



**18 DECEMBER 2018**

Herman Teirlinck,  
01.23 Leon Stynen



**Brooke Watson**

@brookLYNevery1

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How did we get all the way to November of big 2018 before anybody told me that "object of type `closure` is not subsettable" just means I gave R a function when she wanted a plain old object?

4:32 PM - 8 Nov 2018

8 Retweets 114 Likes



4 8 114



**Brooke Watson**

@brookLYNevery1

@ACLU data scientist, @RLadiesNYC organizer and #NASADatanaut. America's Next Top Modeller. Views my own.

New York, NY

brooke.science

Joined June 2012



**Colin Fay** 🙌 @\_ColinFay · Nov 8

Replying to @brookLYNevery1

Yeah this error is quite obscure... `closure` is the functions internal type (try `typeof(mean)` for example), and this error means R has tried somewhere in the code to do a [ or \$ on this function. Definitely the perfect example of a bad and obscure R error message.

1 1 4



**Colin Fay** 🙌 @\_ColinFay · Nov 8

Would writing a 📦 that capture error messages and print more informative messages make sense? (Not asking for a friend, I definitely feel like coding this :))

2 9



**JonTheGeek** @JonTheGeek · Nov 9

I know I spend a lot of time capturing and translating error messages when I write internal packages for work (so it's not just some generic error from way up the stack). A package focused on generalizing that definitely sounds interesting.

1 1



ERROR  
HANDLING

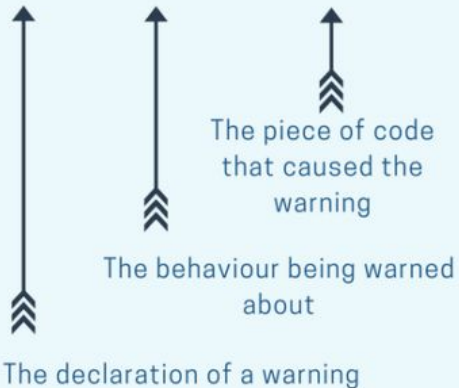
## R HAS BOTH ERRORS AND WARNINGS

Errors: R says no  
Warnings: R says OK, sure, but you may not like what you're going to get

## DECODING A WARNING

Warning messages can be very variable in format, but there are often common elements.

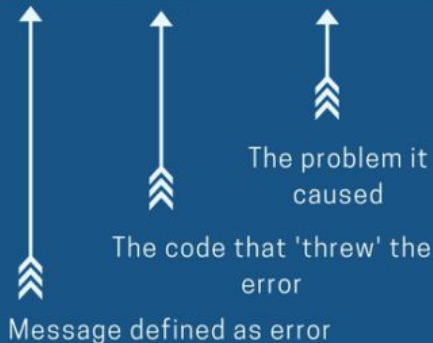
```
Warning message:  
Removed 1 rows containing missing values (geom_path).
```



## DECODING AN ERROR MESSAGE

Error messages typically come in three parts:

```
> fit[5,100,]  
Error in fit[5, 100, ] : subscript out of bounds
```



Errors are a way of telling you why a chunk of code is not possible to execute.

Warnings are a way of telling you that the code is behaving in a different way than you might otherwise expect.


# Share your snippets, **errors** and solutions during the coding session:

Go to [https://hackmd.io/wz\\_7\\_fCJTxWpFL23bklbjg](https://hackmd.io/wz_7_fCJTxWpFL23bklbjg) and post your code in between backticks:

