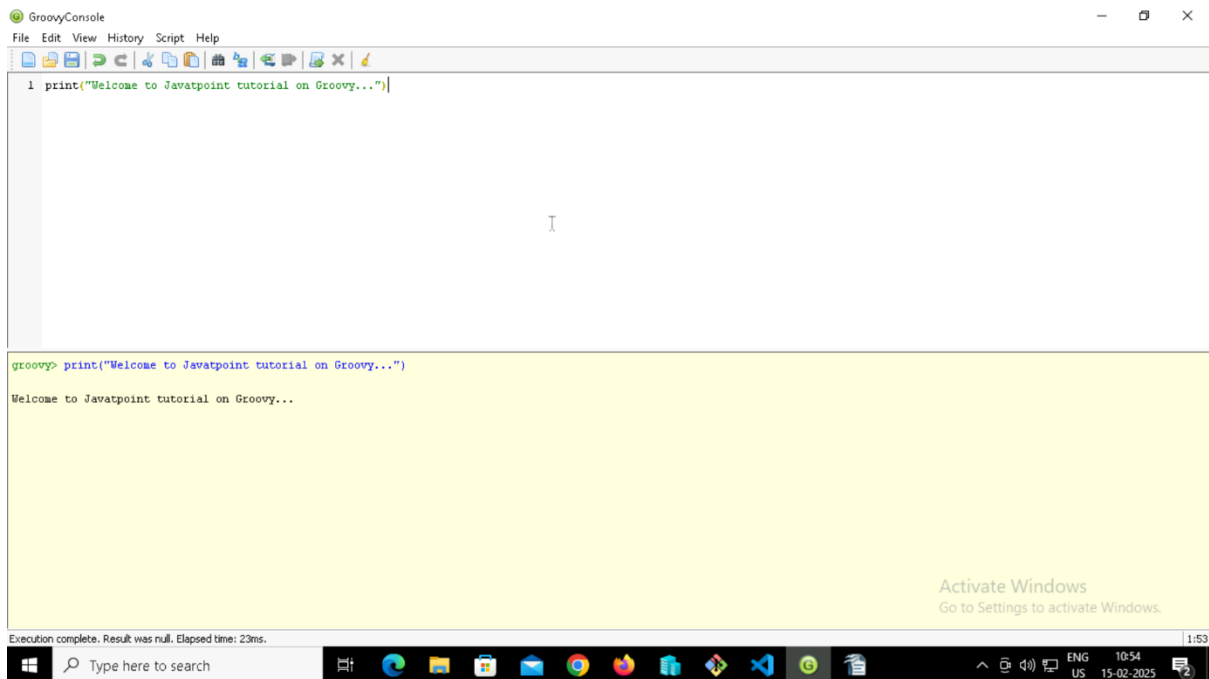


Q. Basic Groovy Program



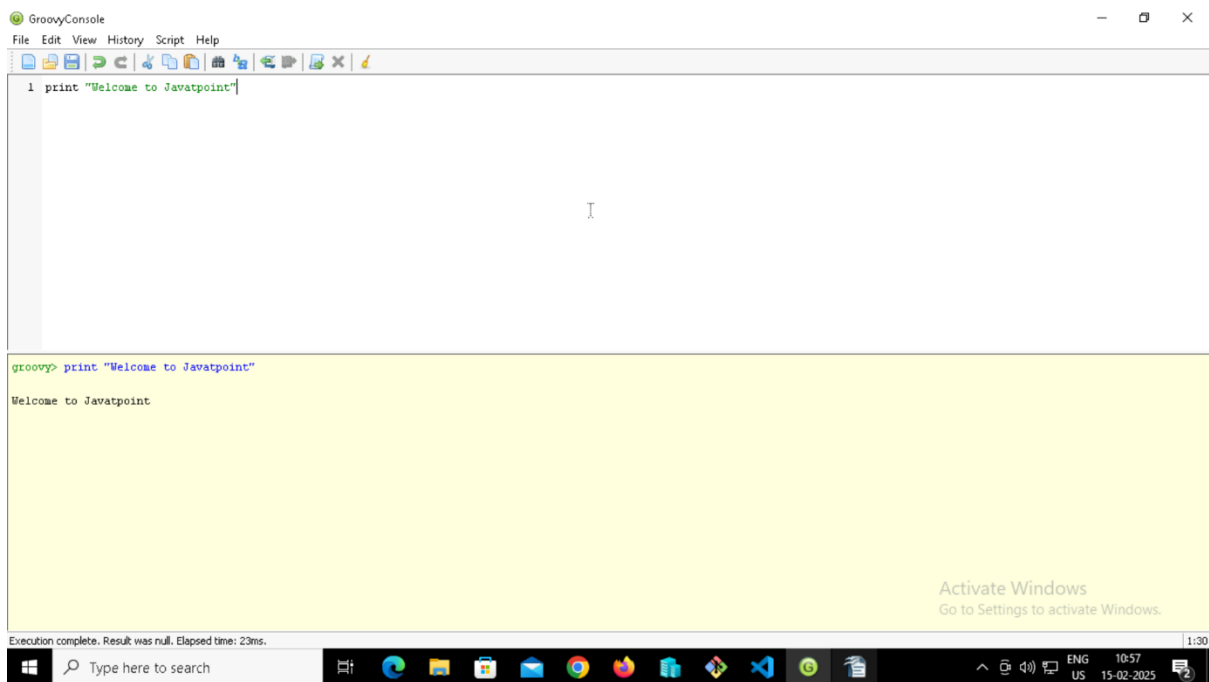
The screenshot shows the GroovyConsole application window. The title bar reads "GroovyConsole" with standard window controls. The menu bar includes "File", "Edit", "View", "History", "Script", and "Help". The toolbar contains icons for file operations and execution. The editor area contains a single line of code: `1 print("Welcome to Javatpoint tutorial on Groovy...")`. The console output area, which has a yellow background, shows the command `groovy> print("Welcome to Javatpoint tutorial on Groovy...")` and the output `Welcome to Javatpoint tutorial on Groovy...`. At the bottom of the console area, it says "Execution complete. Result was null. Elapsed time: 23ms." and "1:53". The Windows taskbar is visible at the bottom with the search bar and various application icons. A watermark "Activate Windows" is present in the bottom right corner.

```
1 print("Welcome to Javatpoint tutorial on Groovy...")
```

```
groovy> print("Welcome to Javatpoint tutorial on Groovy...")
