

How can the environment be cleared in R using various methods?

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The environment in R refers to the set of variables and functions that are currently stored in the memory. It is important to clear the environment at times to avoid any potential errors or conflicts while running a new code. There are various methods to clear the environment in R.

One method is to use the "rm()" function, which allows the user to remove specific variables or objects from the environment. This can be done by specifying the names of the variables or using the wildcard "*" to remove all objects.

Another method is to use the "detach()" function, which removes a specific package from the environment. This is useful when working with multiple packages and wanting to clear the environment of a specific package.

Additionally, the "gc()" function can be used to clear unused memory and reduce the size of the environment. This is particularly helpful when working with large datasets.

One can also use the "restart" button in the RStudio interface to completely clear the environment and restart the R session.

Overall, clearing the environment in R is a crucial step in ensuring smooth and error-free execution of code. It is important to be familiar with these different methods to efficiently manage the environment in R.

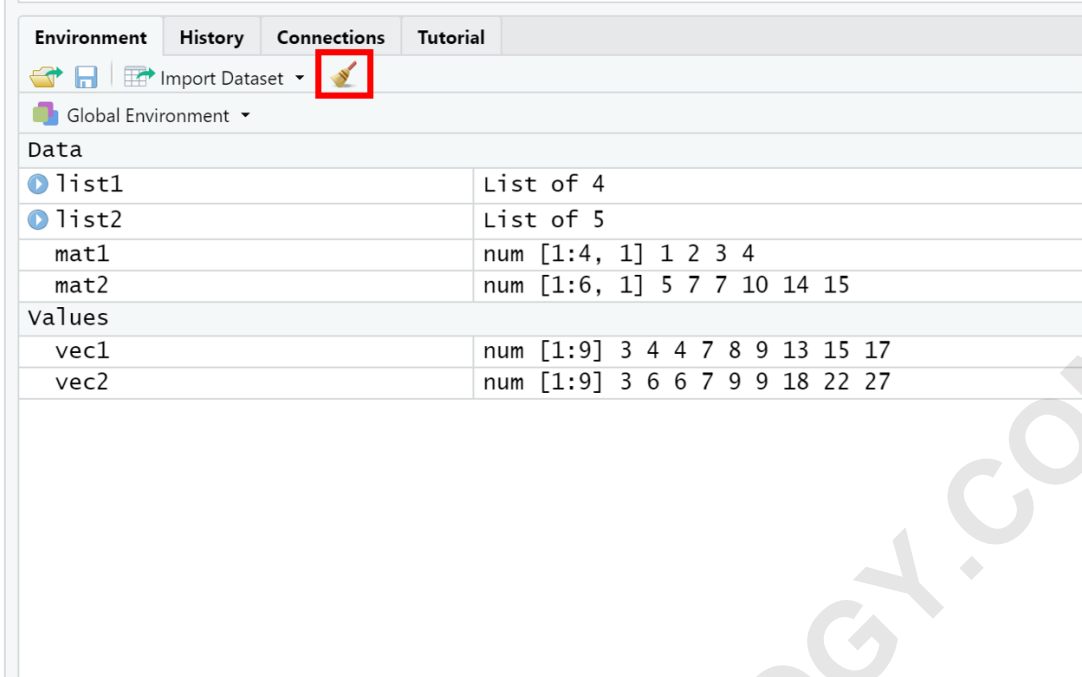
Clear the Environment in R (3 Methods)

There are three methods you can use to quickly clear the environment in R:

Method 1: Clear Environment Using rm()

rm(list=ls())

Method 2: Clear Environment Using the Broom Icon



The screenshot shows the R Studio Environment pane with the following variables and their types/values:

Variable	Type	Value
list1	List	List of 4
list2	List	List of 5
mat1	Matrix	num [1:4, 1] 1 2 3 4
mat2	Matrix	num [1:6, 1] 5 7 7 10 14 15
vec1	Vector	num [1:9] 3 4 4 7 8 9 13 15 17
vec2	Vector	num [1:9] 3 6 6 7 9 9 18 22 27

