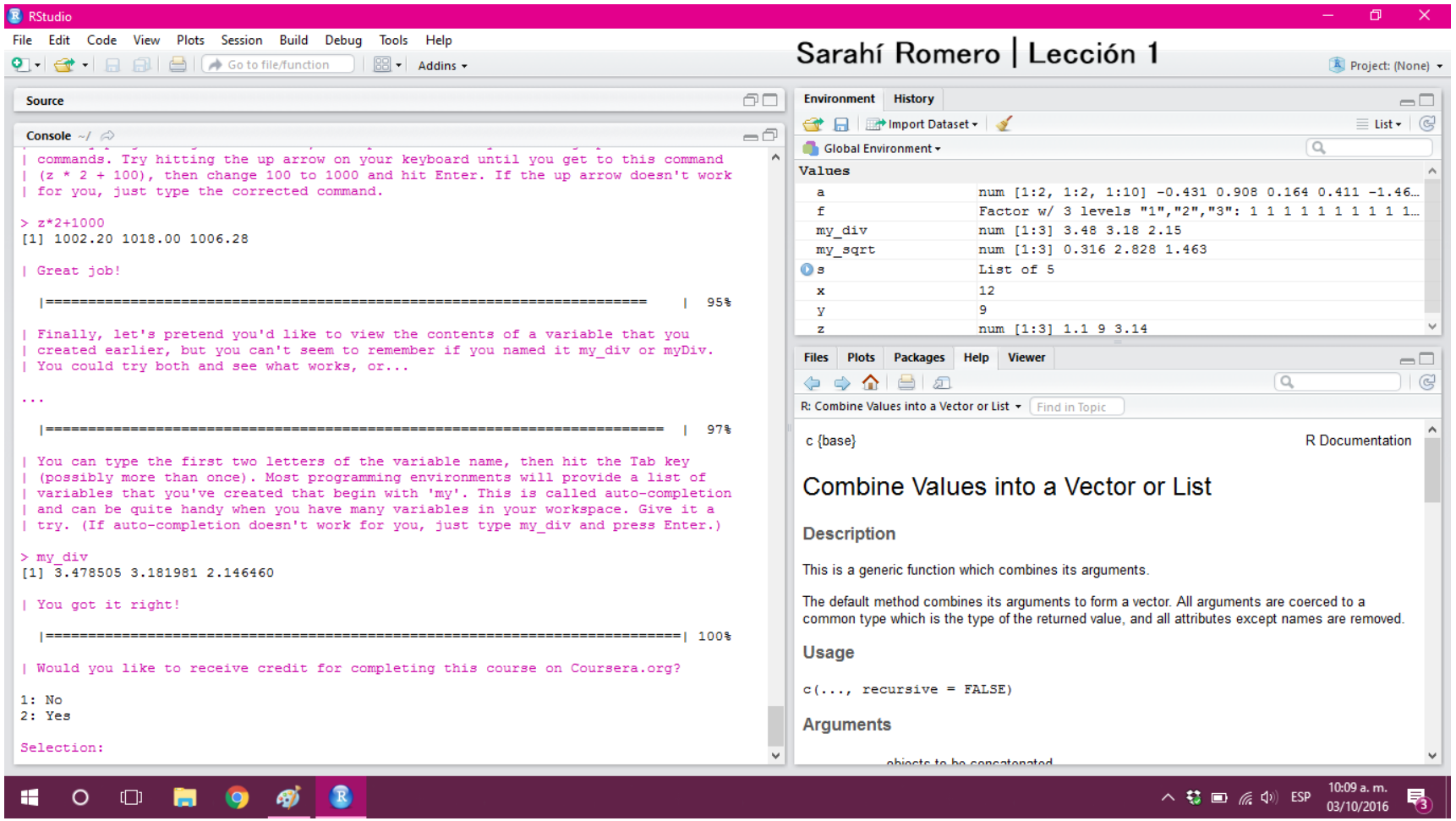
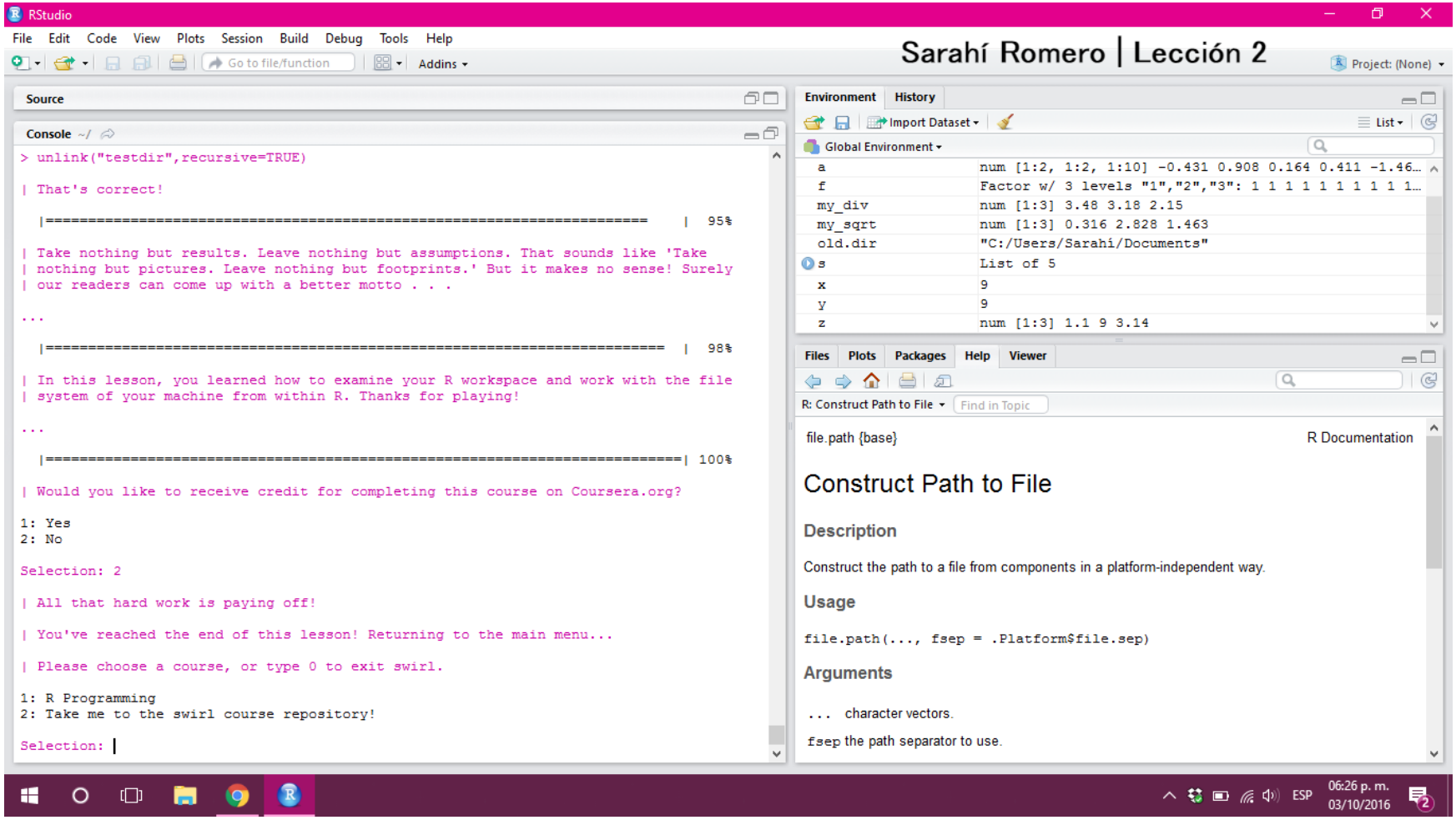
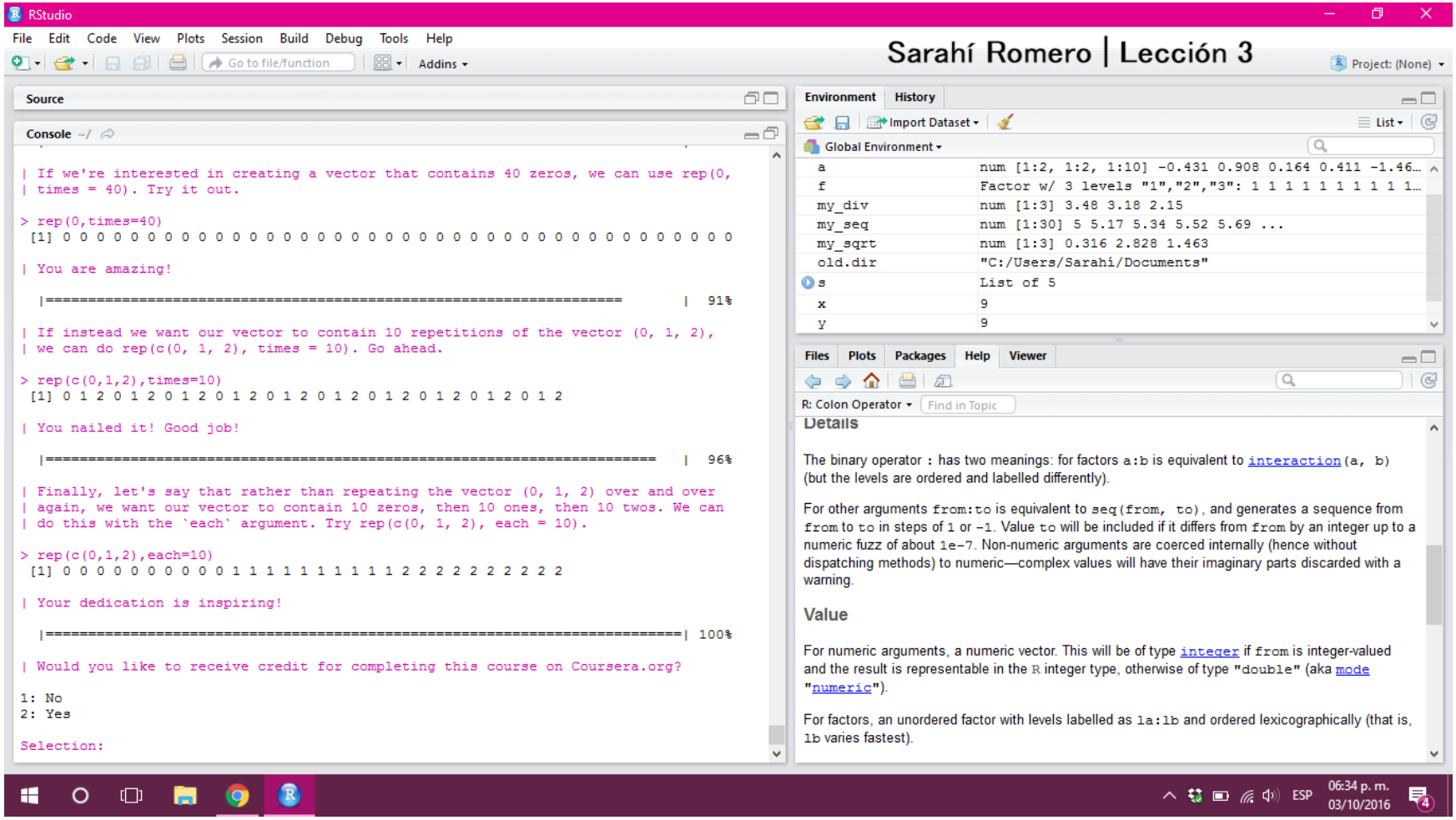