Welcome to Javatpoint tutorial on Groovy...
```

Execution complete. Result was null. Elapsed time: 23ms. 1:53

Q. Groovy syntax



The screenshot shows the GroovyConsole application window. The title bar reads "GroovyConsole" with standard window controls. The menu bar includes "File", "Edit", "View", "History", "Script", and "Help". The toolbar contains icons for file operations and execution. The editor area contains a single line of code: `1 print "Welcome to Javatpoint"`. The console output area, which has a yellow background, shows the command `groovy> print "Welcome to Javatpoint"` and the output `Welcome to Javatpoint`. At the bottom of the console area, it says "Execution complete. Result was null. Elapsed time: 23ms." and "1:30". The Windows taskbar is visible at the bottom with the search bar and various application icons. A watermark "Activate Windows" is present in the bottom right corner.

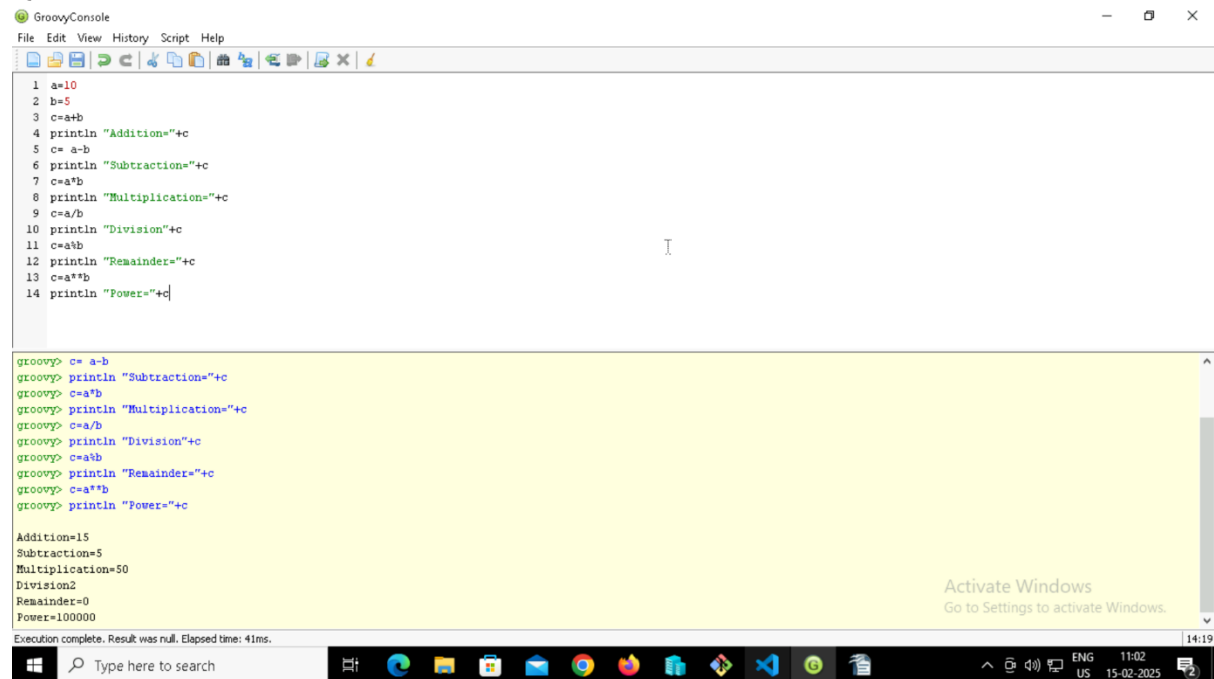
```
1 print "Welcome to Javatpoint"
```

```
groovy> print "Welcome to Javatpoint"
Welcome to Javatpoint
```

