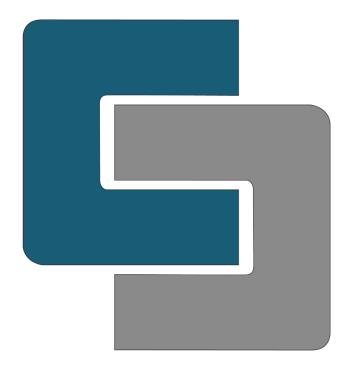


Jeeva S. Chelladhurai CEO, Comorin Consulting Services +91 97319 77222 jeeva@comorin.co



9. Script Supported in Jenkins





Introduction



- Known as Java Scripting Language
- JVM based Dynamic Language
- Java like syntax but semicolon is optional
- Scripting language for Java Platform
- Apache License v2.0



Groovy "Hello World"





println "Hello, World"

```
public class HelloWorld {
     public static void main(String[] args) {
          System.out.println("Hello, World");
     }
}
```





History



- 2003: Started by James Strachan and Bob McWhirter
- 2004: Commission into JSR 241 but was almost abandoned
- 2005: Brought back to life by Guillaume Laforge and Jeremy Rayner
- 2007: Groovy Version 1.0
- 2012: Groovy Version 2.0
- 2014: Groovy Version 2.3(Official support for JDK 8)



Installing Groovy



- Groovy 2.4
 - JDK7+
 - Stable
- Docker
 - docker run --rm -it groovy:2.4.12
- http://groovy-lang.org/download.html



Revisiting Hello World!



```
$ cat helloworld.groovy
class HelloWorld {
       static void main(String[] args) {
              System.out.println("Hello, World");
$ groovy helloworld.groovy
Hello World!!
```

Using alias> groovy-run helloworld.groovy



Implicit Import



import java.lang.* import java.util.* import java.io.* import java.net.* import groovy.lang.* import groovy.util.* import java.math.BigInteger import java.math.BigDecimal



Comments



- Singleline// my comment
- Multiline

```
/* This is my multiline comment
This is next line */
```



Built-in Data Types



- Integer datatype
 - represents whole number
 - int x = 8;
- Long datatype
 - represents long number
 - long y = 200L;
- Floating point datatype
 - represents 32 bit floating point number
 - float a = 10.86f;

- Double datatype
 - represents 64 bit floating point number
 - double b = 10.6e40;
- BigInteger datatype
 - Immutable arbitrary –precision signed integral numbers
 - BigInteger bi = 40g;
- BigDecimal datatype
 - Immutable arbitrary-precision signed decimal numbers
 - BigDecimal bd = 2.5g;



Variables



- Variable can be composed of letters, digits and underscore character.
- Groovy is a case sensitive programming language.
- Variable in lower case
 - int x = 8;
- Variable in uppercase
 - Int X = 10;
- Variable with underscore in its name
 - Def Name = "Kate";



Operators: Arithmetic



Operator	Description	Example
+	Addition	3 + 5 gives 8
_	Subtraction	5 - 3 gives 2
*	Multiplication	2 * 4 gives 8
/	Division	5 / 2 gives 2 . 5
%	Modulus	5 % 2 gives 1
++	Increment	int x = 4; x++; x gives 5
	Decrement	Int x = 4; x ; x gives 3

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Operators: Relational



Operator	Description	Example
==	Checks for equality between two objects	3 = = 3 gives true
!=	Checks the difference between two objects	3 != 5 gives true
<	Checks if the left object is less than the right	3<4 gives true
<=	Check if the left object is less than or equal to the right	3<=4 gives true
>	Check if the left object is greater than the right.	4>2 gives true
>=	Check if the left object is greater than or equal to the right	4>=2 gives true



Operator: Bitwise



Description		
Operator	Description	
&	"and" operator	
1	"or" operator	
٨	"xor" operator	
~	negation operator	

		Truth Table		
р	q	p & q	p q	p ^ q
0	0	0	0	0
0	1	0	1	1
1	1	1	1	0
1	0	0	1	1



Operators: Assignment



Operator	Description	Example
+=	Adds both the operands and assigns the result to the left operand	def B = 8 B += 1 Output is 9
-=	Subtracts both the operands and assigns the result to the right operand	def B = 8 B -= 1 Output is 7
* =	Multiplies both the operands and assigns the result to the left operand	def B = 8 B *= 2 Output is 16
/=	Divides and assigns the value to the left operand	def B = 8 B /= 2 Output is 4
%=	Modulus of the operands and assigns the value to the left operand	def B = 8 B %= 3 Output is 2



Operator: Range



def range = 6..9

Defines a range of integers stored in a local variable called range with lower bound 6 and upper bound 9



Loops: While statement



```
While(condition) {
    statement 1
    statement 2
    .....
}
```



Loops: For Statement



```
for(variable declaration ; expression ; Increment) {
    statement 1
    statement 2
    ...
}
```



Decision Making



- One or more conditions to be evaluated or tested by the program
- Along with a statement or statements to be executed if the condition is determined to be **true**
- Other statements to be executed if the condition is determined to be false



Decision Making Types



Sr.No.	Statements & Description	
1	if Statement	
2	if/else Statement	
3	Nested If Statement	
4	Switch Statement	
5	Nested Switch Statement	