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# GRADLE

* Gradle is a build automation tool. The task like compiling, running the test cases , package the artifact as jar/war and deploying it to server or cloud environment can be achieved by gradle.
* Gradle uses programming languages like ***Groovy or Kotlin*** (known as DLS – Domain Specific Languages) in it configuration file (build.gradle)
* **INCREMENTAL BUILD**: Gradle support incremental build. For example - It only compiles the changed the files and used the compiled code of previous build.
* **BUILD CACHE**:
* **PLUGIN SUP**

## GRADLE WRAPPERS

## APACHE GROOVY BASICS

* Groovy can be downloaded as binary or as an installer.
* For windows- Update the “PATH” environment variable to point the “bin” directory of the

### GROOVY SHELL

|  |  |
| --- | --- |
|  | ***groovysh* – to Start Groovy shell**   * <http://groovy-lang.org/groovysh.html> * The Groovy Shell, aka. ***groovysh*** is a command-line application which allows easy access to evaluate Groovy expressions, define classes, and run simple experiments. * For multiline code – groovy will not start the compilation until it not completed. Hence it allow as write the statement after pressing ***Enter Key*** till the statement is completed (Highlighted ) * This does not create any executable file. |
|  |
| FUNCTIONS IN GROOVY SHELL |

### GROOVY COMPILATION

* The groovy scripts can be compiled using a command line tool ***“groovyc”.* Note – All the groovy scripts are compiled into .class files.**
* <http://groovy-lang.org/groovyc.html>

|  |  |
| --- | --- |
| **groovyc <fileName>.groovy** | Compiling the Groovy Script |
| **groovy <fileName>** | Running the Groovy Script |
| **groovyc \*.groovy** | Compile all groovy script in a folder |
| **groovyc -d classes \*.groovy** | Compile all groovy script and copy all the compiled file in classes folder. It creates the folder too. |

### GROOVY CONSOLE

|  |  |
| --- | --- |
| **COMMANDS**   * OPENS A BLANK FILE IN GROOVY CONSOLE - **groovyconsole** * **OPENS THE GIVEN FILE IN THE GROOVY CONSOLE**   **groovyconsole <filename>.groovy** |  |

### JAVA VERSUS GROOVY

* No import statement is required
* All the methods are by default public, so need mark the methods as public
* All the properties are by default private, so need mark the properties as private
* No need to have return statement in methods. Groovy consider the last line of the function as return value.

## GROOVY LANGUAGE BASICS

### COLLECTIONS

### CLOSURES

### CONTROL STRUCTURES

## OOPS IN GROOVY