Execution complete. Result was null. Elapsed time: 23ms. 1:30

Operators

Q.



The screenshot shows a GroovyConsole window titled "GroovyConsole". The menu bar includes "File", "Edit", "View", "History", "Script", and "Help". The toolbar contains icons for file operations and execution. The script area 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
```

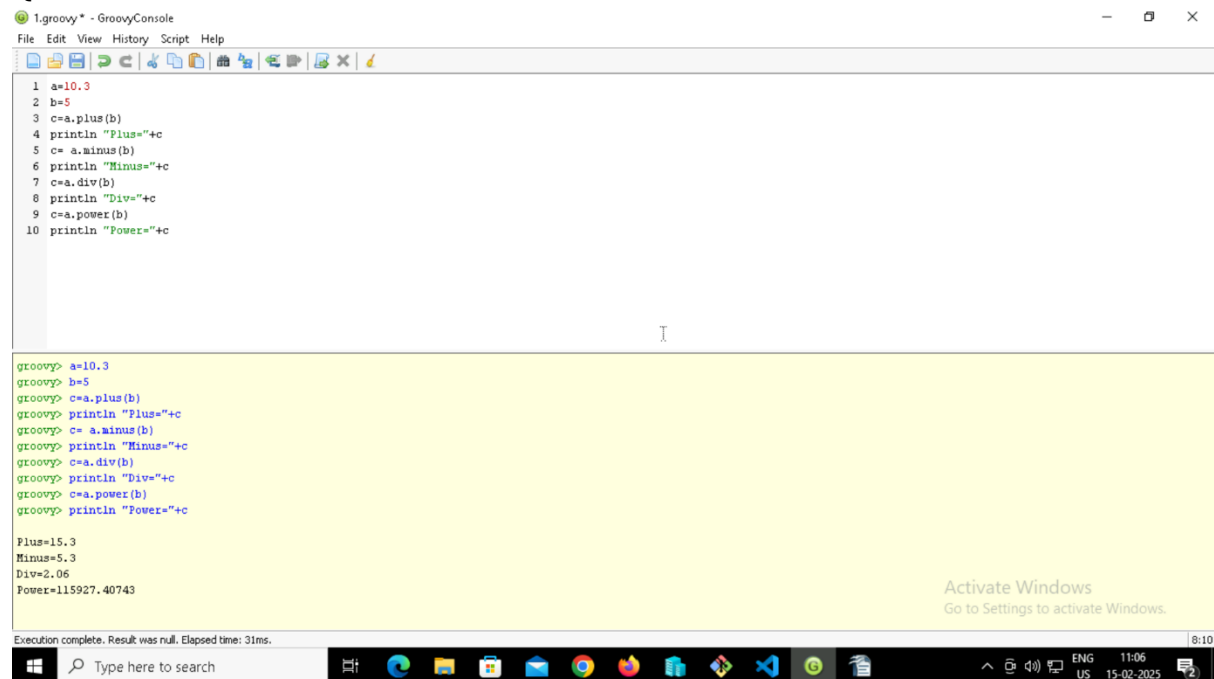
The output area shows the results of the execution:

```
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
```

At the bottom, a status bar indicates "Execution complete. Result was null. Elapsed time: 41ms." and the system clock shows 14:19 on 15-02-2025.

Q.



The screenshot shows a GroovyConsole window titled "1.groovy - GroovyConsole". The menu bar includes "File", "Edit", "View", "History", "Script", and "Help". The toolbar contains icons for file operations and execution. The script area contains the following code:

```
1 a=10.3
2 b=5
3 c=a.plus(b)
4 println "Plus="+c
5 c= a.minus(b)
6 println "Minus="+c
7 c=a.div(b)
8 println "Div="+c
9 c=a.power(b)
10 println "Power="+c
```

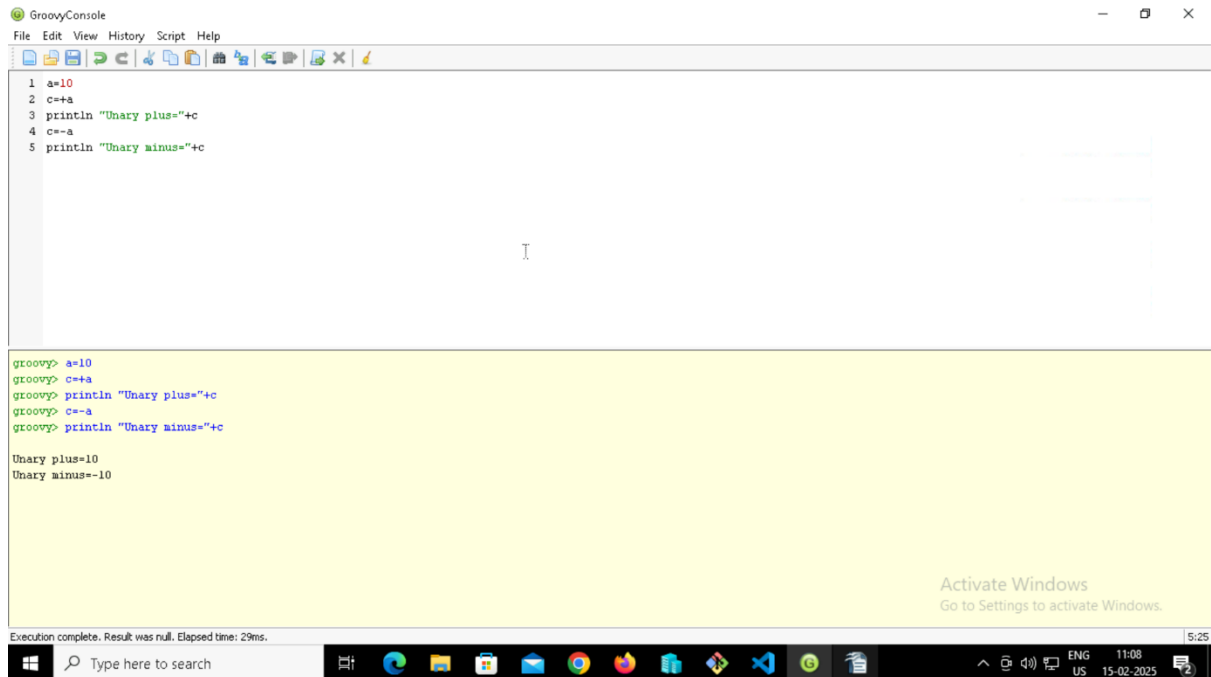
The output area shows the results of the execution:

```
groovy> a=10.3
groovy> b=5
groovy> c=a.plus(b)
groovy> println "Plus="+c
groovy> c= a.minus(b)
groovy> println "Minus="+c
groovy> c=a.div(b)
groovy> println "Div="+c
groovy> c=a.power(b)
groovy> println "Power="+c

