

# R- Programming Language

## Module 2

# Mathematical and Logical Operators



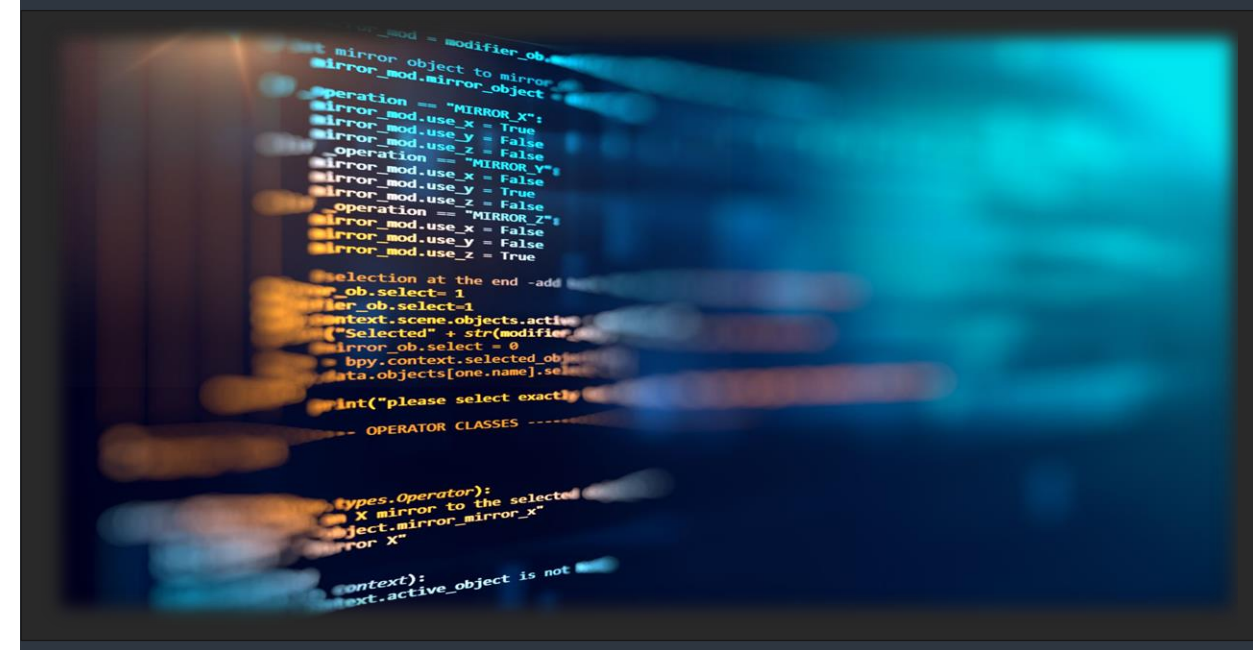
Assuming you have successfully installed the 'R language' in your system, as described in Module 1, You may use open-sourced online compilers, such as -

- [Create a new R program - myCompiler - myCompiler](#)
- [Online R Compiler \(programiz.com\)](#)

Additionally, note that the main user interaction is command-line-based, with a lower priority on graphical user interface options.



R-Language



Self Learning Material

Self Learning Material



[Cognitive Lrn&Shr in India | Online Platform Lrn-Shr \(clm-shr.com\)](#)

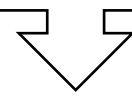


# Let's understand basic algebraic operations using mathematical operators:

Arithmetic operators are used to carry out different mathematical computations on numerical data. For example :

Symbol	Operator	Example
+	Addition	5+5
-	Subtraction	5-5
*	Multiplication	5*5
/	Division	5/5
^ or **	Raise to the power	5^5 or 5**5
%%	Modulus (Find remainder)	8%%5
%/%	Floor division (Rounding the result of division to the nearest integer and ignores the decimal)	8 %/% 5

**A screenshot is given below, executed in the R programming language, for your reference**



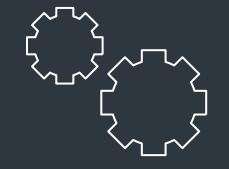
```

R R v [i] [Run] [Save]
1 5+5
2 5-5
3 5*5
4 5/5
5 5^5
6 5**5
7 8%%5
8 8 %/% 5
9
10

Output
[1] 10
[1] 0
[1] 25
[1] 1
[1] 3125
[1] 3125
[1] 3
[1] 1

[Execution complete with exit code 0]

