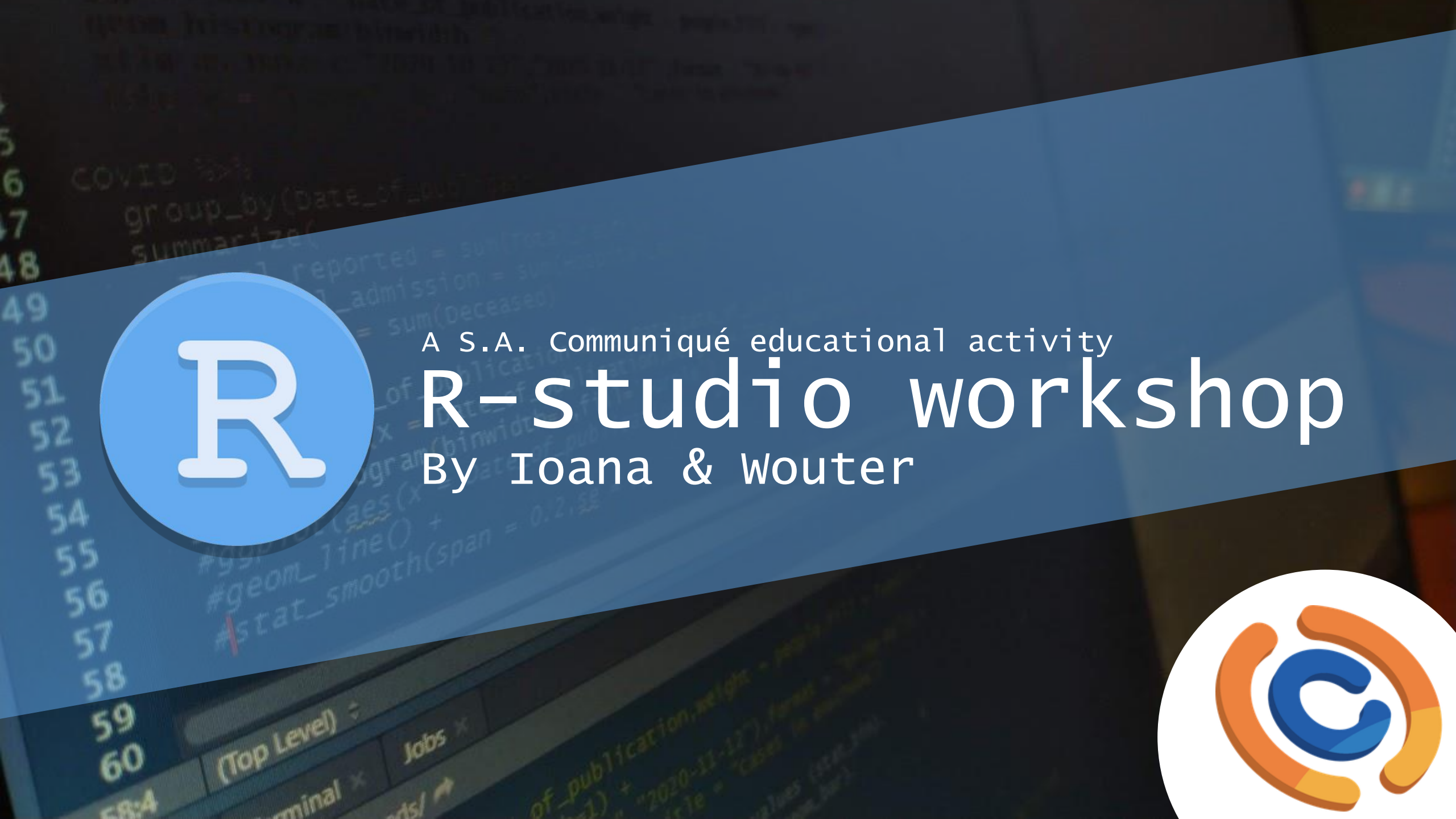

A S.A. Communiqué educational activity

R-studio workshop

By Ioana & Wouter

Nice to meet you!

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R-studio workshop

Nice to meet you!