Plus=15.3
Minus=5.3
Div=2.06
Power=115927.40743
```

At the bottom, a status bar indicates "Execution complete. Result was null. Elapsed time: 31ms." and the system clock shows 8:10 on 15-02-2025.

Q.



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

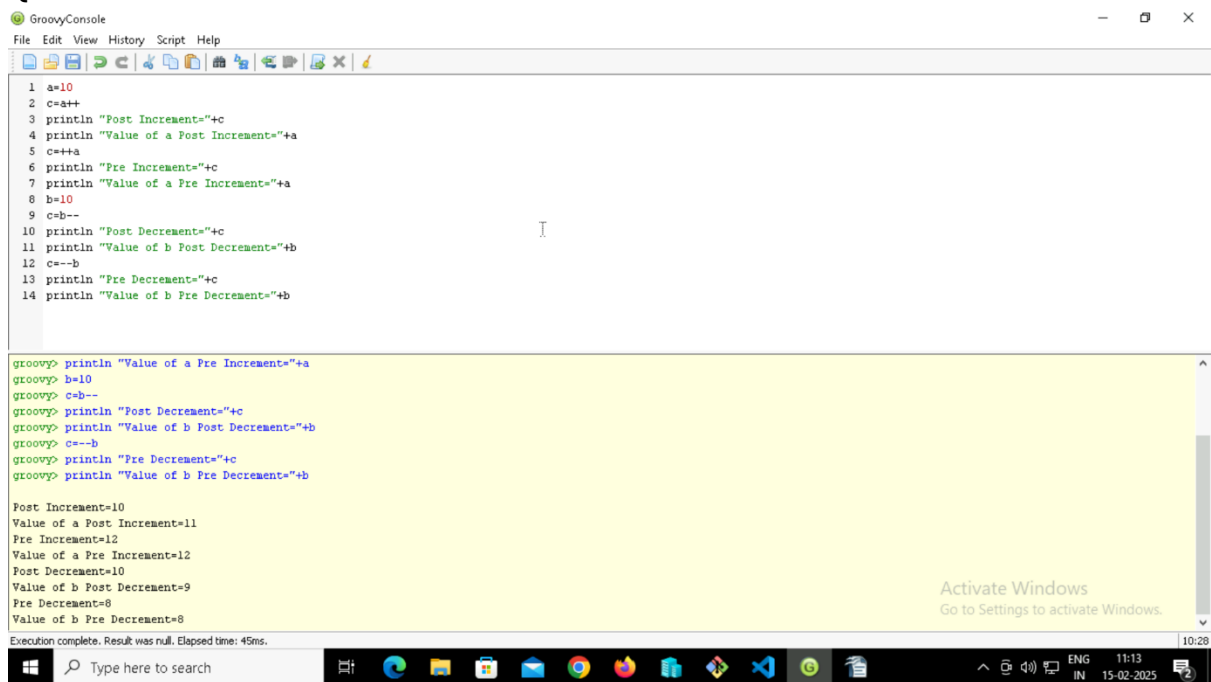
```
1 a=10
2 c+=a
3 println "Unary plus="+c
4 c=-a
5 println "Unary minus="+c
```

The console output shows the results of the execution:

```
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
```

At the bottom, a status bar indicates "Execution complete. Result was null. Elapsed time: 29ms." and a Windows taskbar is visible at the bottom with the time 11:08 and date 15-02-2025.

Q.



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

```
1 a=10
2 c=a++
3 println "Post Increment="+c
4 println "Value of a Post Increment="+a
5 c++
6 println "Pre Increment="+c
7 println "Value of a Pre Increment="+a
8 b=10
9 c=b--
10 println "Post Decrement="+c
11 println "Value of b Post Decrement="+b
12 c--
13 println "Pre Decrement="+c
14 println "Value of b Pre Decrement="+b
```

The console output shows the results of the execution:

```
groovy> println "Value of a Pre Increment="+a
Value of a Pre Increment=10
groovy> b=10
groovy> c=b--
groovy> println "Post Decrement="+c
Post Decrement=10
groovy> println "Value of b Post Decrement="+b
Value of b Post Decrement=9
groovy> c--
groovy> println "Pre Decrement="+c
Pre Decrement=8
groovy> println "Value of b Pre Decrement="+b
Value of b Pre Decrement=8
```

At the bottom, a status bar indicates "Execution complete. Result was null. Elapsed time: 45ms." and a Windows taskbar is visible at the bottom with the time 11:13 and date 15-02-2025.

Q.

```
GroovyConsole
File Edit View History Script Help
1 a=10
2 c=a++
3 println "Post Increment="+c
4 println "Value of a Post Increment="+a
5 c+=a
6 println "Pre Increment="+c
7 println "Value of a Pre Increment="+a
8 b=10
9 c=b--
10 println "Post Decrement="+c
11 println "Value of b Post Decrement="+b
12 c--b
13 println "Pre Decrement="+c
14 println "Value of b Pre Decrement="+b

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

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

Execution complete. Result was null. Elapsed time: 45ms.
```

Q.