*For example:*

```
```\n\nlibrary(tidyverse)\n\nmy_data <- ... \n\n```
```

# The concept

We defined a number of challenges. If you were able to achieve a challenge, add a  to your laptop screen.

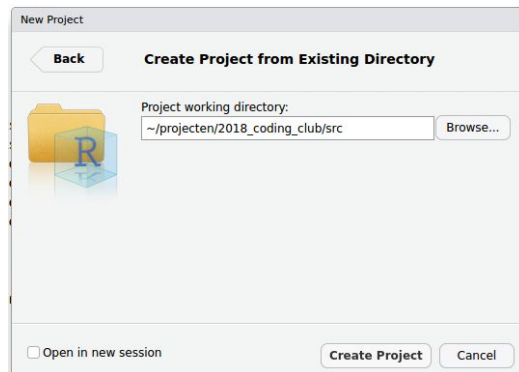
The objective is that **everyone** achieves !

- Someone has more  than you? **Ask for help!**
- Someone has less  than you? **Provide help!**

- Download coding club material and work locally, **not in sync** with the Google drive

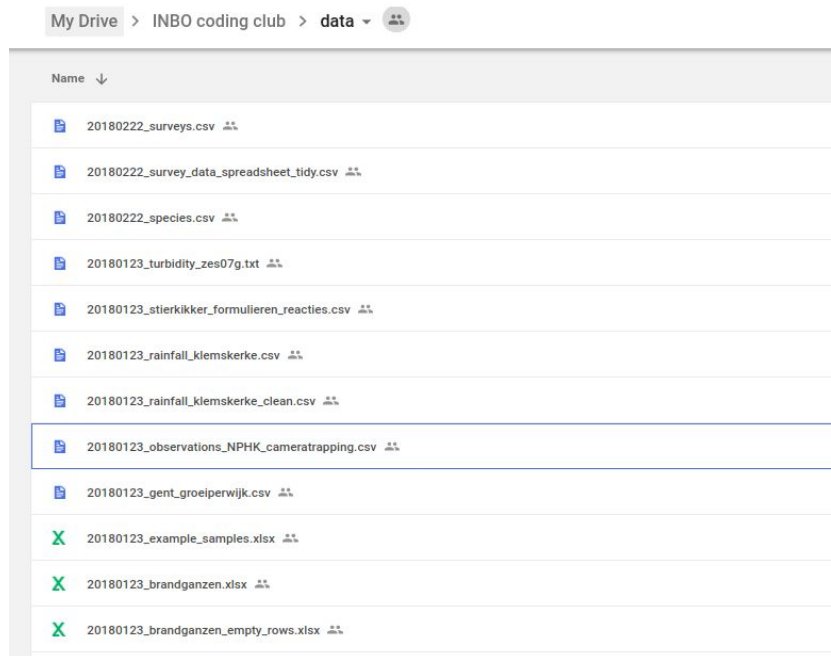


- Create new Rstudio project in your local coding club folder (or in `src` folder, as you prefer)



- Download coding club material and work locally, not in sync with the Google drive
- Create new Rstudio project in the **src** folder...
- Use relative paths to data files!

```
> library(readr)
> read_csv2("../data/20180123_gent_groeiperwijk.csv")
```



For this coding club:

[20180123\\_rainfall\\_klemskerke\\_clean.csv](#)  
[20181218\\_bird\\_rings.csv](#)

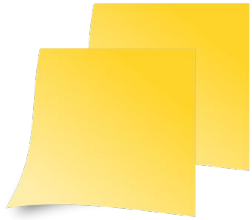




File `./src/2018_12_18_challenge1.R`, doesn't work. Can you help me?

1. Open file `20181220_bird_rings.csv` as `bird_rings`
2. Preview of `bird_rings`
3. Make dataframe `vernacular_names` with vernacular names in English and Dutch
4. Add vernacular names to `bird_rings`
5. Select birds with `L` in ring number



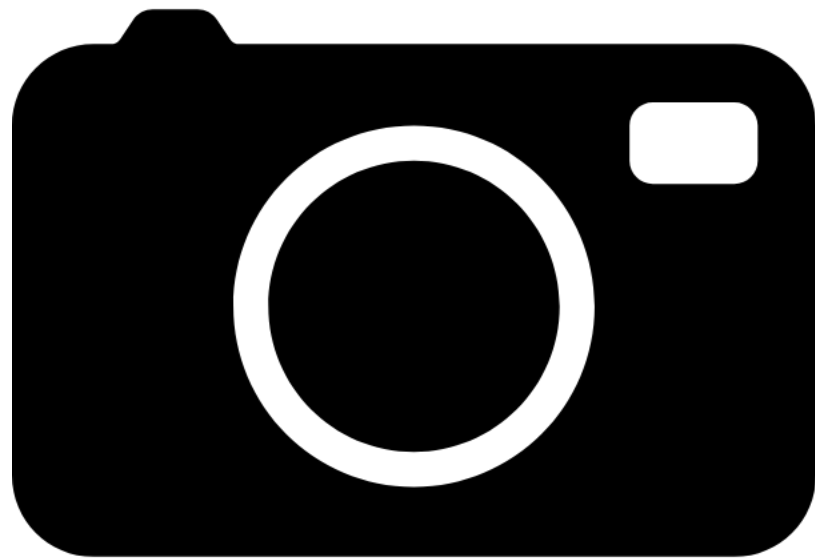


While solving this challenge, each time you run (a section of the) code and an **error occurs**, copy paste this error to the [hackmd section](#) `## Challenge 2 - list errors`.

Read in the data set [20180123\\_rainfall\\_klemskerke\\_clean](#).csv with variable name `klemskerke`. Filter the data by only using data of 2012 and selecting only those records with a `quality_code` equal to 220. Replace all values smaller or equal to 0.01 by zero values. Calculate the total amount of rainfall for each month of the year and make a bar chart of the resulting dataframe.