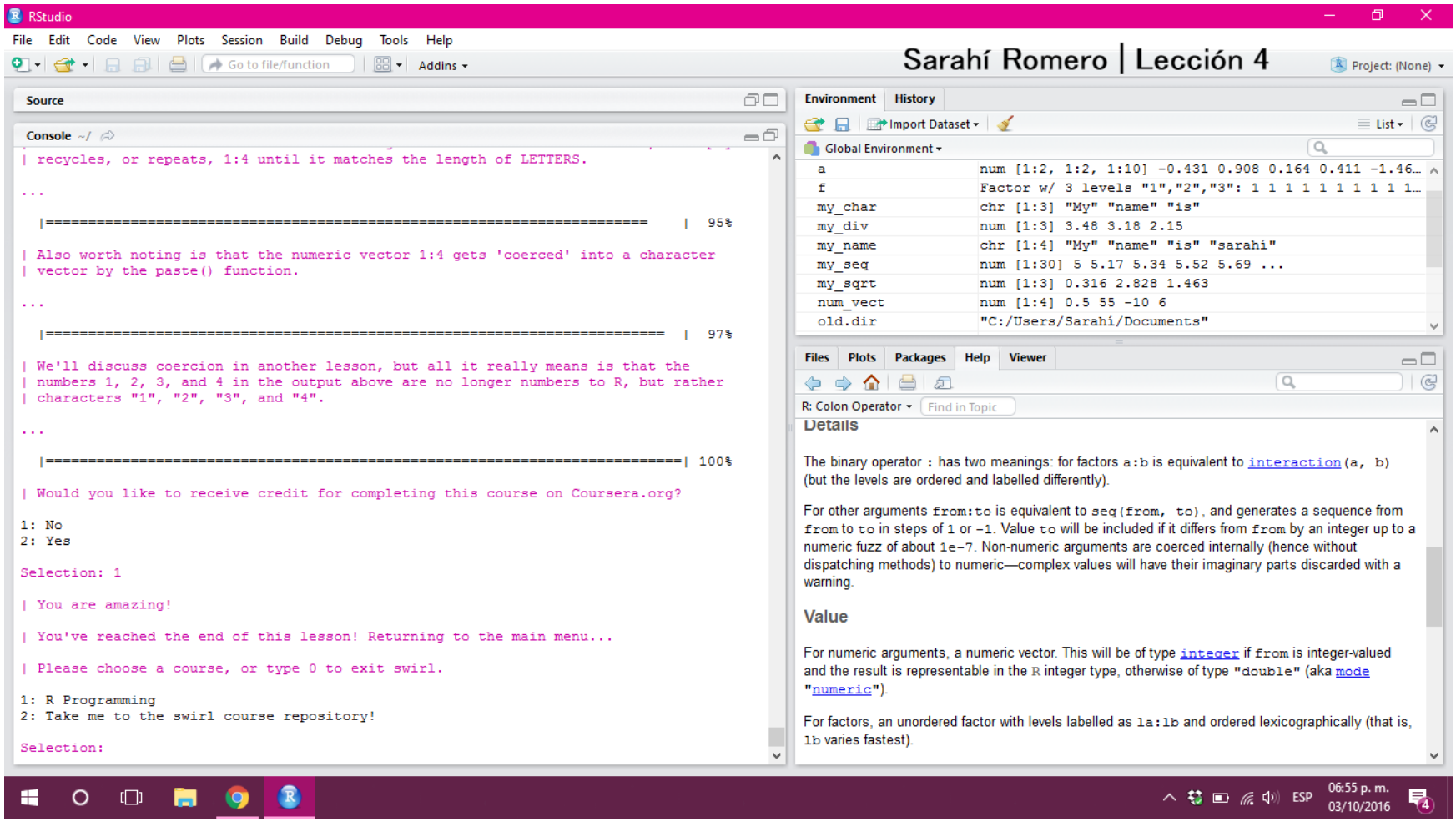
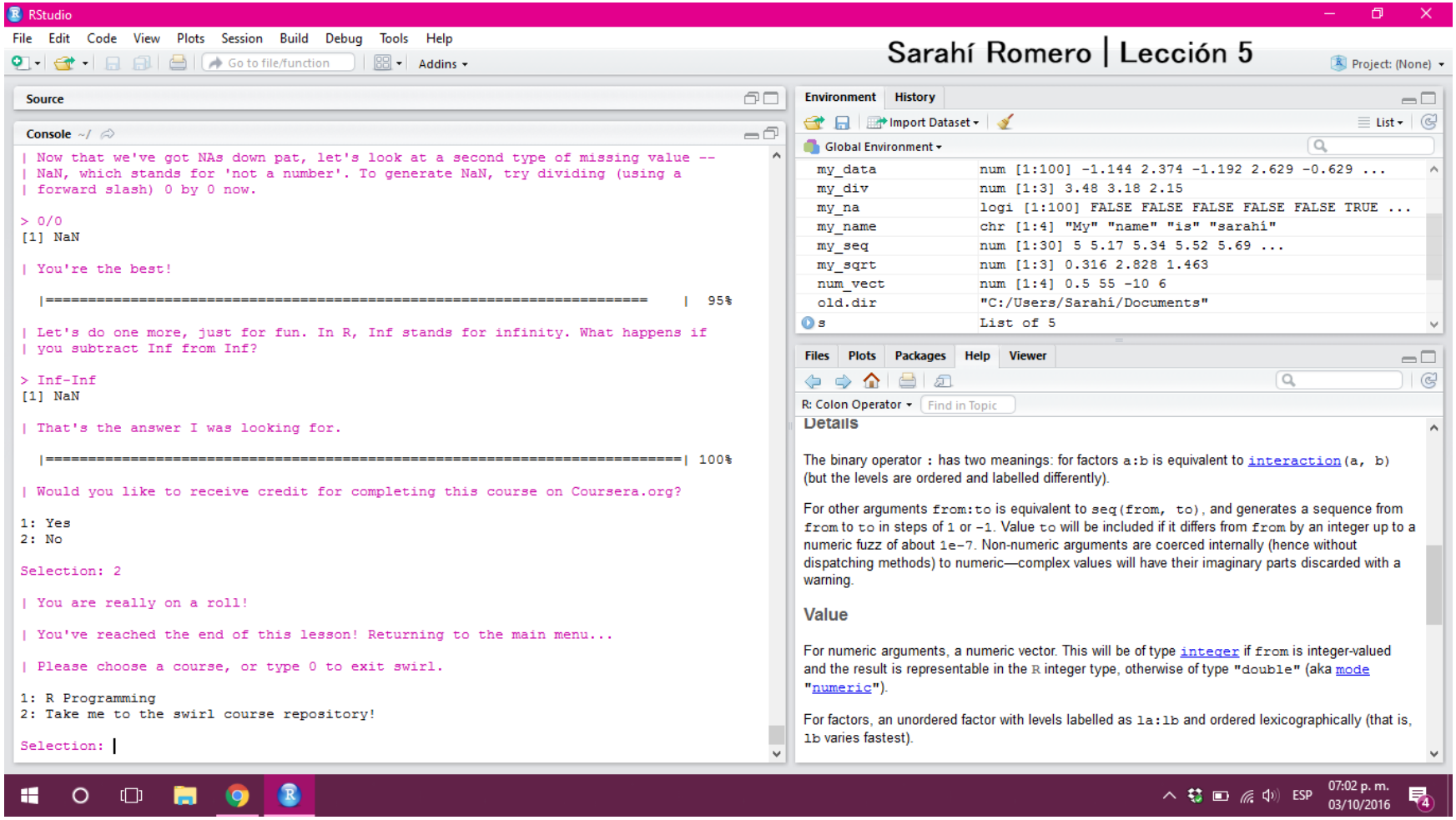
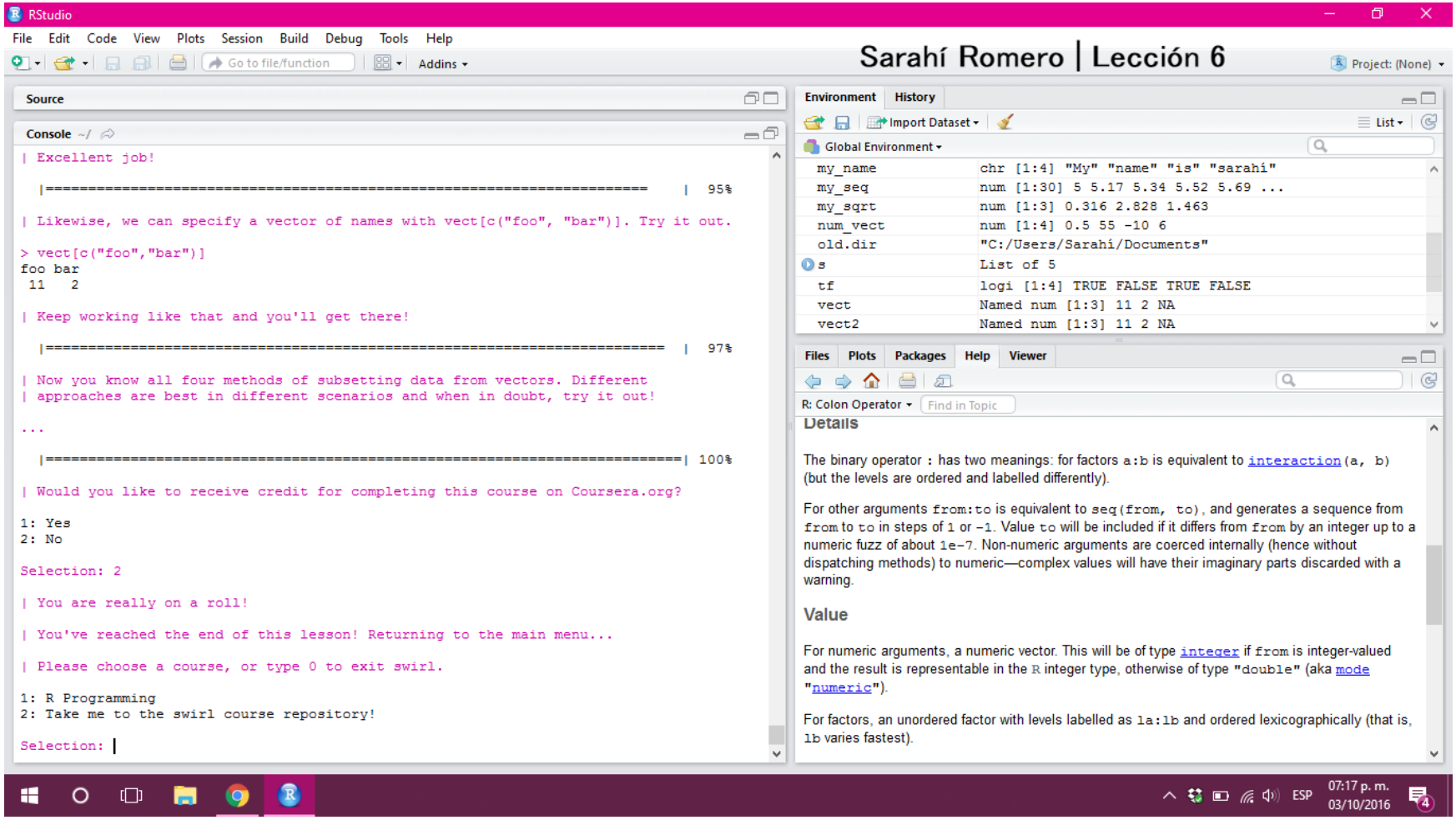

RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero | Lección 1
Project: (None)
Source
Console ~/
| commands. Try hitting the up arrow on your keyboard until you get to this command
| (z * 2 + 100), then change 100 to 1000 and hit Enter. If the up arrow doesn't work
| for you, just type the corrected command.
> z*2+1000
[1] 1002.20 1018.00 1006.28
| Great job!
| 95%
| Finally, let's pretend you'd like to view the contents of a variable that you
| created earlier, but you can't seem to remember if you named it my_div or myDiv.
| You could try both and see what works, or...
...
| 97%
| You can type the first two letters of the variable name, then hit the Tab key
| (possibly more than once). Most programming environments will provide a list of
| variables that you've created that begin with 'my'. This is called auto-completion
| and can be quite handy when you have many variables in your workspace. Give it a
| try. (If auto-completion doesn't work for you, just type my_div and press Enter.)
> my_div
[1] 3.478505 3.181981 2.146460
| You got it right!
| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection:
Environment History
Import Dataset
List
Global Environment
Values
a num [1:2, 1:2, 1:10] -0.431 0.908 0.164 0.411 -1.46...
f Factor w/ 3 levels "1","2","3": 1 1 1 1 1 1 1 1 1 1...
my_div num [1:3] 3.48 3.18 2.15
my_sqrt num [1:3] 0.316 2.828 1.463
s List of 5
x 12
y 9
z num [1:3] 1.1 9 3.14
Files Plots Packages Help Viewer
R: Combine Values into a Vector or List
Find in Topic
c {base} R Documentation
Combine Values into a Vector or List
Description
This is a generic function which combines its arguments.
The default method combines its arguments to form a vector. All arguments are coerced to a common type which is the type of the returned value, and all attributes except names are removed.
Usage
c(..., recursive = FALSE)
Arguments
ESP
10:09 a. m.
03/10/2016