```
GroovyConsole
File Edit View History Script Help
3 println "a+=3 -----> " + a
4
5 a -= 3
6 println "a-=3 -----> " + a
7
8 a *= 3
9 println "a*=3 -----> " + a
10
11 a /= 3
12 println "a/=3 -----> " + a
13
14 a %= 3
15 println "a%=3 -----> " + a
16
17 a **= 3
18 println "a**=3 -----> " + a
19

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: 44ms.
```

Q.

```
5.groovy* - GroovyConsole
File Edit View History Script Help

1 a = 10
2 b = 12
3 println "a = 10"
4 println "b = 12"
5 c = (a == b)
6 println "Relational Operator equals [c = a == b] ----> " + c
7 c = (a != b)
8 println "Relational Operator different [c = a != b] ----> " + c
9 c = (a < b)
10 println "Relational Operator less than [c = a < b] ----> " + c
11 c = (a <= b)
12 println "Relational Operator less than equal to [c = a <= b] ----> " + c
13 c = (a > b)
14 println "Relational Operator greater than [c = a > b] ----> " + c
15 c = (a >= b)
16 println "Relational Operator greater than equal to [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: 44ms. 16:76
```

Q.

```
GroovyConsole
File Edit View History Script Help

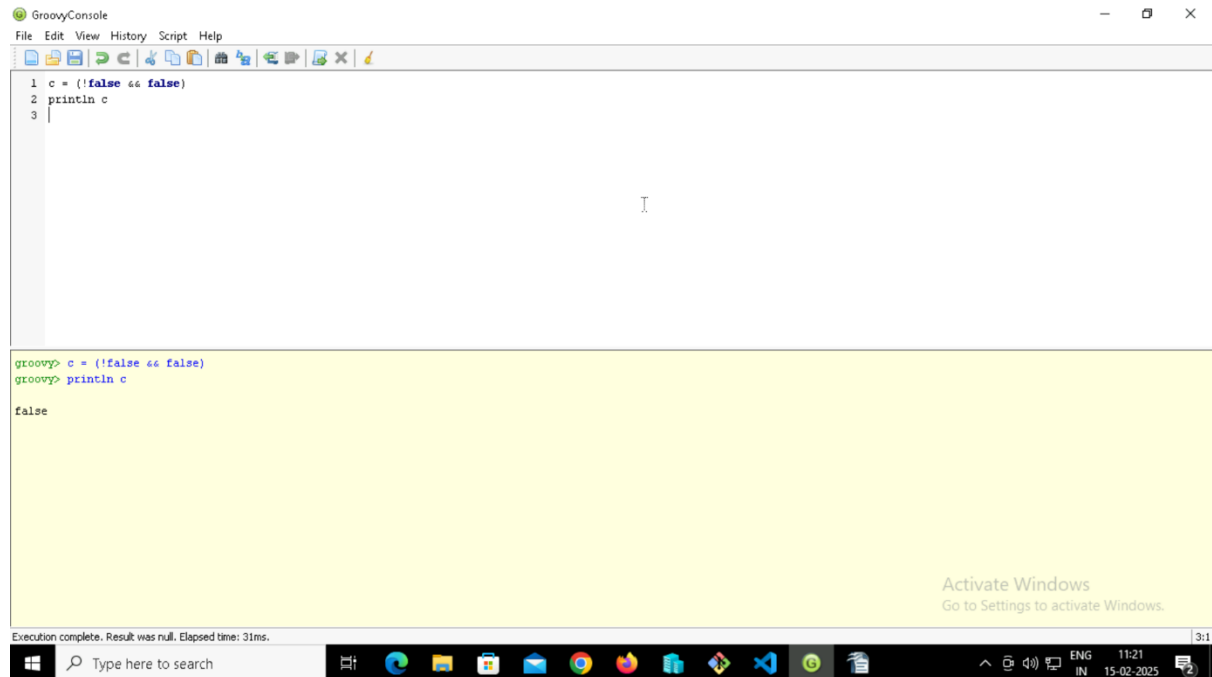
1 c = true && true
2 println "Logical AND operator = " + c
3
4 c = true || false
5 println "Logical OR operator = " + c
6
7 c = !false
8 println "Logical NOT operator = " + c
9

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: 31ms. 9:1
```

Q.



GroovyConsole

File Edit View History Script Help