Method 3: Clear Specific Types of Objects Using `lm()` and `class`

#clear all data frames from environment

`rm(list=ls(all=TRUE))`

#clear all lists from environment

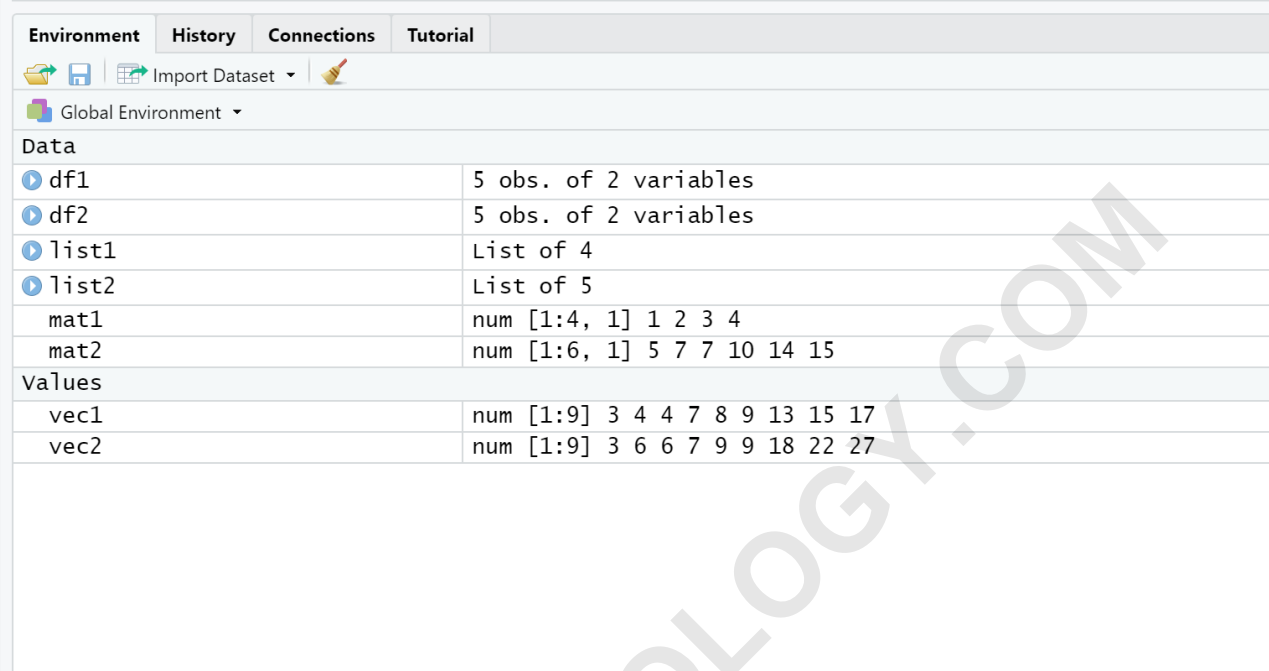
`rm(list=ls(all=TRUE))`

The following examples shows how to use each of these methods in practice.

Method 1: Clear Environment Using `rm()`

Suppose we have an R environment with two data

frames, two lists, two matrices, and two vectors:



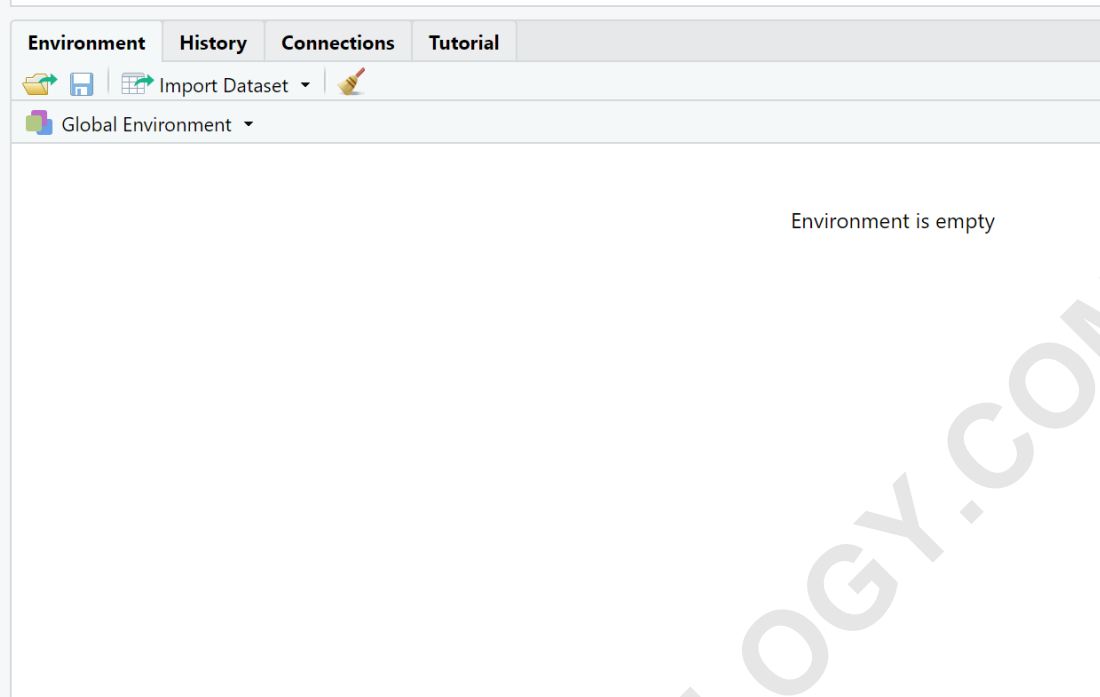
The screenshot shows the R Studio Environment pane with the following objects and their details:

Object	Details
df1	5 obs. of 2 variables
df2	5 obs. of 2 variables
list1	List of 4
list2	List of 5
mat1	num [1:4, 1] 1 2 3 4
mat2	num [1:6, 1] 5 7 7 10 14 15
vec1	num [1:9] 3 4 4 7 8 9 13 15 17
vec2	num [1:9] 3 6 6 7 9 9 18 22 27

We can use the following code to remove all objects from the environment:

```
rm(list=ls())
```

```
> rm(list=ls())  
> |
```