```
# A tibble: 12 x 2
  month monthsum
  <dbl>   <dbl>
1     1     55.4
2     2     17.3
3     3     60.2
...

```





Download script [20181218\\_challenge\\_3.R](#) and check for each of the `wont\_work` steps the error message to identify what is going wrong

**Discuss with your neighbour:** Is there a common pattern in these error messages?

```
## function 'sum' ----
```

```
wont_work <- c('a', 'b', 'c')
```

```
sum(wont_work)
```

```
will_work <- 1:10
```

```
sum(will_work)
```

```
...
```

- **Packages** provide new objects (classes) and methods

```
library('ggplot2')
```

```
library('sp')
```

```
library('raster')
```

- **methods/functions** act on other **objects** (object types) to do something -> ()

```
sum(my_vector)
```

```
t(my_df) # transpose data.frame
```

- These object types have **characteristics/attributes**

```
attributes(my_df)
```

Errors will happen when you try to apply a method to an incompatible



# R informs you about it:

invalid 'type' () of argument



or

'' not defined for "" objects.

or

non-numeric argument to  operator

or

no applicable method for '' applied  
to an object of class ""

sometimes...

R is less informative about it

```
Evaluation error: 'origin' must be supplied.
```





**Katie Mack** ✓

@AstroKatie

Follow

A surprisingly large part of having expertise in a topic is not so much knowing everything about it but learning the language and sources well enough to be extremely efficient in google searches.

8:34 AM - 8 Dec 2018

3,380 Retweets 14,145 Likes



191 3.4K 14K



**Nancy Sims** @CopyrightLibn · Dec 8

Replying to @AstroKatie

See also: why experienced libraryfolk who are only somewhat versed in your subject area may nevertheless be able to -SRSLY- improve your searching. :)

3 28 567



**Katie Mack** ✓ @AstroKatie · Dec 8

Librarians are the absolute best