```
1 c = (!false && false)
2 println c
3
```

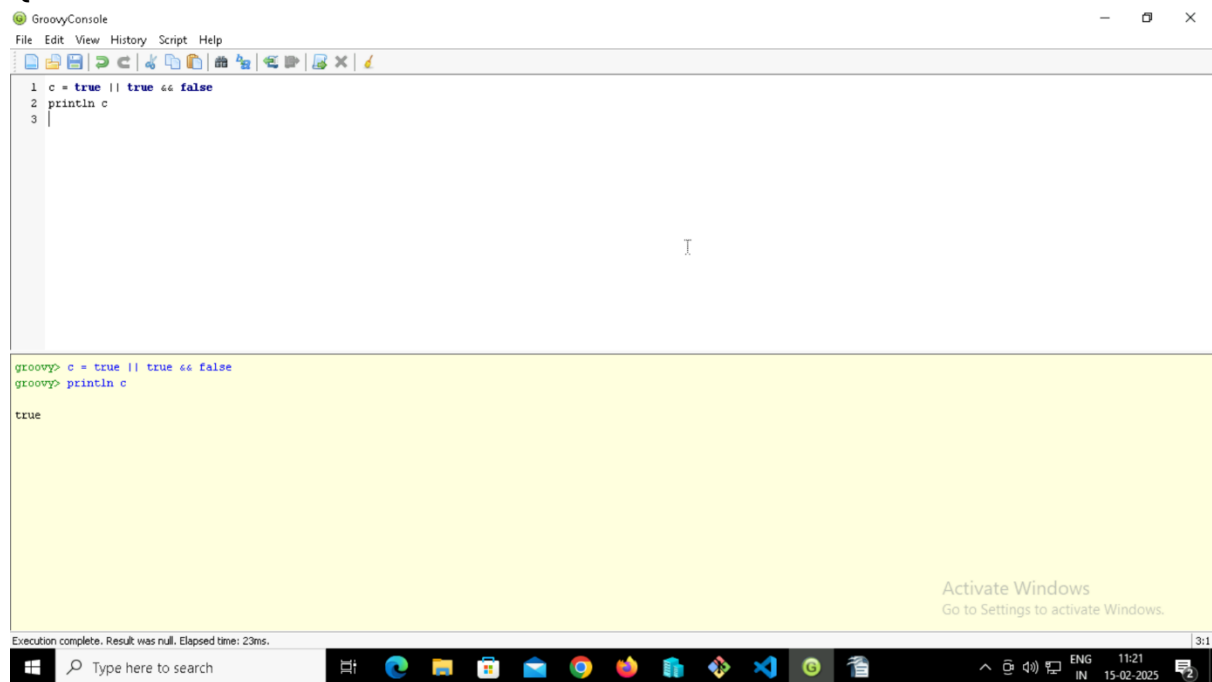
groovy> c = (!false && false)
groovy> println c

false

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

Activate Windows
Go to Settings to activate Windows.

Q.



GroovyConsole

File Edit View History Script Help

```
1 c = true || true && false
2 println c
3
```

groovy> c = true || true && false
groovy> println c

true

Execution complete. Result was null. Elapsed time: 23ms.

Activate Windows
Go to Settings to activate Windows.

Q.

```
GroovyConsole
File Edit View History Script Help
1 a = 0b00101111
2 println "a = 0b00101111 ----> " + a
3 b = 0b000010101
4 println "b = 0b000010101 ----> " + b
5 println "(a & a) ----> " + (a & a)
6 println "(a & b) ----> " + (a & b)
7 println "(a | a) ----> " + (a | a)
8 println "(a | b) ----> " + (a | b)
9 c = 0b11111111
10 println "c = 0b11111111"
11 println "((a ^ a) & c) ----> " + ((a ^ a) & c)
12 println "((a ^ b) & c) ----> " + ((a ^ b) & c)
13 println "((-a) & c) ----> " + ((-a) & c)
14

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: 79ms.
```

Q.

