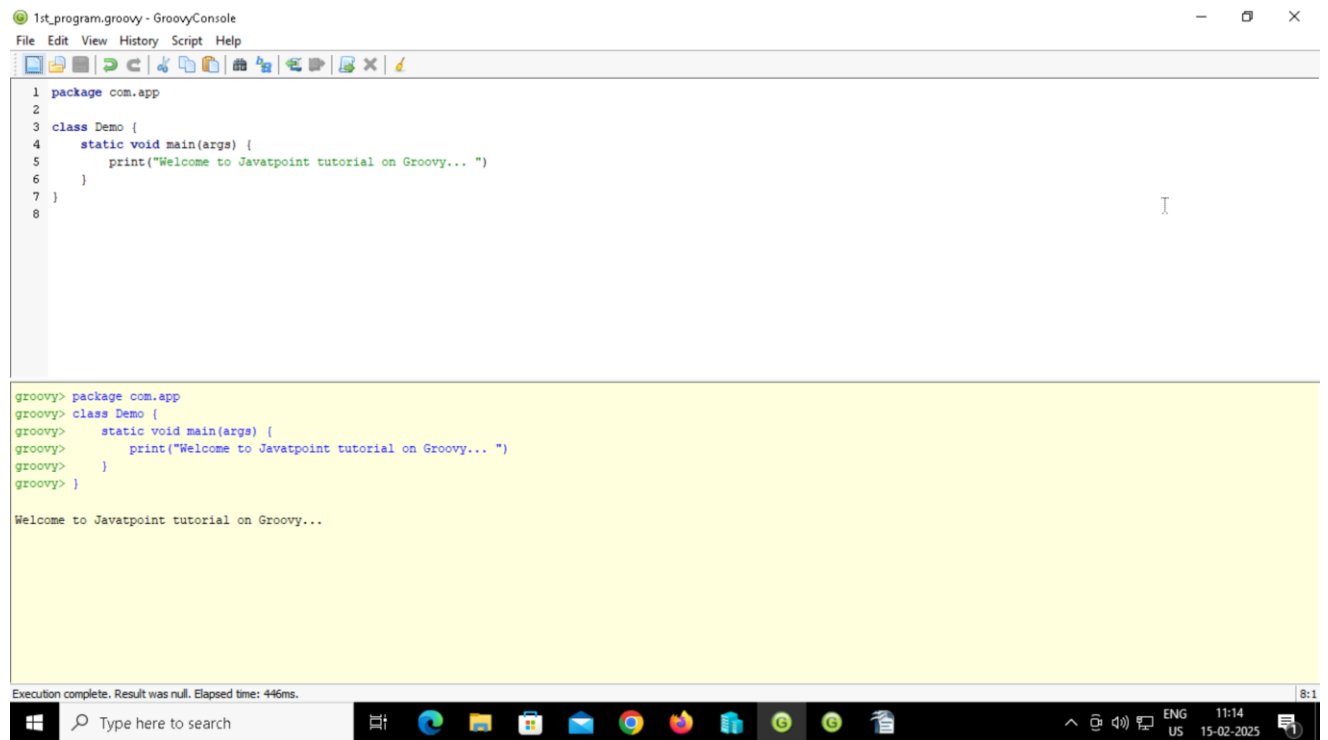


Groovy Assignment

1st Groovy Program



The screenshot shows the GroovyConsole application with a menu bar (File, Edit, View, History, Script, Help) and a toolbar. The editor contains the following code:

```
1 package com.app
2
3 class Demo {
4     static void main(args) {
5         print("Welcome to Javatpoint tutorial on Groovy... ")
6     }
7 }
8
```