Ioana Frîncu

- 3rd year CS student
- Programming since I was 14
- Loves pretty graphs

Flifenstein

Wouter Stoter

- 2nd year CS student
- 8 years of programming experience
- A PowerPoint lover

wouter.stoter

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Planning

```
1  introduce()
2  explain() %>%
3    example(grades)
4  students %>%
5    group_by(level)
6  groups[1] %>% Netflix()
7  groups[2] %>% Covid()
8  share()
9  quit()
```

- Programming Language
- Analyse
- Statistical data

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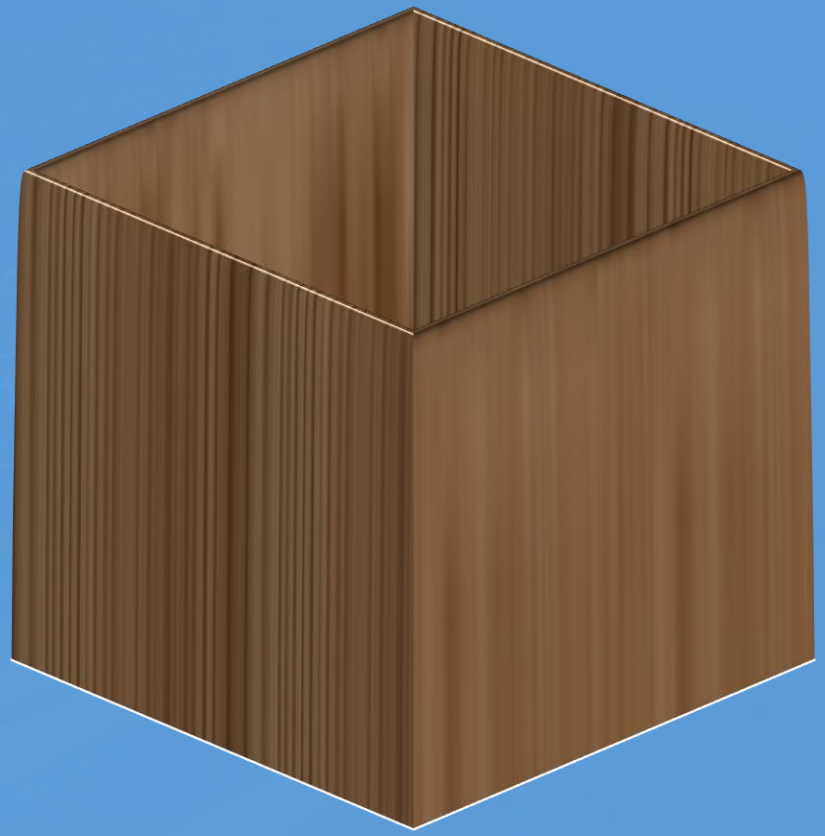
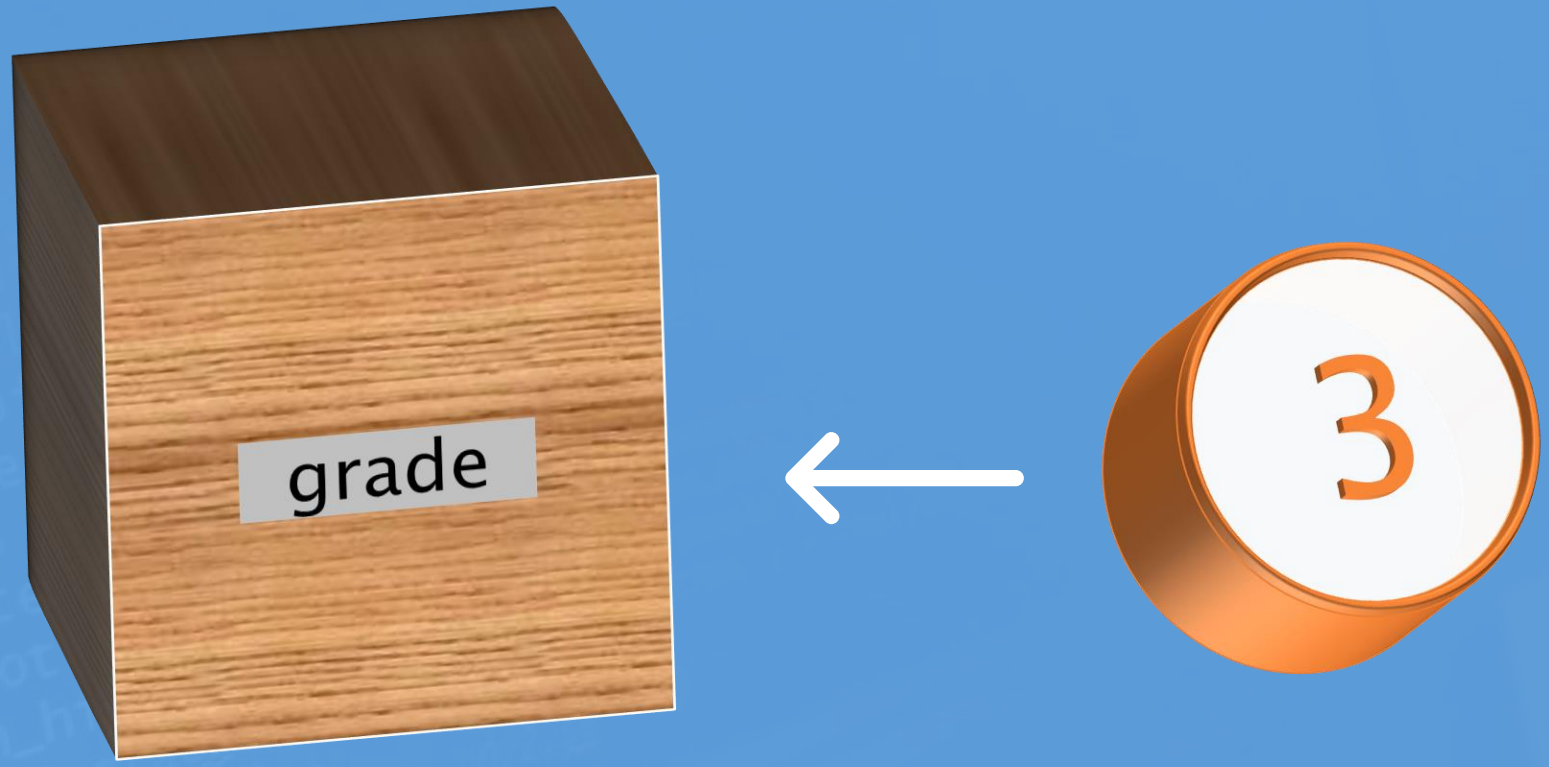
Variables






```
> grade <- 3
>
```

```
> grade <- 3
>
```