6 19 421



**Lake Oswego Library** @LakeOLibrary · Dec 8

Thank you. We think astrophysicists are pretty great, too. 🥰

1 164



**Katie Mack** ✓

@AstroKatie

(a.k.a. Dr Katherine J Mack)  
astrophysicist/cosmologist, occasional  
freelance science writer, connoisseur of

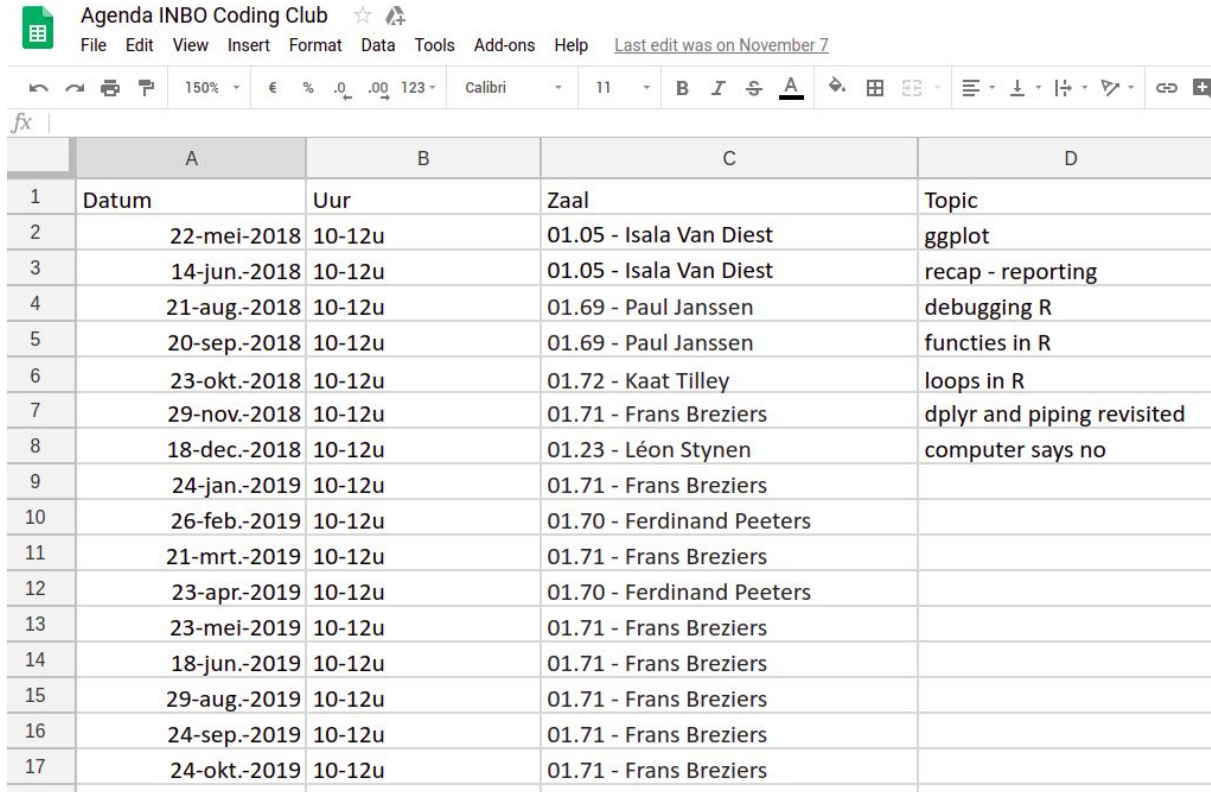


**Copy-paste** the error into google search,  
but **leave out** your script **specific**  
elements (e.g. variable names) and  
add '**R**' to your search.



TIME FOR REVIEW

# Check the [agenda for next year](#) (intranet page):



The screenshot shows a Google Sheets spreadsheet titled "Agenda INBO Coding Club". The spreadsheet has a header row with columns A, B, C, and D. The data rows contain dates, times, locations, and topics. The events are listed from 2018 to 2019.

	A	B	C	D
1	Datum	Uur	Zaal	Topic
2	22-mei-2018	10-12u	01.05 - Isala Van Diest	ggplot
3	14-jun.-2018	10-12u	01.05 - Isala Van Diest	recap - reporting
4	21-aug.-2018	10-12u	01.69 - Paul Janssen	debugging R
5	20-sep.-2018	10-12u	01.69 - Paul Janssen	functies in R
6	23-okt.-2018	10-12u	01.72 - Kaat Tilley	loops in R
7	29-nov.-2018	10-12u	01.71 - Frans Breziers	dplyr and piping revisited
8	18-dec.-2018	10-12u	01.23 - Léon Stynen	computer says no
9	24-jan.-2019	10-12u	01.71 - Frans Breziers	
10	26-feb.-2019	10-12u	01.70 - Ferdinand Peeters	
11	21-mrt.-2019	10-12u	01.71 - Frans Breziers	
12	23-apr.-2019	10-12u	01.70 - Ferdinand Peeters	
13	23-mei-2019	10-12u	01.71 - Frans Breziers	
14	18-jun.-2019	10-12u	01.71 - Frans Breziers	
15	29-aug.-2019	10-12u	01.71 - Frans Breziers	
16	24-sep.-2019	10-12u	01.71 - Frans Breziers	
17	24-okt.-2019	10-12u	01.71 - Frans Breziers	



Zaal: Herman Teirlinck - 01.71 - Frans Breziers

Datum: 2018-01-24, van 10:00 tot 12:00

*(registration announced via [DG\\_useR@inbo.be](mailto:DG_useR@inbo.be))*