

INSTITUTO TECNOLÓGICO DE NUEVO LEÓN

Arreglos en RStudio

Materia. Algoritmos y lenguajes de Programación

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PERIODO AGOSTO – DICIEMBRE 2018

Horario. 11:00am-12:00pm

Guadalupe, Nuevo León, México.

ACTIVIDAD #1

The screenshot displays the RStudio interface with the following components:

- Source Editor:** Contains R code for creating arrays `a`, `b`, and `c`.

```
1 a <- array(0, dim = c(1))
2 a
3
4 b <- array(15:26, dim = c(2, 5))
5 b
6
7 c <- array(20:30, dim = c(4, 5, 3))
8 c
```
- Environment Pane:** Shows the current environment with variables `a`, `b`, and `c`.

Data	
<code>b</code>	int [1:2, 1:5] 15 16 17 18 19 20 21 22 23...
values	
<code>a</code>	num [1(1d)] 0
<code>c</code>	int [1:4, 1:5, 1:3] 20 21 22 23 24 25 26 27...
- Console:** Currently empty.
- Bottom Bar:** Includes tabs for Files, Plots, Packages, Help, and Viewer.

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Source

Console Terminal

```
> a <- array(0, dim = c(1))
> a
[1] 0
> b <- array(15:26, dim=c(2,5))
> b
      [,1] [,2] [,3] [,4] [,5]
[1,]  15  17  19  21  23
[2,]  16  18  20  22  24
> c <- array(20:30, dim = c(4,5,3))
> c
, , 1
      [,1] [,2] [,3] [,4] [,5]
[1,]  20  24  28  21  25
[2,]  21  25  29  22  26
[3,]  22  26  30  23  27
[4,]  23  27  20  24  28
, , 2
      [,1] [,2] [,3] [,4] [,5]
[1,]  29  22  26  30  23
[2,]  30  23  27  20  24
[3,]  20  24  28  21  25
[4,]  21  25  29  22  26
, , 3
      [,1] [,2] [,3] [,4] [,5]
[1,]  27  20  24  28  21
[2,]  28  21  25  29  22
[3,]  29  22  26  30  23
[4,]  30  23  27  20  24
> |
```

Environment History Connections

Import Dataset

Global Environment

Data

b	int [1:2, 1:5]	15 16 17 18 19 20 21 22 23...
values		
a	num [1(1d)]	0
c	int [1:4, 1:5, 1:3]	20 21 22 23 24 25 26 27...

Files Plots Packages Help Viewer

ACTIVIDAD #2

The screenshot displays the RStudio interface with three untitled files open. The active file, 'Untitled2*', contains the following R code:

```
1 a <- array(0, dim=c(1))
2 a
3 aprima <- 1
4 for (j in 1) {
5   aprima[j] <- a[j]/(j/5)
6 }
7 aprima
8
9 b <- array(15:26, dim=c(2,5))
10 b
11 bprima <- 15:26
12 for (i in 15:26) {
13   bprima[i] <- b[i]/(i/5)
14 }
15 bprima
16
17 c <- array(20:30, dim=c(4,5,3))
18 c
19 cprima <- 20:30
20 for (z in 20:30) {
21   cprima[z] <- b[z]/(z/5)
22 }
23 cprima
```

The Environment pane on the right shows the 'Global Environment' with the following objects:

Object	Class	Value
b	int [1:2, 1:5]	15 16 17 18 19 20 21 22 23...
a	num [1(1d)]	0
aprima		0
bprima	num [1:26]	15 16 17 18 19 20 21 22 23 24 ...
c	int [1:4, 1:5, 1:3]	20 21 22 23 24 25 26 27...
cprima	num [1:30]	20 21 22 23 24 25 26 27 28 29 ...
i		26L
j		1
z		30L

The status bar at the bottom indicates the current position is at line 23, column 7, and the file is at the top level.

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Source

Console Terminal

```
> a <- array(0, dim = c(1))
> a
[1] 0
> aprima <- 1
> for (j in 1) {
+   aprima[j] <- a[j]/(j/5)
+ }
> aprima
[1] 0
> b <- array(15:26, dim=c(2,5))
> b
      [,1] [,2] [,3] [,4] [,5]
[1,]  15   17   19   21   23
[2,]  16   18   20   22   24
> bprima <- 15:26
> for (i in 15:26) {
+   bprima[i] <- b[i]/(i/5)
+ }
> bprima
[1] 15 16 17 18 19 20 21 22 23 24 25 26 NA NA NA NA NA NA NA NA NA NA
> c <- array(20:30, dim = c(4,5,3))
> c
, , 1
      [,1] [,2] [,3] [,4] [,5]
[1,]  20   24   28   21   25
[2,]  21   25   29   22   26
[3,]  22   26   30   23   27
[4,]  23   27   20   24   28
, , 2
      [,1] [,2] [,3] [,4] [,5]
[1,]  29   22   26   30   23
[2,]  30   23   27   20   24
[3,]  20   24   28   21   25
```

Environment History Connections

Import Dataset

Global Environment

Data

b	int [1:2, 1:5]	15 16 17 18 19 20 21 22 2...
values		
a	num [1(1d)]	0
aprima		0
bprima	num [1:26]	15 16 17 18 19 20 21 22 23 24 ...
c	int [1:4, 1:5, 1:3]	20 21 22 23 24 25 26 ...
cprima	num [1:30]	20 21 22 23 24 25 26 27 28 29 ...
i		26L
j		1
z		30L

Files Plots Packages Help Viewer

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Source

Console Terminal

```
+ }  
> bprima  
[1] 15 16 17 18 19 20 21 22 23 24 25 26 NA NA NA NA NA NA NA NA NA NA NA  
>  
> c <- array(20:30, dim = c(4,5,3))  
> c  
, , 1  
  
  [,1] [,2] [,3] [,4] [,5]  
[1,] 20 24 28 21 25  
[2,] 21 25 29 22 26  
[3,] 22 26 30 23 27  
[4,] 23 27 20 24 28  
  
, , 2  
  
  [,1] [,2] [,3] [,4] [,5]  
[1,] 29 22 26 30 23  
[2,] 30 23 27 20 24  
[3,] 20 24 28 21 25  
[4,] 21 25 29 22 26  
  
, , 3  
  
  [,1] [,2] [,3] [,4] [,5]  
[1,] 27 20 24 28 21  
[2,] 28 21 25 29 22  
[3,] 29 22 26 30 23  
[4,] 30 23 27 20 24  
  
> cprima <- 20:30  
> for (z in 20:30) {  
+   cprima[z] <- b[z]/(z/5)  
+ }  
> cprima  
[1] 20 21 22 23 24 25 26 27 28 29 30 NA NA NA NA NA NA NA NA NA NA NA NA  
> |
```

Environment History Connections

Global Environment

Data

b	int [1:2, 1:5]	15 16 17 18 19 20 21 22 2...
---	----------------	------------------------------

values

a	num [1(1d)]	0
aprima		0
bprima	num [1:26]	15 16 17 18 19 20 21 22 23 24 ...
c	int [1:4, 1:5, 1:3]	20 21 22 23 24 25 26 ...
cprima	num [1:30]	20 21 22 23 24 25 26 27 28 29 ...
i		26L
j		1
z		30L

Files Plots Packages Help Viewer