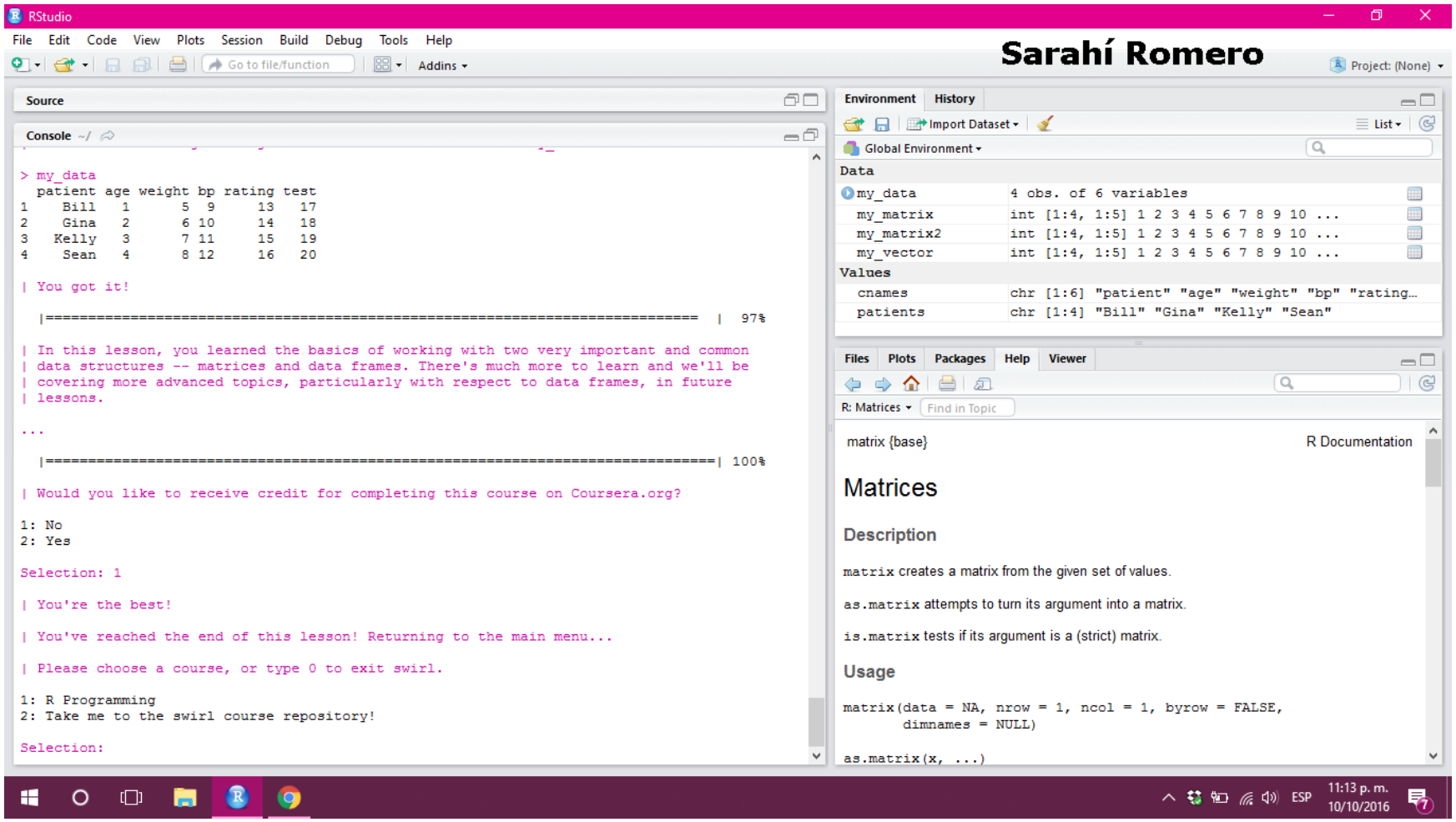

RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero | Lección 2
Project: (None)
Source
Console ~/
> unlink("testdir",recursive=TRUE)
| That's correct!
|========== | 95%
| Take nothing but results. Leave nothing but assumptions. That sounds like 'Take
| nothing but pictures. Leave nothing but footprints.' But it makes no sense! Surely
| our readers can come up with a better motto . . .
...
|========== | 98%
| In this lesson, you learned how to examine your R workspace and work with the file
| system of your machine from within R. Thanks for playing!
...
|==========| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: Yes
2: No
Selection: 2
| All that hard work is paying off!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
a num [1:2, 1:2, 1:10] -0.431 0.908 0.164 0.411 -1.46...
f Factor w/ 3 levels "1","2","3": 1 1 1 1 1 1 1 1 1...
my_div num [1:3] 3.48 3.18 2.15
my_sqrt num [1:3] 0.316 2.828 1.463
old.dir "C:/Users/Sarahí/Documents"
s List of 5
x 9
y 9
z num [1:3] 1.1 9 3.14
Files Plots Packages Help Viewer
R: Construct Path to File
Find in Topic
file.path {base}
R Documentation
Construct Path to File
Description
Construct the path to a file from components in a platform-independent way.
Usage
file.path(..., fsep = .Platform$file.sep)
Arguments
... character vectors.
fsep the path separator to use.
ESP
06:26 p. m.
03/10/2016

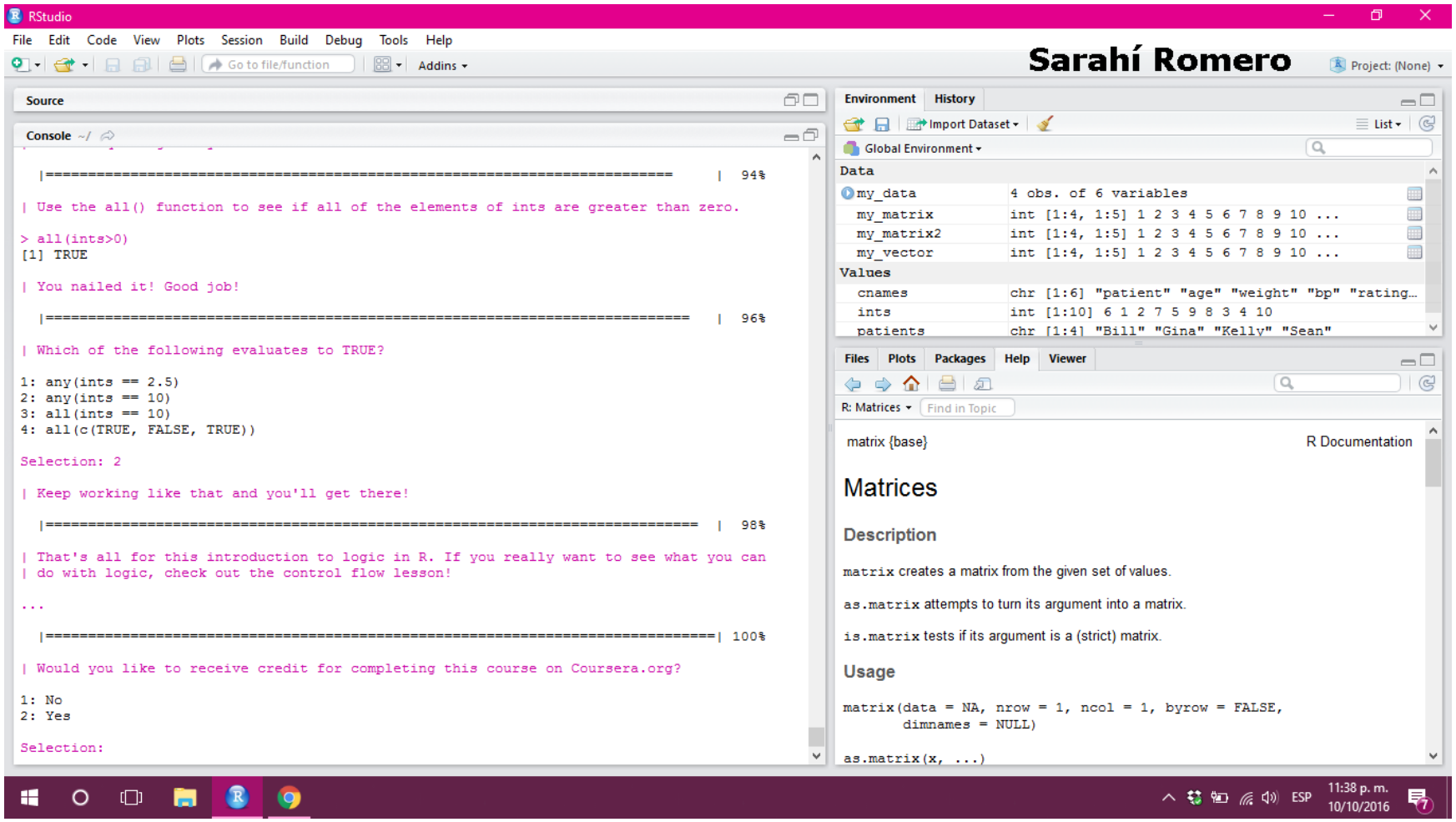

RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero | Lección 3
Project: (None)
Source
Console ~/
| If we're interested in creating a vector that contains 40 zeros, we can use rep(0,
| times = 40). Try it out.
> rep(0,times=40)
[1] 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
| You are amazing!
|======== | 91%
| If instead we want our vector to contain 10 repetitions of the vector (0, 1, 2),
| we can do rep(c(0, 1, 2), times = 10). Go ahead.
> rep(c(0,1,2),times=10)
[1] 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2 0 1 2
| You nailed it! Good job!
|======== | 96%
| Finally, let's say that rather than repeating the vector (0, 1, 2) over and over
| again, we want our vector to contain 10 zeros, then 10 ones, then 10 twos. We can
| do this with the `each` argument. Try rep(c(0, 1, 2), each = 10).
> rep(c(0,1,2),each=10)
[1] 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2
| Your dedication is inspiring!
|========| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection:
Environment History
Import Dataset List
Global Environment
a num [1:2, 1:2, 1:10] -0.431 0.908 0.164 0.411 -1.46...
f Factor w/ 3 levels "1","2","3": 1 1 1 1 1 1 1 1 1 1...
my_div num [1:3] 3.48 3.18 2.15
my_seq num [1:30] 5 5.17 5.34 5.52 5.69 ...
my_sqrt num [1:3] 0.316 2.828 1.463
old.dir "C:/Users/Sarahí/Documents"
s List of 5
x 9
y 9
Files Plots Packages Help Viewer
R: Colon Operator
Find in Topic
Details
The binary operator : has two meanings: for factors a:b is equivalent to interaction(a, b) (but the levels are ordered and labelled differently).
For other arguments from:to is equivalent to seq(from, to), and generates a sequence from from to to in steps of 1 or -1. Value to will be included if it differs from from by an integer up to a numeric fuzz of about 1e-7. Non-numeric arguments are coerced internally (hence without dispatching methods) to numeric—complex values will have their imaginary parts discarded with a warning.
Value
For numeric arguments, a numeric vector. This will be of type integer if from is integer-valued and the result is representable in the R integer type, otherwise of type "double" (aka mode "numeric").
For factors, an unordered factor with levels labelled as la:lb and ordered lexicographically (that is, lb varies fastest).
ESP
06:34 p. m.
03/10/2016