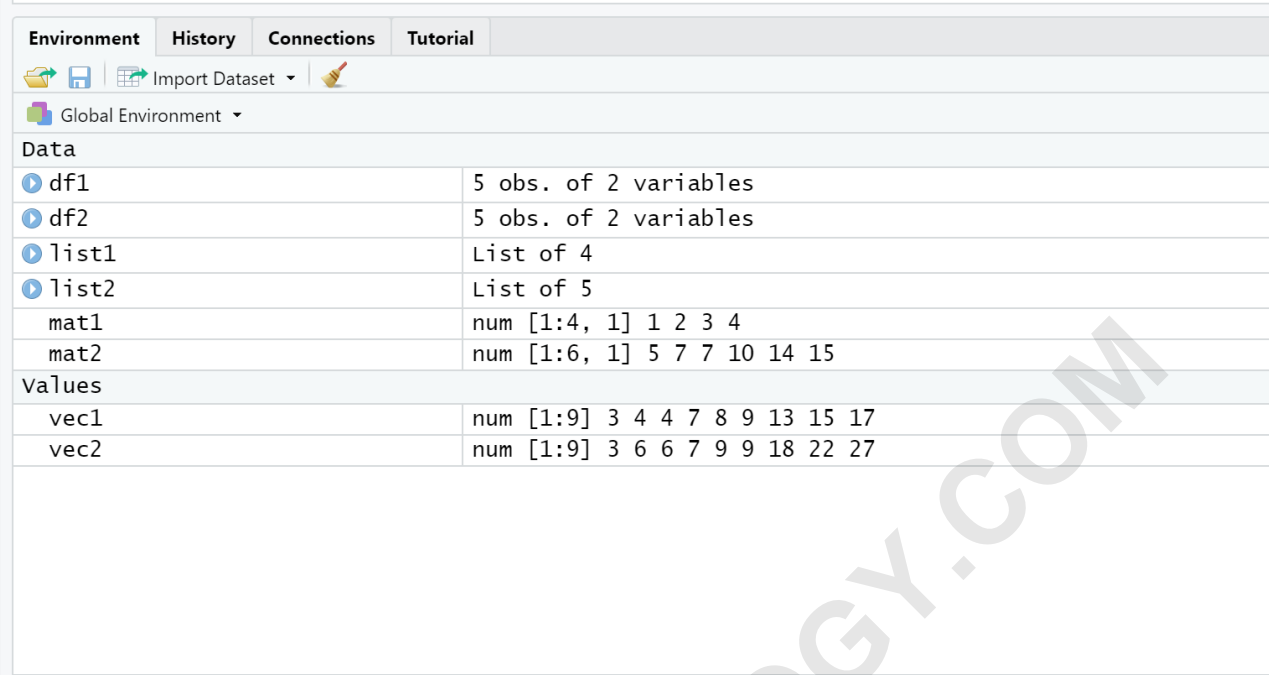


The screenshot shows the RStudio interface. At the top, the Environment pane is active, displaying tabs for Environment, History, Connections, and Tutorial. Below the tabs, there are icons for Import Dataset and a broom icon. The main area of the Environment pane is empty, with the text "Environment is empty" centered. A large watermark "ARABPSYCHOLOGY.COM" is visible diagonally across the image.

Notice that every object in the R environment is now cleared.

Method 2: Clear Environment Using the Broom Icon

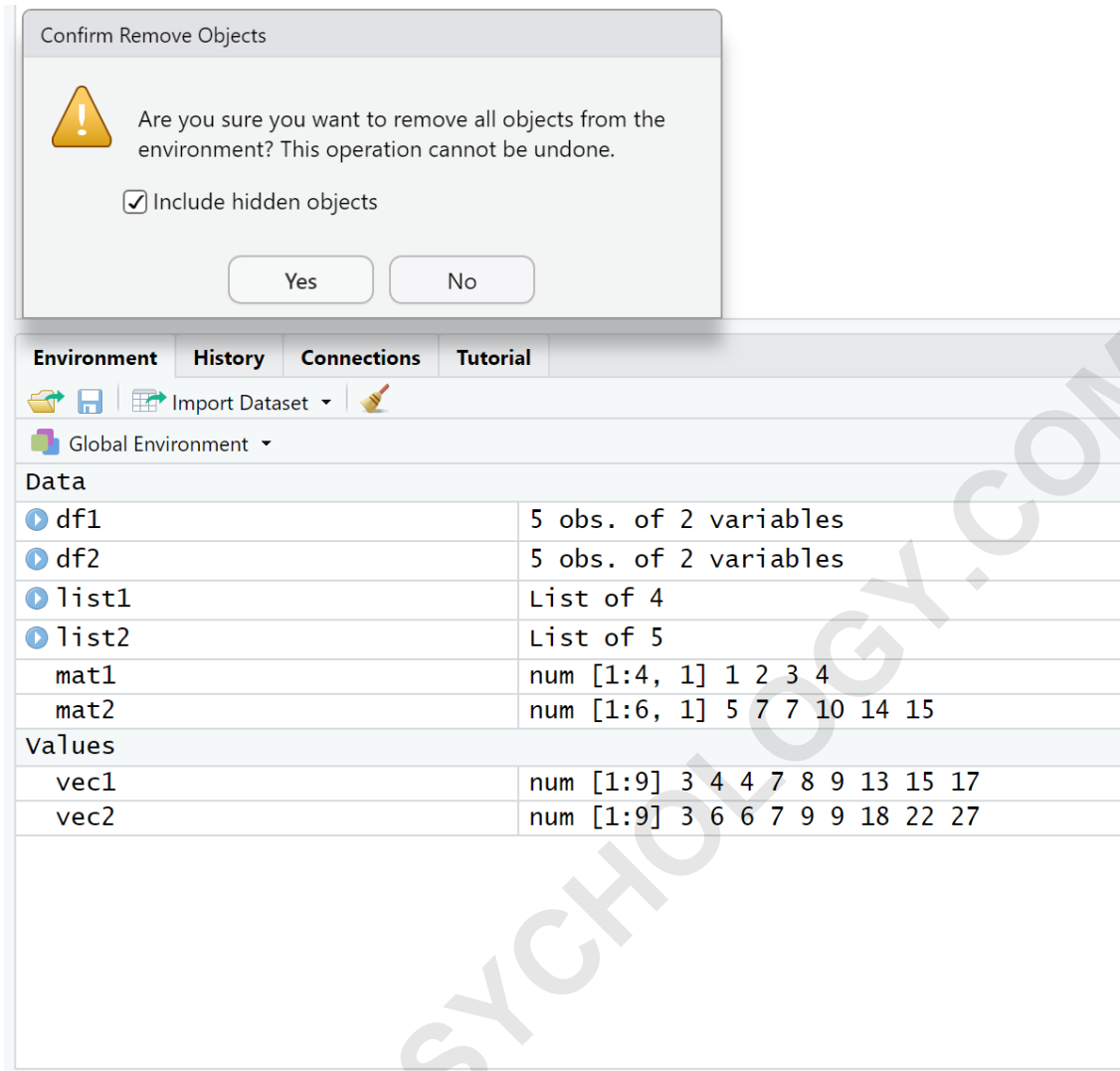
Once again suppose we have an R environment with the following objects:



The screenshot shows the R Studio Environment pane with the following content:

Environment	History	Connections	Tutorial
Global Environment			
Data			
df1		5 obs. of 2 variables	
df2		5 obs. of 2 variables	
list1		List of 4	
list2		List of 5	
mat1		num [1:4, 1] 1 2 3 4	
mat2		num [1:6, 1] 5 7 7 10 14 15	
Values			
vec1		num [1:9] 3 4 4 7 8 9 13 15 17	
vec2		num [1:9] 3 6 6 7 9 9 18 22 27	

We can click the broom icon to clear the entire environment:

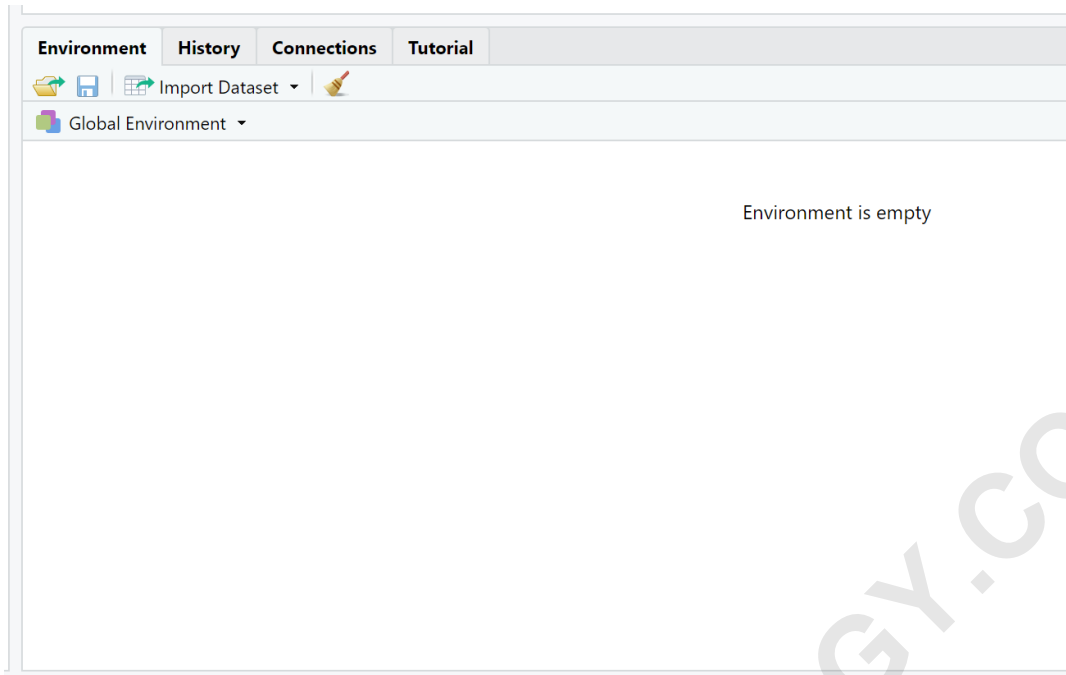


The screenshot shows the R Studio interface. A dialog box titled "Confirm Remove Objects" is open, asking for confirmation to remove all objects from the environment. The dialog includes a warning icon, the text "Are you sure you want to remove all objects from the environment? This operation cannot be undone.", and a checked checkbox for "Include hidden objects". There are "Yes" and "No" buttons at the bottom of the dialog.