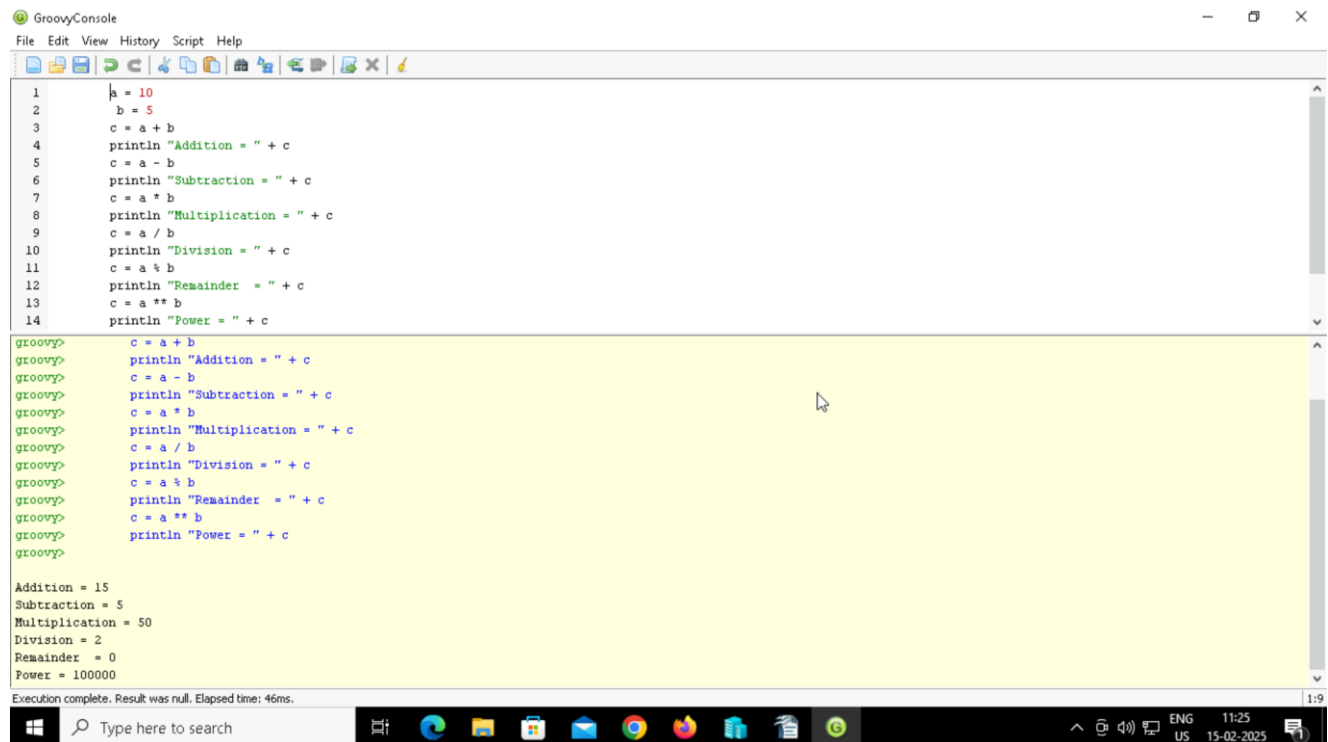
The console output shows the command history and the result of the execution:

```
groovy> package com.app
groovy> class Demo {
groovy>     static void main(args) {
groovy>         print("Welcome to Javatpoint tutorial on Groovy... ")
groovy>     }
groovy> }

Welcome to Javatpoint tutorial on Groovy...
```

The status bar at the bottom indicates "Execution complete. Result was null. Elapsed time: 446ms." and shows the Windows taskbar with the date 15-02-2025 and time 11:14.