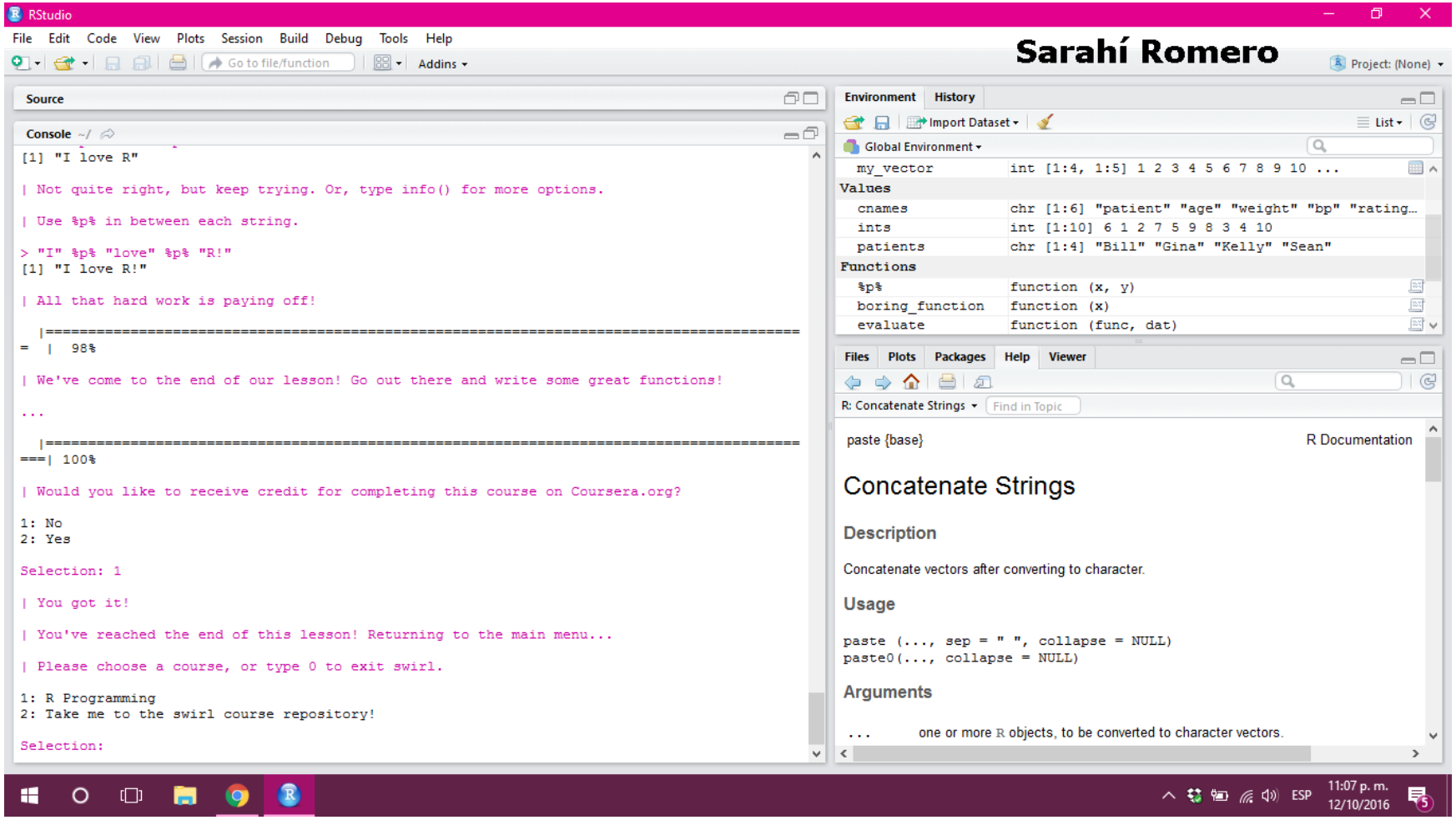

RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero | Lección 4
Project: (None)
Source
Console ~/
| recycles, or repeats, 1:4 until it matches the length of LETTERS.
...
|== | 95%
| Also worth noting is that the numeric vector 1:4 gets 'coerced' into a character
| vector by the paste() function.
...
|== | 97%
| We'll discuss coercion in another lesson, but all it really means is that the
| numbers 1, 2, 3, and 4 in the output above are no longer numbers to R, but rather
| characters "1", "2", "3", and "4".
...
|==| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection: 1
| You are amazing!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
a num [1:2, 1:2, 1:10] -0.431 0.908 0.164 0.411 -1.46...
f Factor w/ 3 levels "1","2","3": 1 1 1 1 1 1 1 1 1 1...
my_char chr [1:3] "My" "name" "is"
my_div num [1:3] 3.48 3.18 2.15
my_name chr [1:4] "My" "name" "is" "sarahí"
my_seq num [1:30] 5 5.17 5.34 5.52 5.69 ...
my_sqrt num [1:3] 0.316 2.828 1.463
num_vect num [1:4] 0.5 55 -10 6
old.dir "C:/Users/Sarahí/Documents"
Files Plots Packages Help Viewer
R: Colon Operator
Find in Topic
Details
The binary operator : has two meanings: for factors a:b is equivalent to interaction(a, b) (but the levels are ordered and labelled differently).
For other arguments from:to is equivalent to seq(from, to), and generates a sequence from from to to in steps of 1 or -1. Value to will be included if it differs from from by an integer up to a numeric fuzz of about 1e-7. Non-numeric arguments are coerced internally (hence without dispatching methods) to numeric—complex values will have their imaginary parts discarded with a warning.
Value
For numeric arguments, a numeric vector. This will be of type integer if from is integer-valued and the result is representable in the R integer type, otherwise of type "double" (aka mode "numeric").
For factors, an unordered factor with levels labelled as la:lb and ordered lexicographically (that is, lb varies fastest).
ESP
06:55 p. m.
03/10/2016

