PM	Cascading Style Shee...	
member-search-index	10/20/2020 3:07 PM	JavaScript File	
module-search-index	10/20/2020 3:07 PM	JavaScript File	
overview-tree	10/20/2020 3:07 PM	Chrome HTML Docu...	
package-search-index	10/20/2020 3:07 PM	JavaScript File	
script	10/20/2020 3:07 PM	JavaScript File	
search	10/20/2020 3:07 PM	JavaScript File	
stylesheet	10/20/2020 3:07 PM	Cascading Style Shee...	
tag-search-index	10/20/2020 3:07 PM	JavaScript File	
type-search-index	10/20/2020 3:07 PM	JavaScript File	

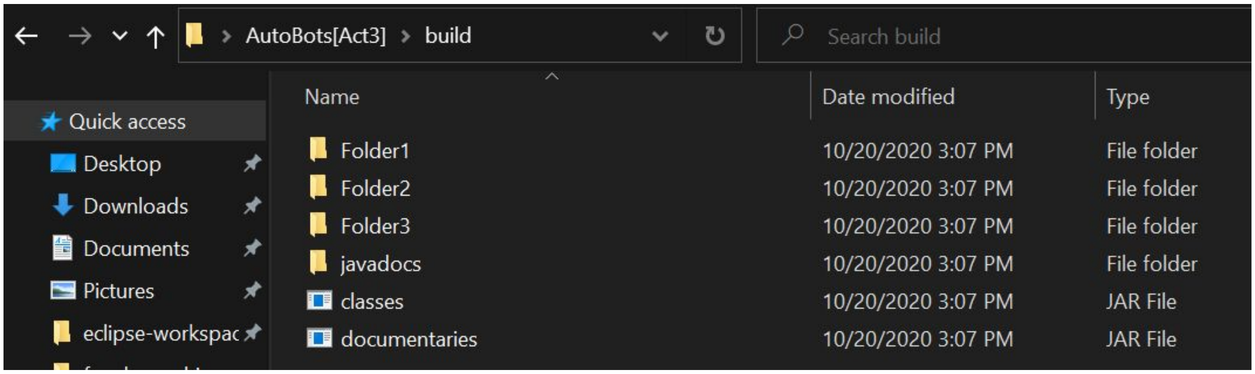
Figure 5: created javadoc files



```
jar-classes:
      [jar] Building jar: C:\Users\d524lab\Desktop\autoBots\build\classes.jar

jar-docu:
      [jar] Building jar: C:\Users\d524lab\Desktop\autoBots\build\docu.jar
```

Figure 6: execution of 2 jar files

The last process that was instructed in the build.xml was to create a Java ARchive for the classes that were compiled using the apache ant and also its documentation(javadocs). The function called jar is used in apache ant script to create jar files which allows to archive folders and files into java archive format.



Name	Date modified	Type
Folder1	10/20/2020 3:07 PM	File folder
Folder2	10/20/2020 3:07 PM	File folder
Folder3	10/20/2020 3:07 PM	File folder
javadocs	10/20/2020 3:07 PM	File folder
classes	10/20/2020 3:07 PM	JAR File
documentaries	10/20/2020 3:07 PM	JAR File

Figure 7: Result of Build

Based on figure 7, the program was able to automatically build or create files,directory, and documentation using the apache ant software.