```



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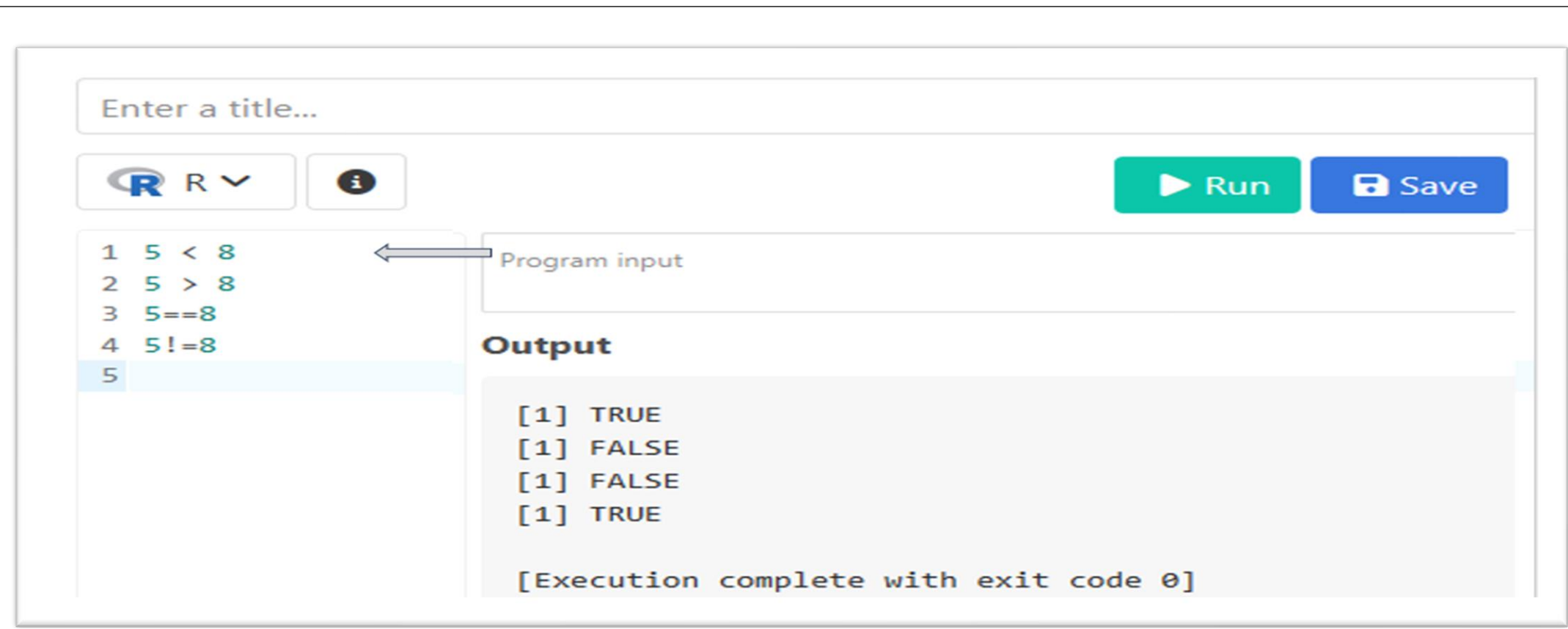


# Logical Operators

Logical operators in programming are used to execute logical operations on Boolean values or expressions. In the R programming language, logical operators are often used in conditional statements, loops, and other scenarios that require decision-making depending on the true or false of specific conditions. For example :

Symbol	Operator	Example
<	Less than	5 < 8
>	Greater than	5 > 8
==	Checks equality of the elements	5 == 8
!=	Checks inequality of the elements	5 != 8

A screenshot is given below, executed in the R programming language, for your reference



The screenshot shows an R programming interface with the following content:

- Input field: "Enter a title..."
- Language selector: "R" with a dropdown arrow.
- Info icon: "i" in a circle.
- Buttons: "Run" (green) and "Save" (blue).
- Code editor (Program input):

```
1 5 < 8
2 5 > 8
3 5==8
4 5!=8
5
```
- Output console:

```
[1] TRUE
[1] FALSE
[1] FALSE
[1] TRUE

[Execution complete with exit code 0]
```