Arithmetic Operations



The screenshot shows the GroovyConsole application with a menu bar (File, Edit, View, History, Script, Help) and a toolbar. The editor contains the following code:

```
1 a = 10
2 b = 5
3 c = a + b
4 println "Addition = " + c
5 c = a - b
6 println "Subtraction = " + c
7 c = a * b
8 println "Multiplication = " + c
9 c = a / b
10 println "Division = " + c
11 c = a % b
12 println "Remainder = " + c
13 c = a ** b
14 println "Power = " + c
```

The console output shows the command history and the results of the arithmetic operations:

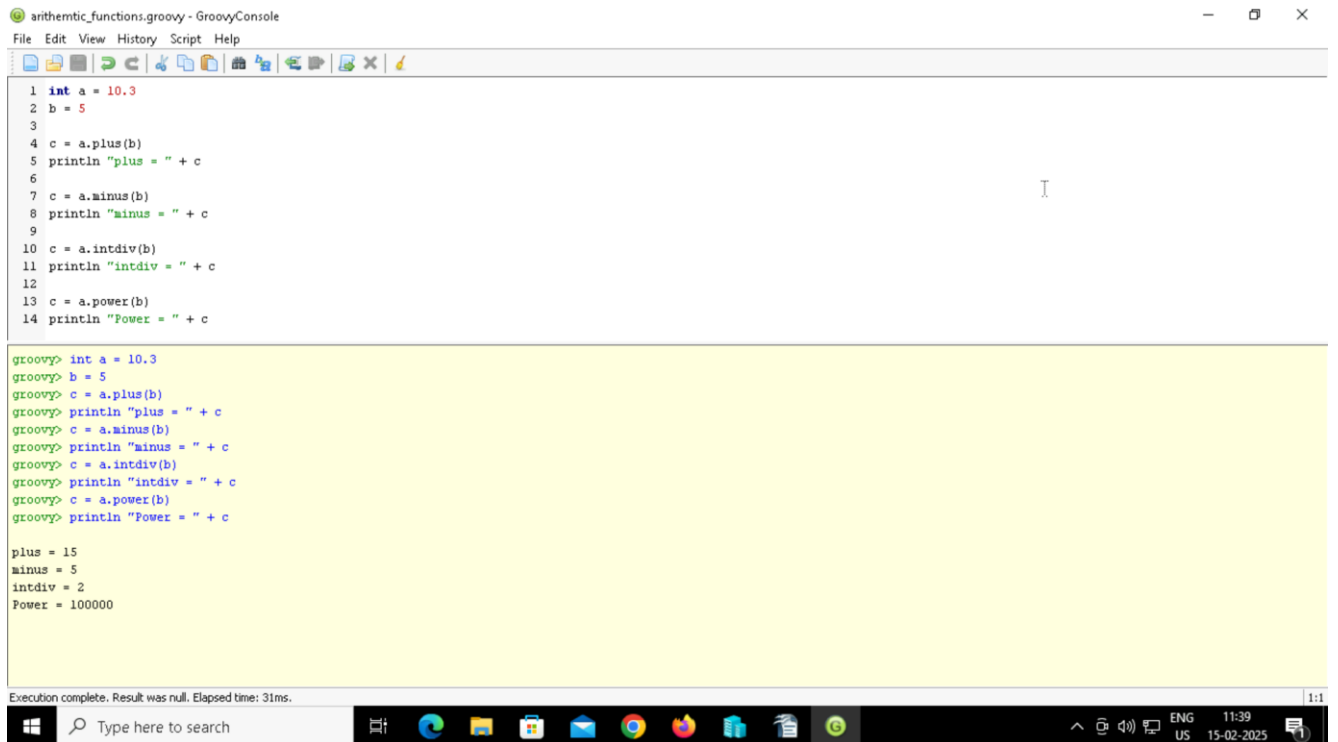
```
groovy> c = a + b
groovy> println "Addition = " + c
groovy> c = a - b
groovy> println "Subtraction = " + c
groovy> c = a * b
groovy> println "Multiplication = " + c
groovy> c = a / b
groovy> println "Division = " + c
groovy> c = a % b
groovy> println "Remainder = " + c
groovy> c = a ** b
groovy> println "Power = " + c

Addition = 15
Subtraction = 5
Multiplication = 50
Division = 2
Remainder = 0
Power = 100000
```

The status bar at the bottom indicates "Execution complete. Result was null. Elapsed time: 46ms." and shows the Windows taskbar with the date 15-02-2025 and time 11:25.