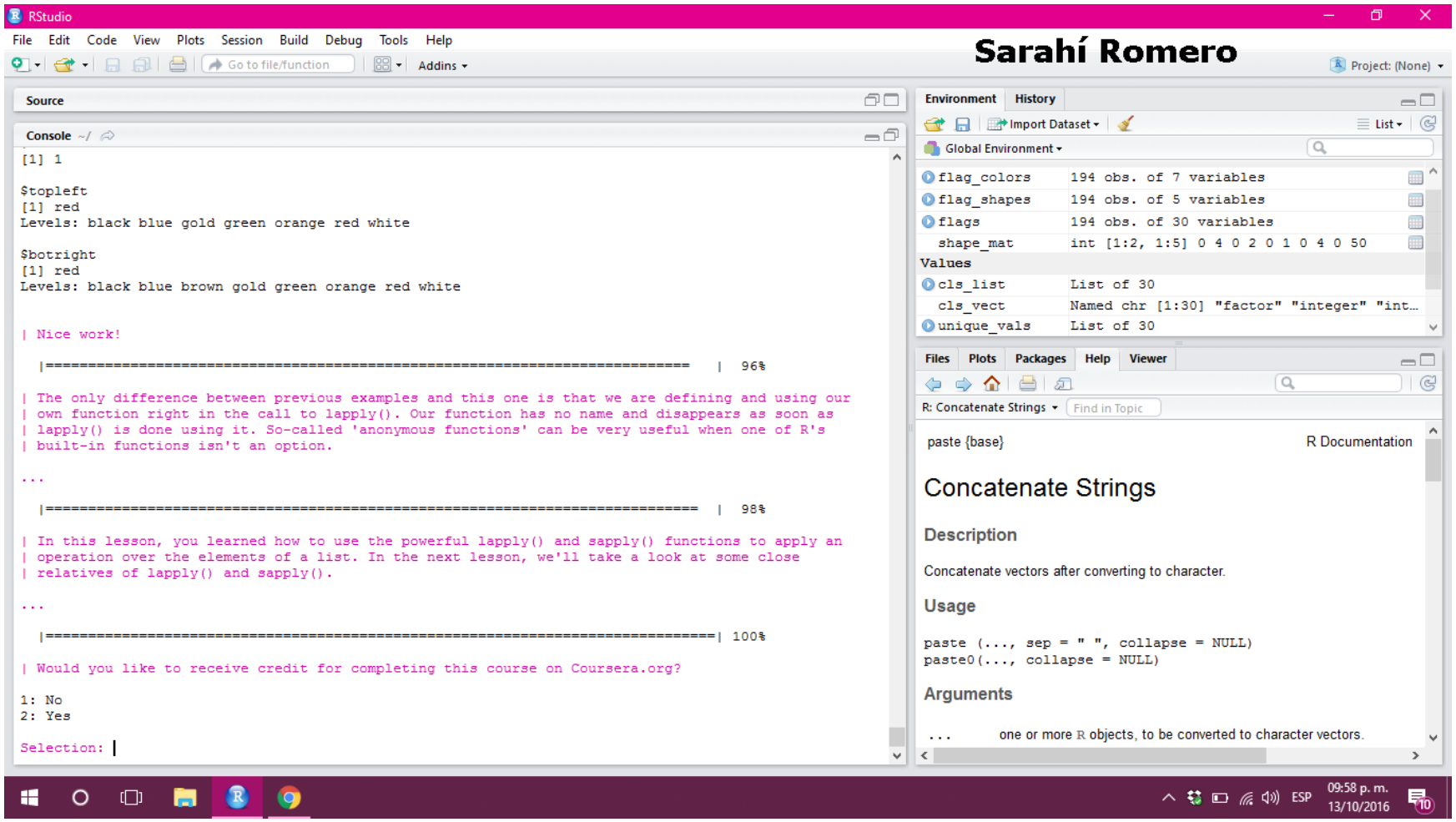

RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero | Lección 5
Project: (None)
Source
Console ~/
| Now that we've got NAs down pat, let's look at a second type of missing value --
| NaN, which stands for 'not a number'. To generate NaN, try dividing (using a
| forward slash) 0 by 0 now.
> 0/0
[1] NaN
| You're the best!
95%
| Let's do one more, just for fun. In R, Inf stands for infinity. What happens if
| you subtract Inf from Inf?
> Inf-Inf
[1] NaN
| That's the answer I was looking for.
100%
| Would you like to receive credit for completing this course on Coursera.org?
1: Yes
2: No
Selection: 2
| You are really on a roll!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
my_data num [1:100] -1.144 2.374 -1.192 2.629 -0.629 ...
my_div num [1:3] 3.48 3.18 2.15
my_na logi [1:100] FALSE FALSE FALSE FALSE FALSE TRUE ...
my_name chr [1:4] "My" "name" "is" "sarahí"
my_seq num [1:30] 5 5.17 5.34 5.52 5.69 ...
my_sqrt num [1:3] 0.316 2.828 1.463
num_vect num [1:4] 0.5 55 -10 6
old.dir "C:/Users/Sarahí/Documents"
s List of 5
Files Plots Packages Help Viewer
R: Colon Operator
Find in Topic
Details
The binary operator : has two meanings: for factors a:b is equivalent to interaction(a, b) (but the levels are ordered and labelled differently).
For other arguments from:to is equivalent to seq(from, to), and generates a sequence from from to to in steps of 1 or -1. Value to will be included if it differs from from by an integer up to a numeric fuzz of about 1e-7. Non-numeric arguments are coerced internally (hence without dispatching methods) to numeric—complex values will have their imaginary parts discarded with a warning.
Value
For numeric arguments, a numeric vector. This will be of type integer if from is integer-valued and the result is representable in the R integer type, otherwise of type "double" (aka mode "numeric").
For factors, an unordered factor with levels labelled as la:lb and ordered lexicographically (that is, lb varies fastest).
ESP
07:02 p. m.
03/10/2016

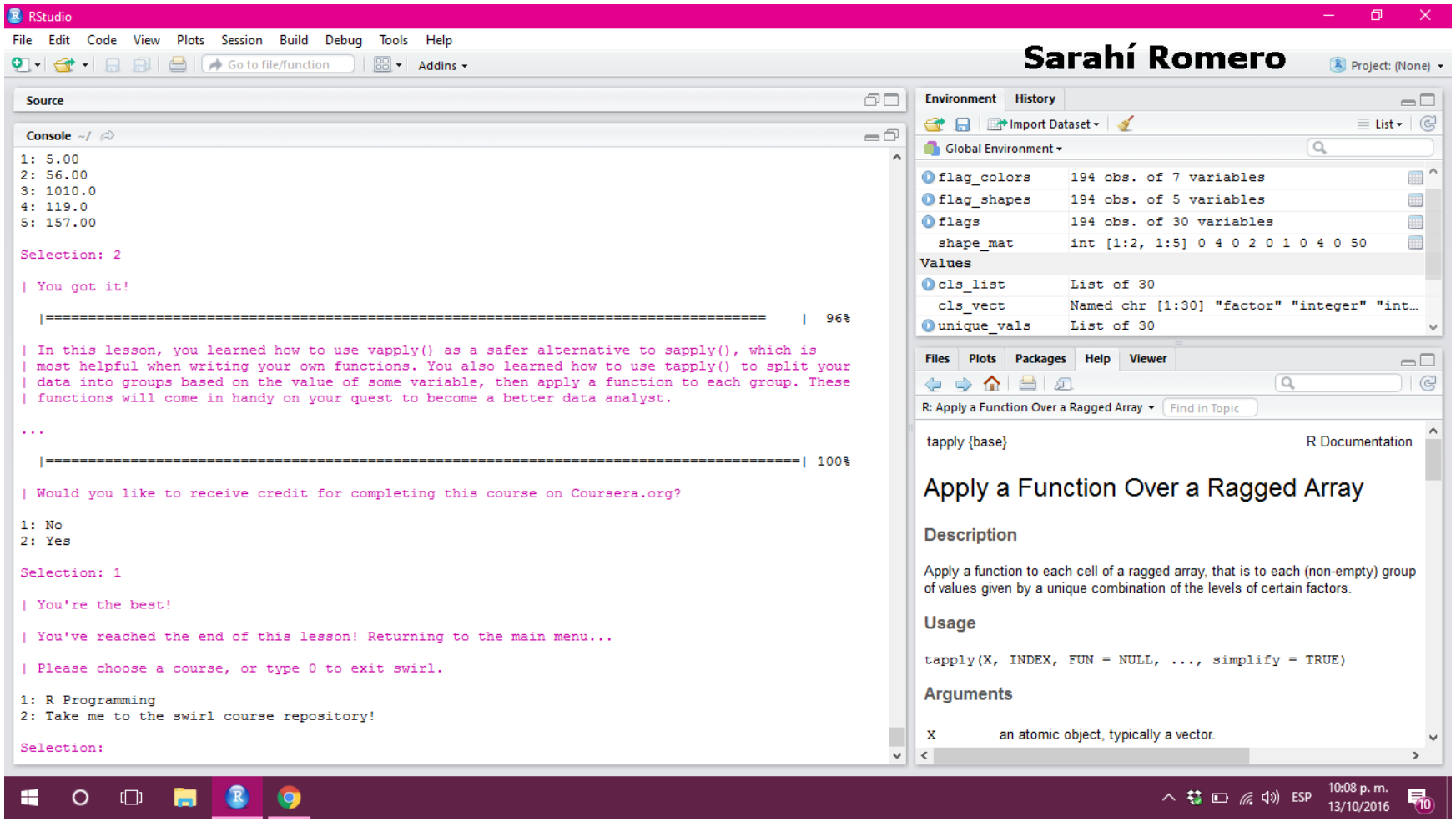

RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero | Lección 6
Project: (None)
Source
Console ~/
| Excellent job!
|== | 95%
| Likewise, we can specify a vector of names with vect[c("foo", "bar")]. Try it out.
> vect[c("foo","bar")]
foo bar
11 2
| Keep working like that and you'll get there!
|== | 97%
| Now you know all four methods of subsetting data from vectors. Different
| approaches are best in different scenarios and when in doubt, try it out!
...
|==| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: Yes
2: No
Selection: 2
| You are really on a roll!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
my_name chr [1:4] "My" "name" "is" "sarahi"
my_seq num [1:30] 5 5.17 5.34 5.52 5.69 ...
my_sqrt num [1:3] 0.316 2.828 1.463
num_vect num [1:4] 0.5 55 -10 6
old.dir "C:/Users/Sarahí/Documents"
s List of 5
tf logi [1:4] TRUE FALSE TRUE FALSE
vect Named num [1:3] 11 2 NA
vect2 Named num [1:3] 11 2 NA
Files Plots Packages Help Viewer
R: Colon Operator
Find in Topic
Details
The binary operator : has two meanings: for factors a:b is equivalent to interaction(a, b) (but the levels are ordered and labelled differently).
For other arguments from:to is equivalent to seq(from, to), and generates a sequence from from to to in steps of 1 or -1. Value to will be included if it differs from from by an integer up to a numeric fuzz of about 1e-7. Non-numeric arguments are coerced internally (hence without dispatching methods) to numeric—complex values will have their imaginary parts discarded with a warning.
Value
For numeric arguments, a numeric vector. This will be of type integer if from is integer-valued and the result is representable in the R integer type, otherwise of type "double" (aka mode "numeric").
For factors, an unordered factor with levels labelled as la:lb and ordered lexicographically (that is, lb varies fastest).
ESP
07:17 p. m.
03/10/2016

