

R Activity: Learning R Programming with Swirl

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Basic Building Blocks

```
Console Terminal x Jobs x
R 4.1.0 . ~/
| 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...
...myDiv
|=====| 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
| Your dedication is inspiring!
|=====| 100%
| Would you like to inform someone about your successful completion of this lesson via
| email?
1: No
2: Yes
Selection: 1
| Perseverance, that's the answer.
| 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 E
2: Take me to the swirl course repository!
Selection: |
```

Workspace and Files

```
Console Terminal x Jobs x
R 4.1.0 . ~/
| back to the original values at the end. This isn't the same as what we have done here,
| but it seems similar enough to mention.
...
|=====| 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 . . .
...
|=====| 97%
| 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 inform someone about your successful completion of this lesson via
| email?
1: No
2: Yes
Selection: 1
| Excellent work!
| You've reached the end of this lesson! Returning to the main menu...
| Please choose a course, or type 0 to exit swirl.
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Selection: |
```

Sequences of Numbers

```
Console Terminal Jobs
R 4.1.0 . ~/
| 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 0 1 2

| That's a job well done!

|=====| 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 2 2

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

|=====| 100%
| Would you like to inform someone about your successful completion of this lesson via
| email?

1: No
2: Yes

Selection: 1

| Great 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 E
2: Take me to the swirl course repository!

Selection: |
```

Vectors

```
Console Terminal Jobs
R 4.1.0 . ~/
| Since the character vector LETTERS is longer than the numeric vector 1:4, R simply
| 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 inform someone about your successful completion of this lesson via
| email?

1: Yes
2: No

Selection: 2

| All that practice 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 E
2: Take me to the swirl course repository!

Selection: |
```

Missing Values

```
Console Terminal x Jobs x
R 4.1.0 ~/
| One more time. You can do it! Or, type info() for more options.

| Try 0/0.

> 0/0
[1] NaN

| You are really on a roll!

|=====| 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

| Nice work!

|=====| 100%
| Would you like to inform someone about your successful completion of this lesson via
| email?

1: No
2: Yes

Selection: 1

| You're the best!

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

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Selection: |
```