Groovy Assignment

Arithmetic operations using functions



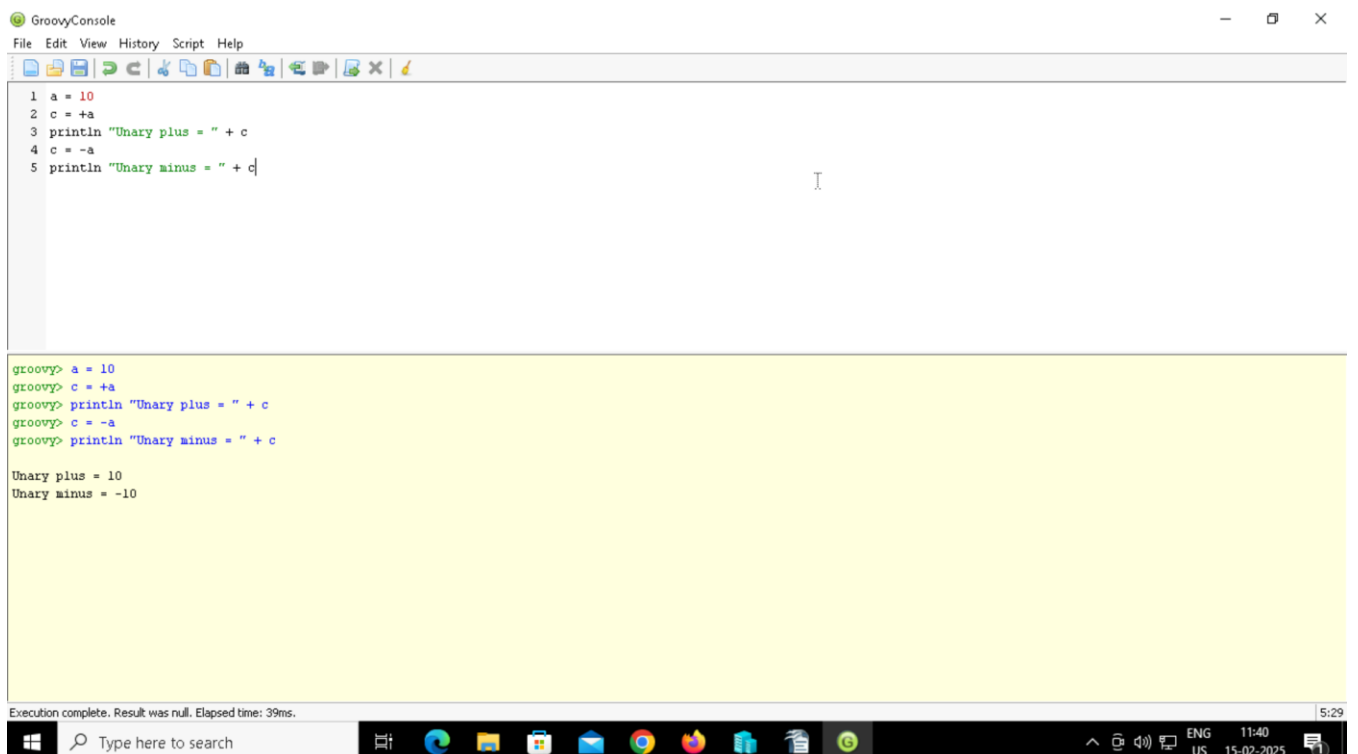
The screenshot shows the GroovyConsole application with a script file named 'arithmetic_functions.groovy'. The script defines variables 'a' and 'b', and then uses functions 'plus', 'minus', 'intdiv', and 'power' to calculate 'c'. The console output shows the results of these calculations.

```
1 int a = 10.3
2 b = 5
3
4 c = a.plus(b)
5 println "plus = " + c
6
7 c = a.minus(b)
8 println "minus = " + c
9
10 c = a.intdiv(b)
11 println "intdiv = " + c
12
13 c = a.power(b)
14 println "Power = " + c
```

```
groovy> int a = 10.3
groovy> b = 5
groovy> c = a.plus(b)
groovy> println "plus = " + c
plus = 15
groovy> c = a.minus(b)
groovy> println "minus = " + c
minus = 5
groovy> c = a.intdiv(b)
groovy> println "intdiv = " + c
intdiv = 2
groovy> c = a.power(b)
groovy> println "Power = " + c
Power = 100000
```

Execution complete. Result was null. Elapsed time: 31ms.