```
GroovyConsole
File Edit View History Script Help
1 a = 23
2 b = 43
3
4 println "Converting Integer to Binary a = 23 ----> " + Integer.toBinaryString(a)
5 println "Converting Integer to Binary b = 43 ----> " + Integer.toBinaryString(b)
6
7 println "Converting binary to integer 1011 ----> a = " + Integer.parseInt("1011", 2)
8 println "Converting binary to integer 101011 ----> b = " + Integer.parseInt("10111", 2)
9

groovy> a = 23
groovy> b = 43
groovy> println "Converting Integer to Binary a = 23 ----> " + Integer.toBinaryString(a)
groovy> println "Converting Integer to Binary b = 43 ----> " + Integer.toBinaryString(b)
groovy> println "Converting binary to integer 1011 ----> a = " + Integer.parseInt("1011", 2)
groovy> println "Converting binary to integer 101011 ----> b = " + Integer.parseInt("10111", 2)

Converting Integer to Binary a = 23 ----> 10111
Converting Integer to Binary b = 43 ----> 101011
Converting binary to integer 1011 ----> a = 23
Converting binary to integer 101011 ----> b = 23

Execution complete. Result was null. Elapsed time: 40ms.
```

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: 24ms.

Activate Windows
Go to Settings to activate Windows.

Q.

GroovyConsole

File Edit View History Script Help

```
1 s = 'javatpoint'
2 answer = (s != null && s.length() > 0) ? 'Found' : 'Not found'
3
4 println answer
5
```

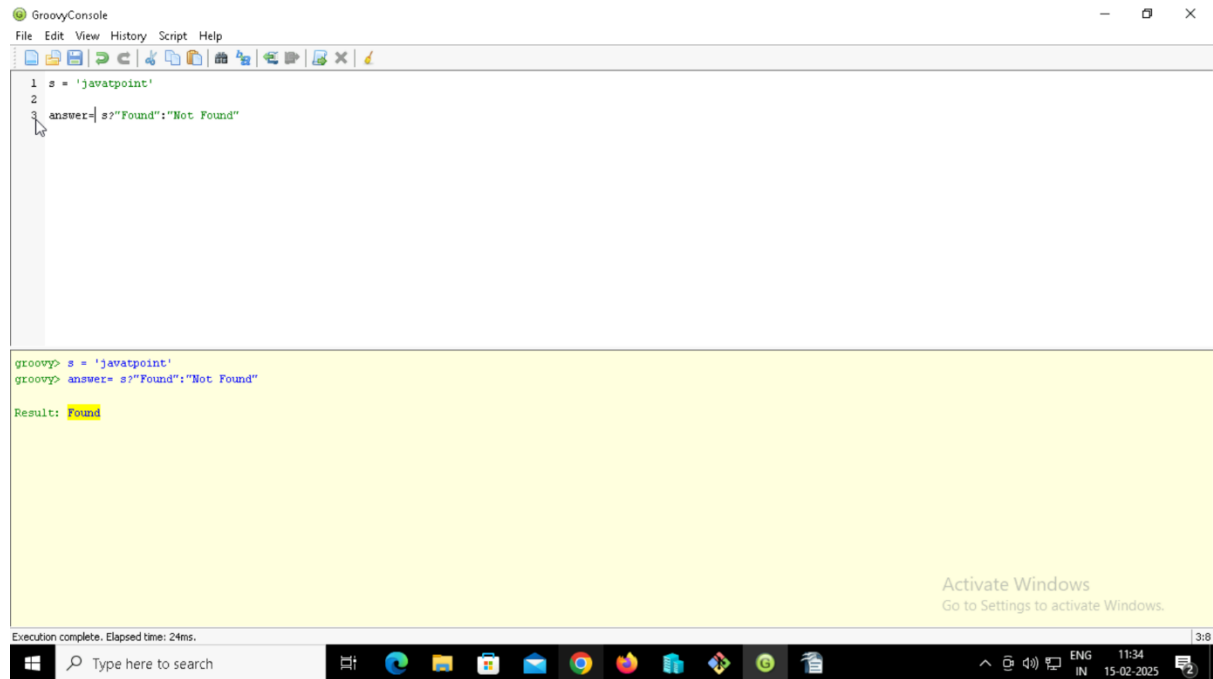
```
groovy> s = 'javatpoint'
groovy> answer = (s != null && s.length() > 0) ? 'Found' : 'Not found'
groovy> println answer

Found
```

Execution complete. Result was null. Elapsed time: 28ms.

Activate Windows
Go to Settings to activate Windows.

Q.



```
1 s = 'javatpoint'
2
3 answer = s?"Found":"Not Found"
```

```
groovy> s = 'javatpoint'
groovy> answer = s?"Found":"Not Found"

Result: Found
```

Execution complete. Elapsed time: 24ms.

3/8

Activate Windows
Go to Settings to activate Windows.