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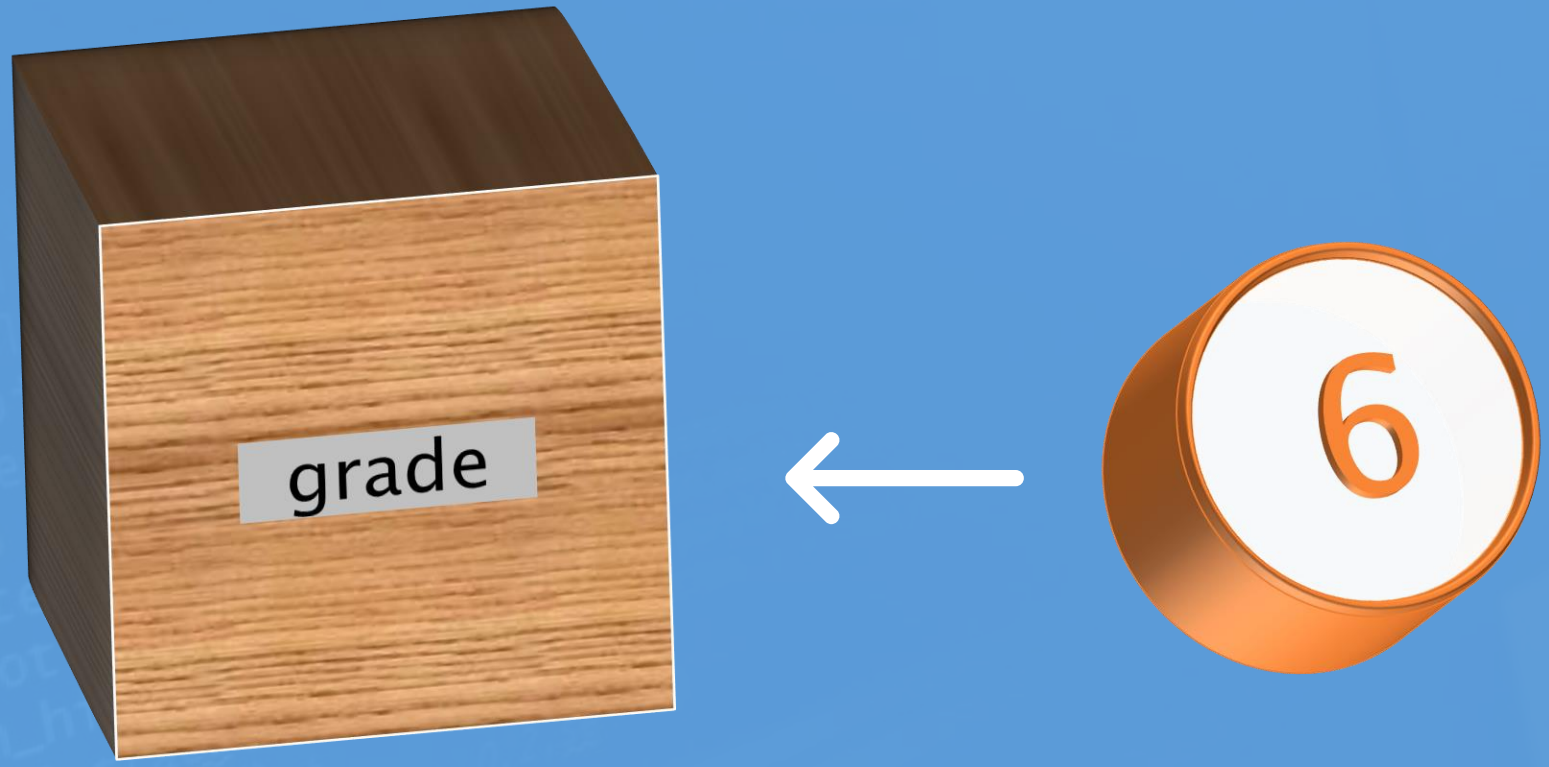


```
> grade <- 3
> grade <- 6
```

```
> grade <- 3
> grade <- 6
```