Unary operators



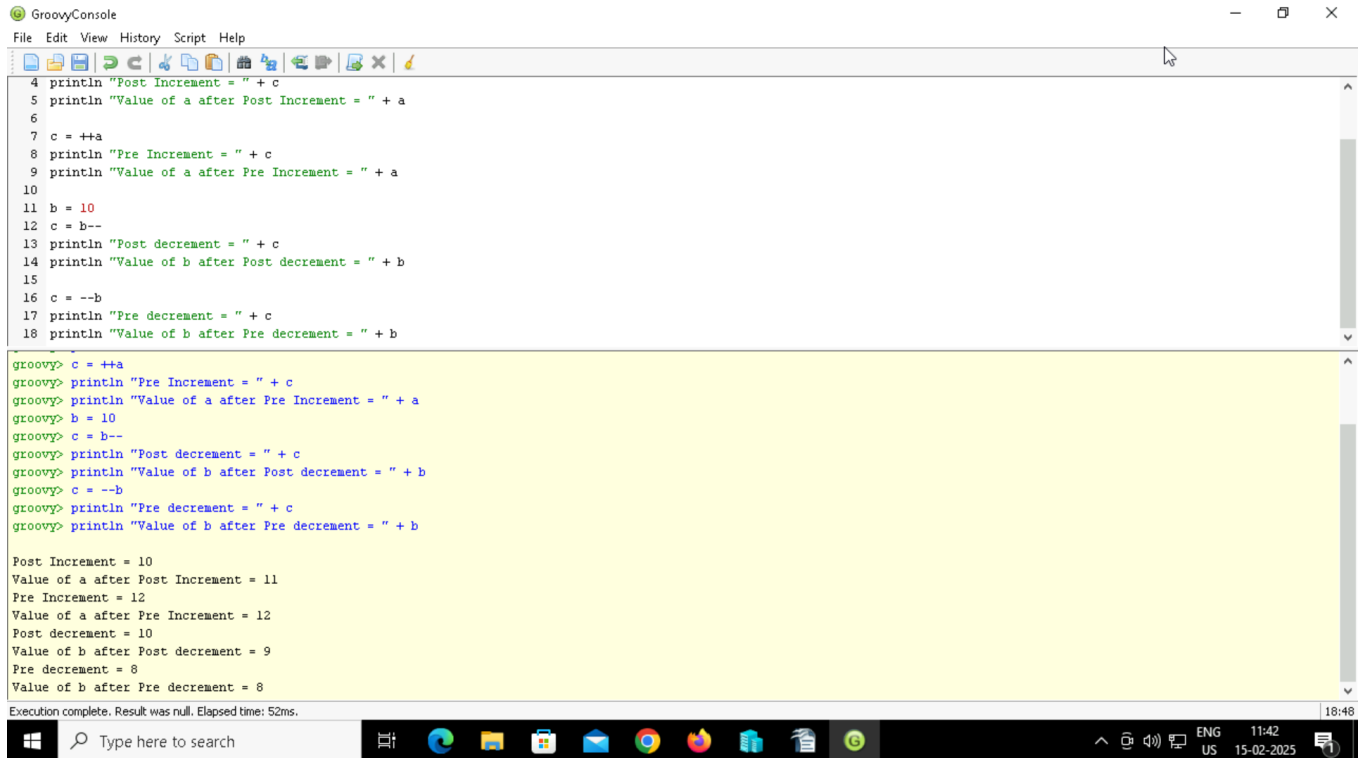
The screenshot shows the GroovyConsole application with a script file named 'UnaryOperators.groovy'. The script defines variable 'a', and then uses unary operators '+' and '-' to calculate 'c'. The console output shows the results of these calculations.

```
1 a = 10
2 c = +a
3 println "Unary plus = " + c
4 c = -a
5 println "Unary minus = " + c
```

```
groovy> a = 10
groovy> c = +a
groovy> println "Unary plus = " + c
Unary plus = 10
groovy> c = -a
groovy> println "Unary minus = " + c
Unary minus = -10
```