Below the dialog, the R Studio Environment pane is visible. It shows the "Global Environment" with a list of objects:

Data	
df1	5 obs. of 2 variables
df2	5 obs. of 2 variables
list1	List of 4
list2	List of 5
mat1	num [1:4, 1] 1 2 3 4
mat2	num [1:6, 1] 5 7 7 10 14 15
Values	
vec1	num [1:9] 3 4 4 7 8 9 13 15 17
vec2	num [1:9] 3 6 6 7 9 9 18 22 27

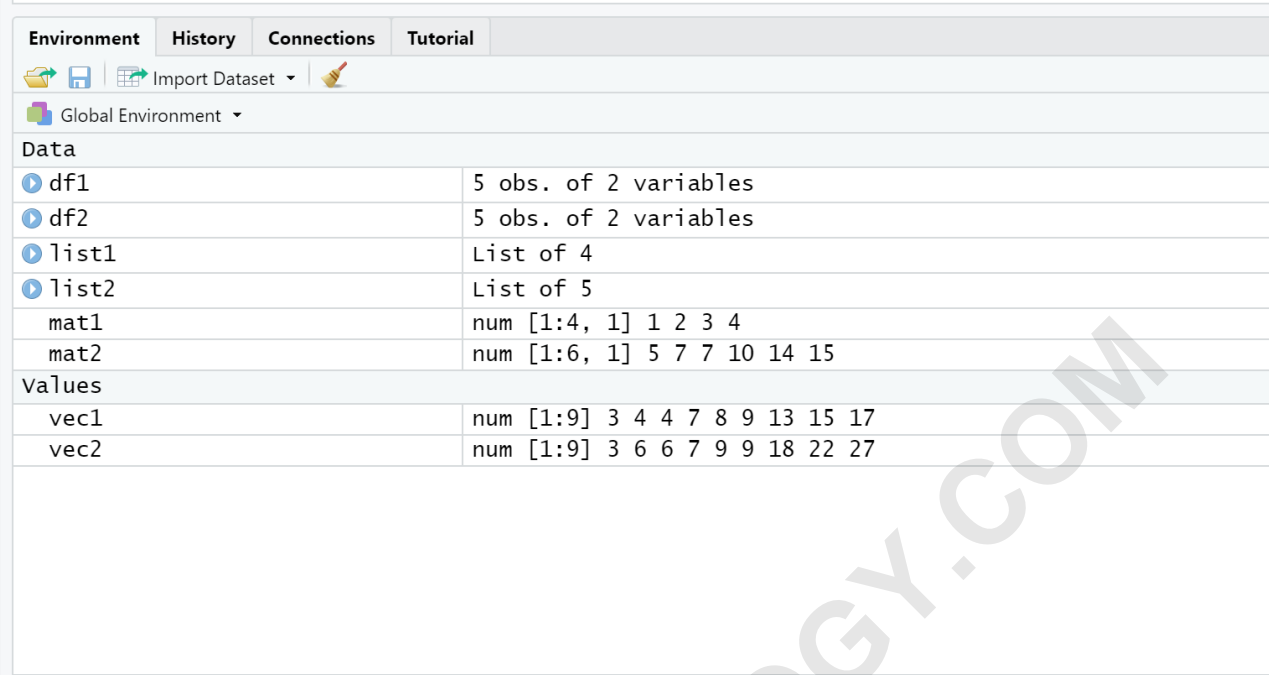
Once we click Yes, the environment will be cleared:



Method 3: Clear Specific Types of Objects

Occasionally we may only want to clear specific types of objects from the environment in R.