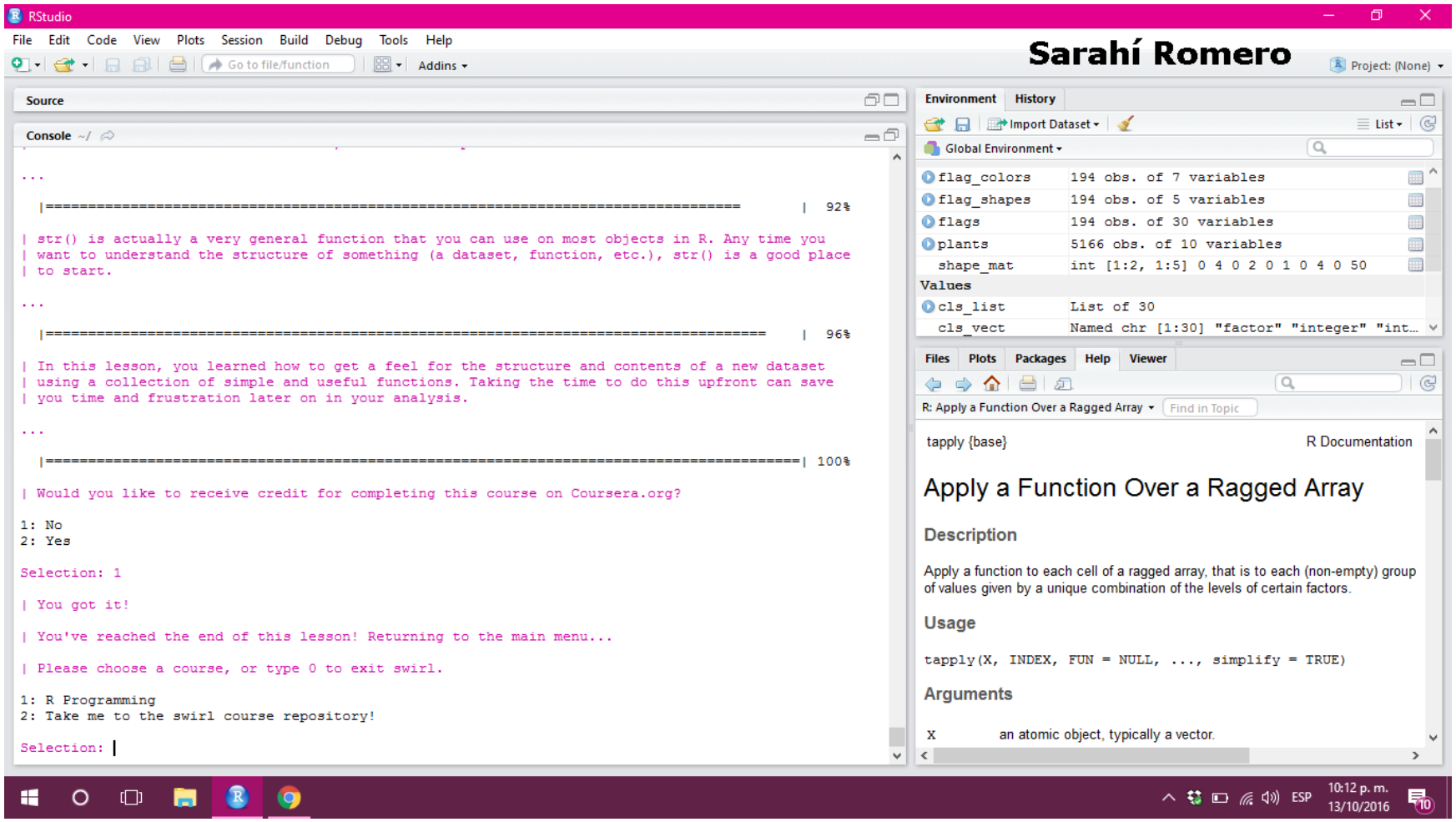

RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero
Project: (None)
Source
Console ~/
> my_data
patient age weight bp rating test
1 Bill 1 5 9 13 17
2 Gina 2 6 10 14 18
3 Kelly 3 7 11 15 19
4 Sean 4 8 12 16 20
| You got it!
| 97%
| In this lesson, you learned the basics of working with two very important and common
| data structures -- matrices and data frames. There's much more to learn and we'll be
| covering more advanced topics, particularly with respect to data frames, in future
| lessons.
...
| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection: 1
| You're the best!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
Data
my_data 4 obs. of 6 variables
my_matrix int [1:4, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
my_matrix2 int [1:4, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
my_vector int [1:4, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
Values
cnames chr [1:6] "patient" "age" "weight" "bp" "rating...
patients chr [1:4] "Bill" "Gina" "Kelly" "Sean"
Files Plots Packages Help Viewer
R: Matrices
Find in Topic
matrix {base}
R Documentation
Matrices
Description
matrix creates a matrix from the given set of values.
as.matrix attempts to turn its argument into a matrix.
is.matrix tests if its argument is a (strict) matrix.
Usage
matrix(data = NA, nrow = 1, ncol = 1, byrow = FALSE,
dimnames = NULL)
as.matrix(x, ...)
ESP
11:13 p. m.
10/10/2016


RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero
Project: (None)
Source
Console ~/
|========== | 94%
| Use the all() function to see if all of the elements of ints are greater than zero.
> all(ints>0)
[1] TRUE
| You nailed it! Good job!
|========== | 96%
| Which of the following evaluates to TRUE?
1: any(ints == 2.5)
2: any(ints == 10)
3: all(ints == 10)
4: all(c(TRUE, FALSE, TRUE))
Selection: 2
| Keep working like that and you'll get there!
|========== | 98%
| That's all for this introduction to logic in R. If you really want to see what you can
| do with logic, check out the control flow lesson!
...
|==========| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection:
Environment History
Import Dataset
List
Global Environment
Data
my_data 4 obs. of 6 variables
my_matrix int [1:4, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
my_matrix2 int [1:4, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
my_vector int [1:4, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
Values
cnames chr [1:6] "patient" "age" "weight" "bp" "rating...
ints int [1:10] 6 1 2 7 5 9 8 3 4 10
patients chr [1:4] "Bill" "Gina" "Kelly" "Sean"
Files Plots Packages Help Viewer
R: Matrices
Find in Topic
matrix {base}
R Documentation
Matrices
Description
matrix creates a matrix from the given set of values.
as.matrix attempts to turn its argument into a matrix.
is.matrix tests if its argument is a (strict) matrix.
Usage
matrix(data = NA, nrow = 1, ncol = 1, byrow = FALSE,
dimnames = NULL)
as.matrix(x, ...)
ESP
11:38 p. m.
10/10/2016


RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero
Project: (None)
Source
Console ~/
[1] "I love R"
| Not quite right, but keep trying. Or, type info() for more options.
| Use %p% in between each string.
> "I" %p% "love" %p% "R!"
[1] "I love R!"
| All that hard work is paying off!
|======== 98%
| We've come to the end of our lesson! Go out there and write some great functions!
...
|======== 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection: 1
| You got it!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
my_vector int [1:4, 1:5] 1 2 3 4 5 6 7 8 9 10 ...
Values
cnames chr [1:6] "patient" "age" "weight" "bp" "rating...
ints int [1:10] 6 1 2 7 5 9 8 3 4 10
patients chr [1:4] "Bill" "Gina" "Kelly" "Sean"
Functions
%p% function (x, y)
boring_function function (x)
evaluate function (func, dat)
Files Plots Packages Help Viewer
R: Concatenate Strings
Find in Topic
paste {base}
R Documentation
Concatenate Strings
Description
Concatenate vectors after converting to character.
Usage
paste (..., sep = " ", collapse = NULL)
paste0(..., collapse = NULL)
Arguments
... one or more R objects, to be converted to character vectors.
ESP
11:07 p. m.
12/10/2016


RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero
Project: (None)
Source
Console ~/
[1] 1
$topleft
[1] red
Levels: black blue gold green orange red white
$botright
[1] red
Levels: black blue brown gold green orange red white
| Nice work!
|======== | 96%
| The only difference between previous examples and this one is that we are defining and using our
| own function right in the call to lapply(). Our function has no name and disappears as soon as
| lapply() is done using it. So-called 'anonymous functions' can be very useful when one of R's
| built-in functions isn't an option.
...
|======== | 98%
| In this lesson, you learned how to use the powerful lapply() and sapply() functions to apply an
| operation over the elements of a list. In the next lesson, we'll take a look at some close
| relatives of lapply() and sapply().
...
|==========| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection:
Environment History
Import Dataset
List
Global Environment
flag_colors 194 obs. of 7 variables
flag_shapes 194 obs. of 5 variables
flags 194 obs. of 30 variables
shape_mat int [1:2, 1:5] 0 4 0 2 0 1 0 4 0 50
Values
cls_list List of 30
cls_vect Named chr [1:30] "factor" "integer" "int…
unique_vals List of 30
Files Plots Packages Help Viewer
R: Concatenate Strings
Find in Topic
paste {base} R Documentation
Concatenate Strings
Description
Concatenate vectors after converting to character.
Usage
paste (..., sep = " ", collapse = NULL)
paste0(..., collapse = NULL)
Arguments
... one or more R objects, to be converted to character vectors.
ESP
09:58 p. m.
13/10/2016


RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero
Project: (None)
Source
Console ~/
1: 5.00
2: 56.00
3: 1010.0
4: 119.0
5: 157.00
Selection: 2
| You got it!
| 96%
| In this lesson, you learned how to use vapply() as a safer alternative to sapply(), which is
| most helpful when writing your own functions. You also learned how to use tapply() to split your
| data into groups based on the value of some variable, then apply a function to each group. These
| functions will come in handy on your quest to become a better data analyst.
...
| 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection: 1
| You're the best!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
flag_colors 194 obs. of 7 variables
flag_shapes 194 obs. of 5 variables
flags 194 obs. of 30 variables
shape_mat int [1:2, 1:5] 0 4 0 2 0 1 0 4 0 50
Values
cls_list List of 30
cls_vect Named chr [1:30] "factor" "integer" "int…
unique_vals List of 30
Files Plots Packages Help Viewer
R: Apply a Function Over a Ragged Array
Find in Topic
tapply {base} R Documentation
Apply a Function Over a Ragged Array
Description
Apply a function to each cell of a ragged array, that is to each (non-empty) group of values given by a unique combination of the levels of certain factors.
Usage
tapply(X, INDEX, FUN = NULL, ..., simplify = TRUE)
Arguments
X an atomic object, typically a vector.
ESP
10:08 p. m.
13/10/2016