Execution complete. Result was null. Elapsed time: 39ms.

Groovy Assignment



The screenshot shows the GroovyConsole application with a script and its execution output. The script defines variables a and b, performs post-increment and post-decrement operations, and prints the values at each step. The output shows the sequence of operations and the resulting values of a and b.

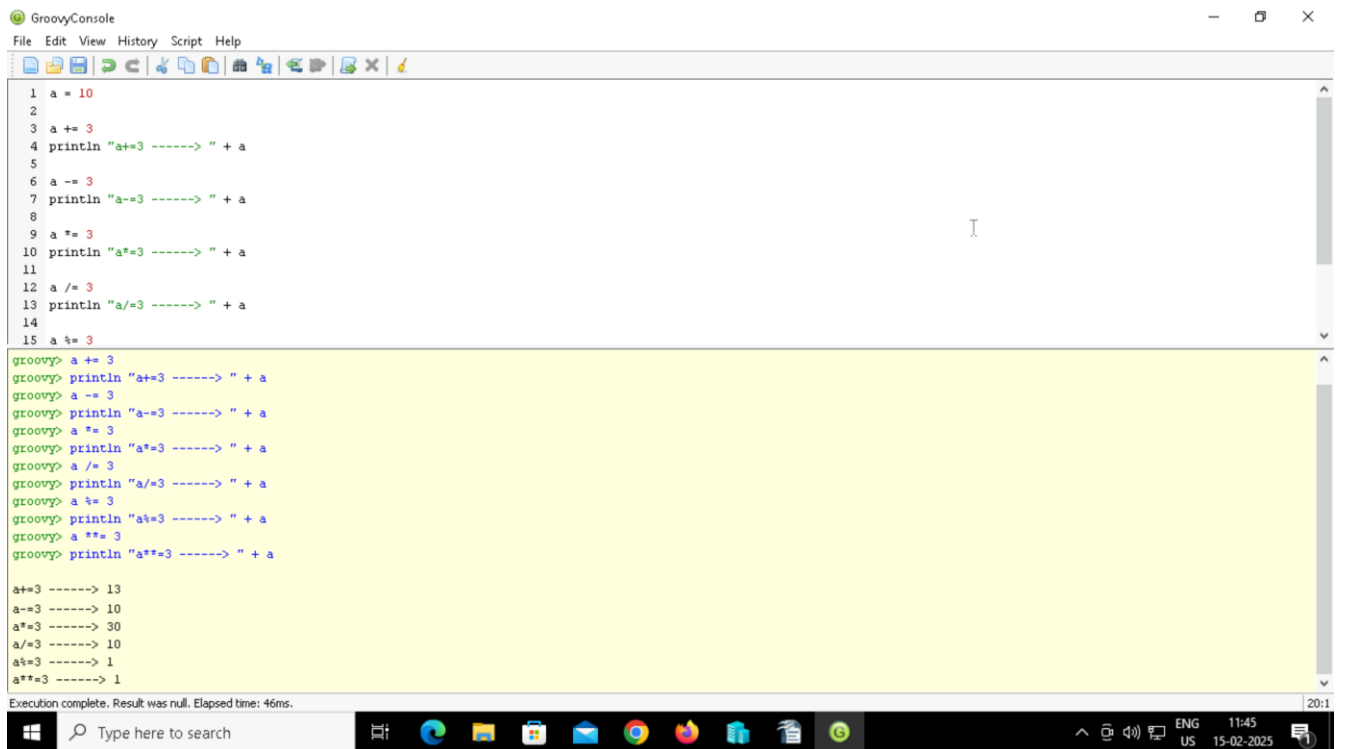
```
4 println "Post Increment = " + c
5 println "Value of a after Post Increment = " + a
6
7 c = ++a
8 println "Pre Increment = " + c
9 println "Value of a after Pre Increment = " + a
10
11 b = 10
12 c = b--
13 println "Post decrement = " + c
14 println "Value of b after Post decrement = " + b
15
16 c = --b
17 println "Pre decrement = " + c
18 println "Value of b after Pre decrement = " + b

groovy> c = ++a
groovy> println "Pre Increment = " + c
groovy> println "Value of a after Pre Increment = " + a
groovy> b = 10
groovy> c = b--
groovy> println "Post decrement = " + c
groovy> println "Value of b after Post decrement = " + b
groovy> c = --b
groovy> println "Pre decrement = " + c
groovy> println "Value of b after Pre decrement = " + b

Post Increment = 10
Value of a after Post Increment = 11
Pre Increment = 12
Value of a after Pre Increment = 12
Post decrement = 10
Value of b after Post decrement = 9
Pre decrement = 8
Value of b after Pre decrement = 8

Execution complete. Result was null. Elapsed time: 52ms.
```