For example, suppose we have an R environment with the following objects:



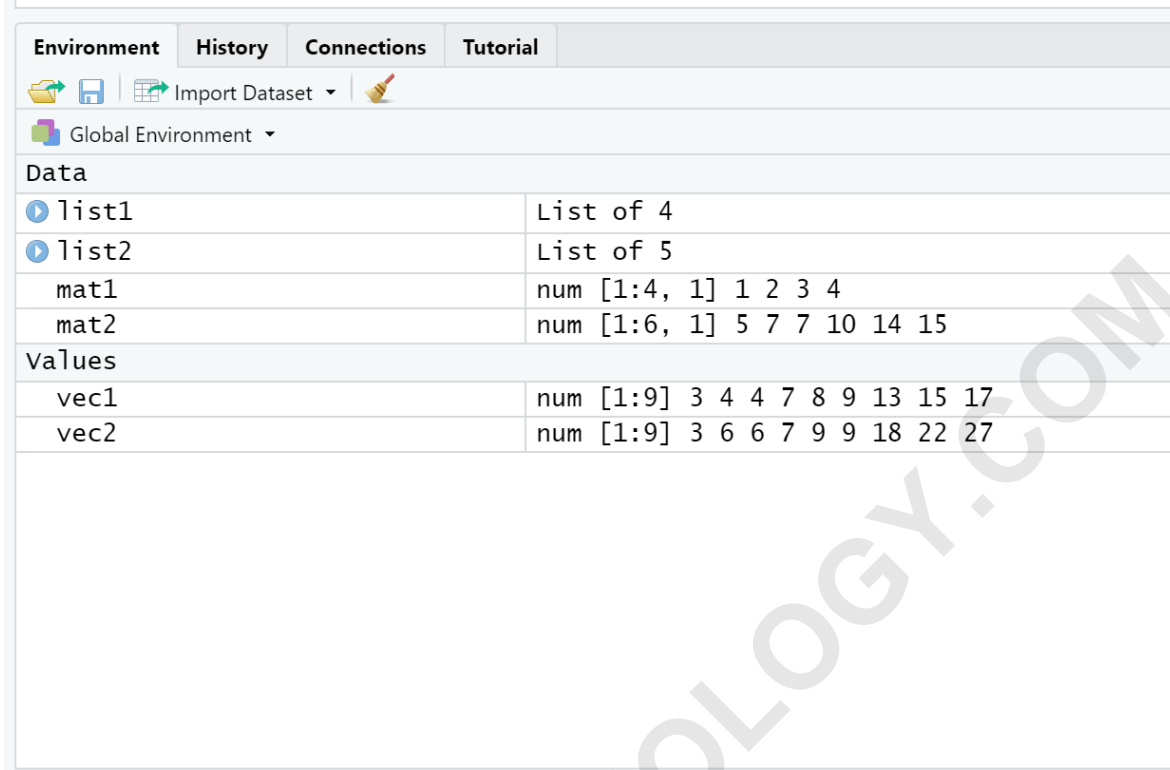
The screenshot shows the R Environment pane with the following variables and their types:

Variable	Type
df1	5 obs. of 2 variables
df2	5 obs. of 2 variables
list1	List of 4
list2	List of 5
mat1	num [1:4, 1] 1 2 3 4
mat2	num [1:6, 1] 5 7 7 10 14 15
vec1	num [1:9] 3 4 4 7 8 9 13 15 17
vec2	num [1:9] 3 6 6 7 9 9 18 22 27

We can use the following code to clear only the data frames from the environment:

```
#clear all data frames from environment  
rm(list=ls(all=TRUE))
```

```
> rm(list=ls(all=TRUE)[sapply(mget(ls(all=TRUE)), class) == "data.frame"])  
> |
```



The screenshot shows the R Studio Environment pane with the following content:

Environment	History	Connections	Tutorial
Global Environment ▾			
Data			
list1		List of 4	
list2		List of 5	
mat1		num [1:4, 1] 1 2 3 4	
mat2		num [1:6, 1] 5 7 7 10 14 15	
Values			
vec1		num [1:9] 3 4 4 7 8 9 13 15 17	
vec2		num [1:9] 3 6 6 7 9 9 18 22 27	

Notice that all of the data frames have been cleared from the environment but all of the other objects remain.

How to Create a Multi-Line Comment in R