RStudio
File Edit Code View Plots Session Build Debug Tools Help
Sarahí Romero
Project: (None)
Source
Console ~/
...
|== | 92%
| str() is actually a very general function that you can use on most objects in R. Any time you
| want to understand the structure of something (a dataset, function, etc.), str() is a good place
| to start.
...
|== | 96%
| In this lesson, you learned how to get a feel for the structure and contents of a new dataset
| using a collection of simple and useful functions. Taking the time to do this upfront can save
| you time and frustration later on in your analysis.
...
|== | 100%
| Would you like to receive credit for completing this course on Coursera.org?
1: No
2: Yes
Selection: 1
| You got it!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
1: R Programming
2: Take me to the swirl course repository!
Selection:
Environment History
Import Dataset
List
Global Environment
flag_colors 194 obs. of 7 variables
flag_shapes 194 obs. of 5 variables
flags 194 obs. of 30 variables
plants 5166 obs. of 10 variables
shape_mat int [1:2, 1:5] 0 4 0 2 0 1 0 4 0 50
Values
cls_list List of 30
cls_vect Named chr [1:30] "factor" "integer" "int…
Files Plots Packages Help Viewer
R: Apply a Function Over a Ragged Array
Find in Topic
tapply {base} R Documentation
Apply a Function Over a Ragged Array
Description
Apply a function to each cell of a ragged array, that is to each (non-empty) group of values given by a unique combination of the levels of certain factors.
Usage
tapply(X, INDEX, FUN = NULL, ..., simplify = TRUE)
Arguments
X an atomic object, typically a vector.
ESP
10:12 p. m.
13/10/2016

RStudio

File Edit Code View Plots Session Build Debug Tools Help

Sarahí Romero

Go to file/function | Addins | Project: (None)

Source

Console ~/

```
| Looks like our column means are almost normally distributed, right? That's the Central Limit
| Theorem at work, but that's a lesson for another day!

...

  |=======================================================================================     |  94%

| All of the standard probability distributions are built into R, including exponential (rexp()),
| chi-squared (rchisq()), gamma (rgamma()), .... Well, you see the pattern.

...

  |=========================================================================================   |  97%

| Simulation is practically a field of its own and we've only skimmed the surface of what's
| possible. I encourage you to explore these and other functions further on your own.

...

  |=========================================================================================== | 100%

| Would you like to receive credit for completing this course on Coursera.org?

1: No
2: Yes

Selection: 1

| You nailed it! Good job!

| You've reached the end of this lesson! Returning to the main menu...

| Please choose a course, or type 0 to exit swirl.

1: R Programming
2: Take me to the swirl course repository!

Selection:
```

Environment | History

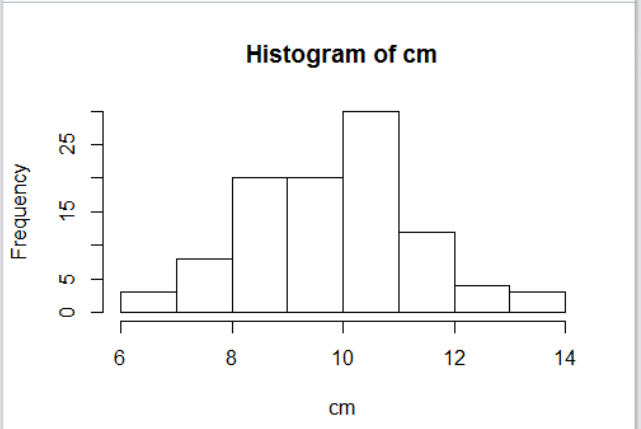
Import Dataset | List

Global Environment

flags	194 obs. of 30 variables
my_pois	int [1:5, 1:100] 4 9 8 5 12 10 8 9 15 …
plants	5166 obs. of 10 variables
shape_mat	int [1:2, 1:5] 0 4 0 2 0 1 0 4 0 50
Values	
cls_list	List of 30
cls_vect	Named chr [1:30] "factor" "integer" "int…
cm	num [1:100] 7.6 12.4 7 8 9 8.4 10.6 8.8 …

Files | Plots | Packages | Help | Viewer

Zoom | Export | Publish



ESP 10:22 p. m. 13/10/2016

RStudio

File Edit Code View Plots Session Build Debug Tools Help

Sarahí Romero

Go to file/function | Addins | Project: (None)

Source

Console ~/

```
  |=======================================================================================      |  94%

| Use difftime(Sys.time(), t1, units = 'days') to find the amount of time in DAYS that has passed
| since you created t1.

>
> difftime(Sys.time(), t1, units = "days")
Time difference of 0.007013738 days

| You nailed it! Good job!

  |=========================================================================================    |  97%

| In this lesson, you learned how to work with dates and times in R. While it is important to
| understand the basics, if you find yourself working with dates and times often, you may want to
| check out the lubridate package by Hadley Wickham.

...

  |=========================================================================================| 100%

| Would you like to receive credit for completing this course on Coursera.org?

1: No
2: Yes

Selection: 1

| Keep working like that and you'll get there!

| You've reached the end of this lesson! Returning to the main menu...

| Please choose a course, or type 0 to exit swirl.

1: R Programming
2: Take me to the swirl course repository!

Selection:
```

Environment | **History**

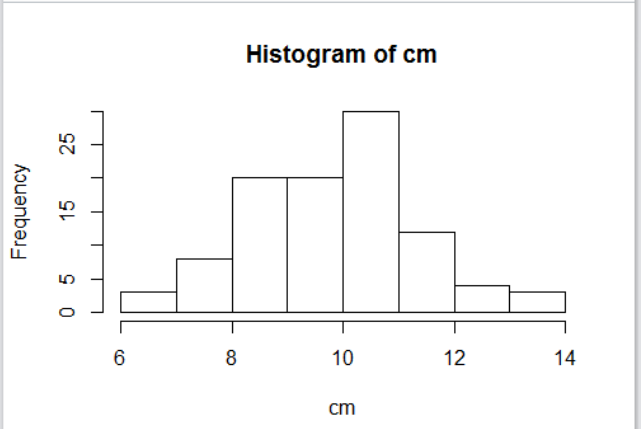
Import Dataset | List

Global Environment

cm	num [1:100] 7.6 12.4 7 8 9 8.4 10.6 8.8 …
d1	2016-10-13
d2	1969-01-01
flips	num [1:100] 1 1 1 1 0 1 1 1 1 1 ...
flips2	int [1:100] 1 1 1 0 1 0 1 0 1 1 ...
t1	2016-10-13 22:28:49
t2	2016-10-13 22:29:41
t3	"October 17, 1986 08:24"
t4	List of 1

Files | **Plots** | **Packages** | **Help** | **Viewer**

Zoom | Export | Publish



ESP 10:39 p. m. 13/10/2016

RStudio

File Edit Code View Plots Session Build Debug Tools Help

Go to file/function | Addins

Sarahí Romero

Project: (None)

Source

Console ~/

```
  |=======================================================================================    |  96%

| Use hist() with the vector mtcars$mpg to create a histogram.

> hist(mtscars$mpg)
Error in hist(mtscars$mpg) : object 'mtscars' not found
> hist(mtcars$mpg)

| Perseverance, that's the answer.

  |=======================================================================================  |  98%

| In this lesson, you learned how to work with base graphics in R. The best place to go from here
| is to study the ggplot2 package. If you want to explore other elements of base graphics, then
| this web page (http://www.ling.upenn.edu/~joseff/rstudy/week4.html) provides a useful overview.

...

  |=======================================================================================| 100%

| Would you like to receive credit for completing this course on Coursera.org?

1: No
2: Yes

Selection: 1

| You are doing so well!

| You've reached the end of this lesson! Returning to the main menu...

| Please choose a course, or type 0 to exit swirl.

1: R Programming
2: Take me to the swirl course repository!

Selection:
```

Environment History

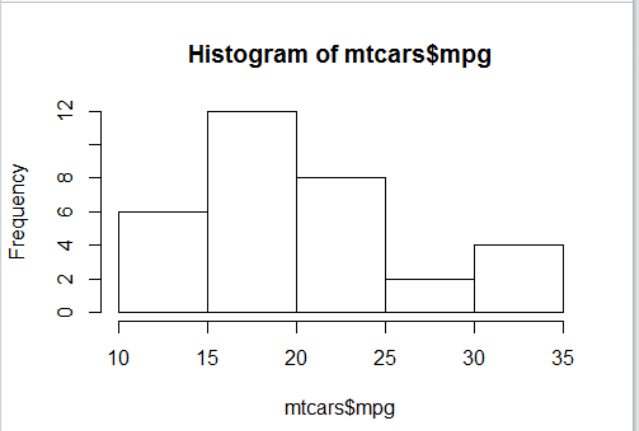
Import Dataset | List

Global Environment

mtcars	32 obs. of 11 variables
my_pois	int [1:5, 1:100] 4 9 8 5 12 10 8 9 15 …
plants	5166 obs. of 10 variables
shape_mat	int [1:2, 1:5] 0 4 0 2 0 1 0 4 0 50
Values	
cls_list	List of 30
cls_vect	Named chr [1:30] "factor" "integer" "int…
cm	num [1:100] 7.6 12.4 7 8 9 8.4 10.6 8.8 …
d1	2016-10-13

Files Plots Packages Help Viewer

Zoom | Export | Publish



ESP 10:48 p. m. 13/10/2016