Assignment arithmetic operations



The screenshot shows the GroovyConsole application with a script and its execution output. The script defines variable a and performs various arithmetic operations (addition, subtraction, multiplication, division, modulus, and exponentiation) and prints the results. The output shows the sequence of operations and the resulting values of a.

```
1 a = 10
2
3 a += 3
4 println "a+=3 -----> " + a
5
6 a -= 3
7 println "a-=3 -----> " + a
8
9 a *= 3
10 println "a*=3 -----> " + a
11
12 a /= 3
13 println "a/=3 -----> " + a
14
15 a %= 3
16 println "a%=3 -----> " + a
17
18 a **= 3
19 println "a**=3 -----> " + a

groovy> a += 3
groovy> println "a+=3 -----> " + a
groovy> a -= 3
groovy> println "a-=3 -----> " + a
groovy> a *= 3
groovy> println "a*=3 -----> " + a
groovy> a /= 3
groovy> println "a/=3 -----> " + a
groovy> a %= 3
groovy> println "a%=3 -----> " + a
groovy> a **= 3
groovy> println "a**=3 -----> " + a

a+=3 -----> 13
a-=3 -----> 10
a*=3 -----> 30
a/=3 -----> 10
a%=3 -----> 1
a**=3 -----> 1

Execution complete. Result was null. Elapsed time: 46ms.
```

Groovy Assignment

Relational operators

```
relational.groovy - GroovyConsole
File Edit View History Script Help

11 c = a != b
12 println "Relational Operator different [c = a != b] ----> " + c
13
14 c = a < b
15 println "Relational Operator less than [c = a < b] ----> " + c
16
17 c = a <= b
18 println "Relational Operator less than equal to [c = a <= b] ----> " + c
19
20 c = a > b
21 println "Relational Operator greater than [c = a > b] ----> " + c
22
23 c = a >= b
24 println "Relational Operator greater than equal to [c = a >= b] ----> " + c
25

groovy> c = a != b
groovy> println "Relational Operator different [c = a != b] ----> " + c
groovy> c = a < b
groovy> println "Relational Operator less than [c = a < b] ----> " + c
groovy> c = a <= b
groovy> println "Relational Operator less than equal to [c = a <= b] ----> " + c
groovy> c = a > b
groovy> println "Relational Operator greater than [c = a > b] ----> " + c
groovy> c = a >= b
groovy> println "Relational Operator greater than equal to [c = a >= b] ----> " + c

a = 10
b = 12
Relational Operator equals [c = a == b] ----> false
Relational Operator different [c = a != b] ----> true
Relational Operator less than [c = a < b] ----> true
Relational Operator less than equal to [c = a <= b] ----> true
Relational Operator greater than [c = a > b] ----> false
Relational Operator greater than equal to [c = a >= b] ----> false

Execution complete. Result was null. Elapsed time: 54ms.
```

Logical operators

```
GroovyConsole
File Edit View History Script Help

1 c = true && true
2 println "Logical AND operator = " + c
3
4 c = true || false
5 println "Logical OR operator = " + c
6
7 c = !false
8 println "Logical NOT operator = " + c
9

groovy> c = true && true
groovy> println "Logical AND operator = " + c
groovy> c = true || false
groovy> println "Logical OR operator = " + c
groovy> c = !false
groovy> println "Logical NOT operator = " + c

Logical AND operator = true
Logical OR operator = true
Logical NOT operator = true

Execution complete. Result was null. Elapsed time: 32ms.
```

Groovy Assignment

Bitwise operators

```
GroovyConsole
File Edit View History Script Help

1 a = 0b00101111
2 println "a = 0b00101111 ----> " + a
3
4 b = 0b000010101
5 println "b = 0b000010101 ----> " + b
6
7 println "(a < a) ----> " + (a < a)
8 println "(a < b) ----> " + (a < b)
9 println "(a | a) ----> " + (a | a)
10 println "(a | b) ----> " + (a | b)
11
12 c = 0b11111111
13 println "c = 0b11111111"
14 println "((a ^ a) < c) ----> " + ((a ^ a) < c)
15 println "((a ^ b) < c) ----> " + ((a ^ b) < c)

groovy> println "(a < b) ----> " + (a < b)
groovy> println "(a | a) ----> " + (a | a)
groovy> println "(a | b) ----> " + (a | b)
groovy> c = 0b11111111
groovy> println "c = 0b11111111"
groovy> println "((a ^ a) < c) ----> " + ((a ^ a) < c)
groovy> println "((a ^ b) < c) ----> " + ((a ^ b) < c)
groovy> println "((-a) < c) ----> " + ((-a) < c)

a = 0b00101111 ----> 47
b = 0b000010101 ----> 21
(a < a) ----> 47
(a < b) ----> 5
(a | a) ----> 47
(a | b) ----> 63
c = 0b11111111
((a ^ a) < c) ----> 0
((a ^ b) < c) ----> 58
((-a) < c) ----> 208

Execution complete. Result was null. Elapsed time: 61ms.
```

Not operator

```
GroovyConsole
File Edit View History Script Help

1 println "(!true) ----> " + (!true)
2 println "(!'javatpoint') ----> " + (!'javatpoint')
3 println "(!Null) ----> " + (!'')
4

groovy> println "(!true) ----> " + (!true)
groovy> println "(!'javatpoint') ----> " + (!'javatpoint')
groovy> println "(!Null) ----> " + (!'')

(!true) ----> false
(!'javatpoint') ----> false
(!Null) ----> true

Execution complete. Result was null. Elapsed time: 22ms.
```

Groovy Assignment

Ternary operator

G GroovyConsole

File Edit View History Script Help



```
1 s = 'javatpoint'
2 Answer = (s != null && s.length() > 0) ? 'Found' : 'Not found'
3
```

```
groovy> s = 'javatpoint'
groovy> Answer = (s != null && s.length() > 0) ? 'Found' : 'Not found'

Result: Found
```

Elvis operator

G GroovyConsole

File Edit View History Script Help



```
1 s = 'javatpoint'
2 Answer = s ? 'Found' : 'Not Found'
3 println Answer
4
5 Answer = s ?: 'Found'
6 println Answer
7 |
```

```
groovy> s = 'javatpoint'
groovy> Answer = s ? 'Found' : 'Not Found'
groovy> println Answer
groovy> Answer = s ?: 'Found'
groovy> println Answer
```

```
Found
javatpoint
```