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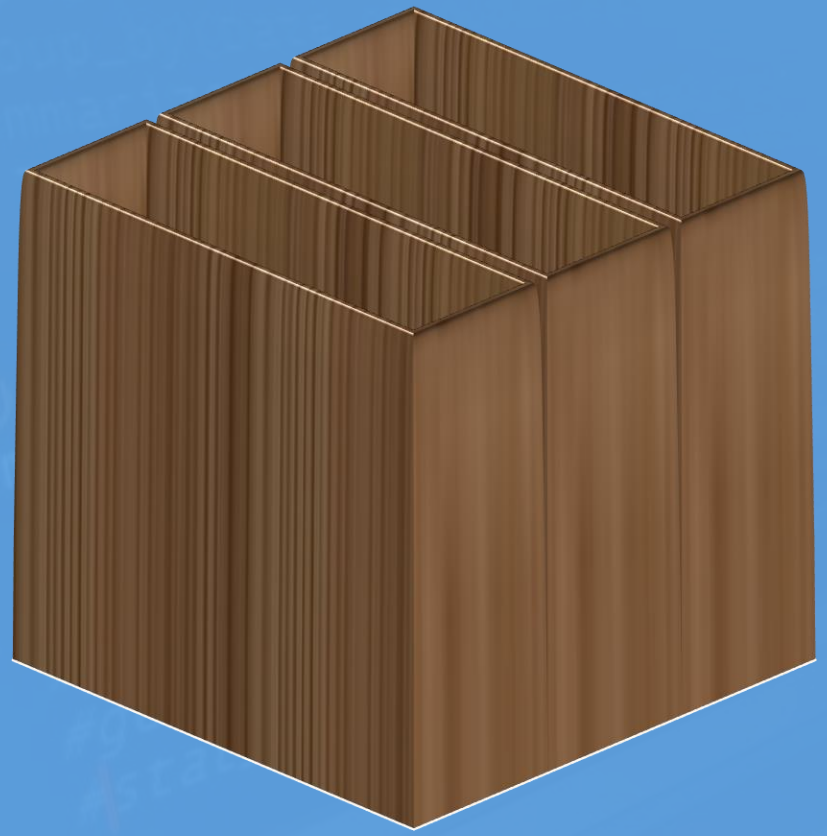
Data-types

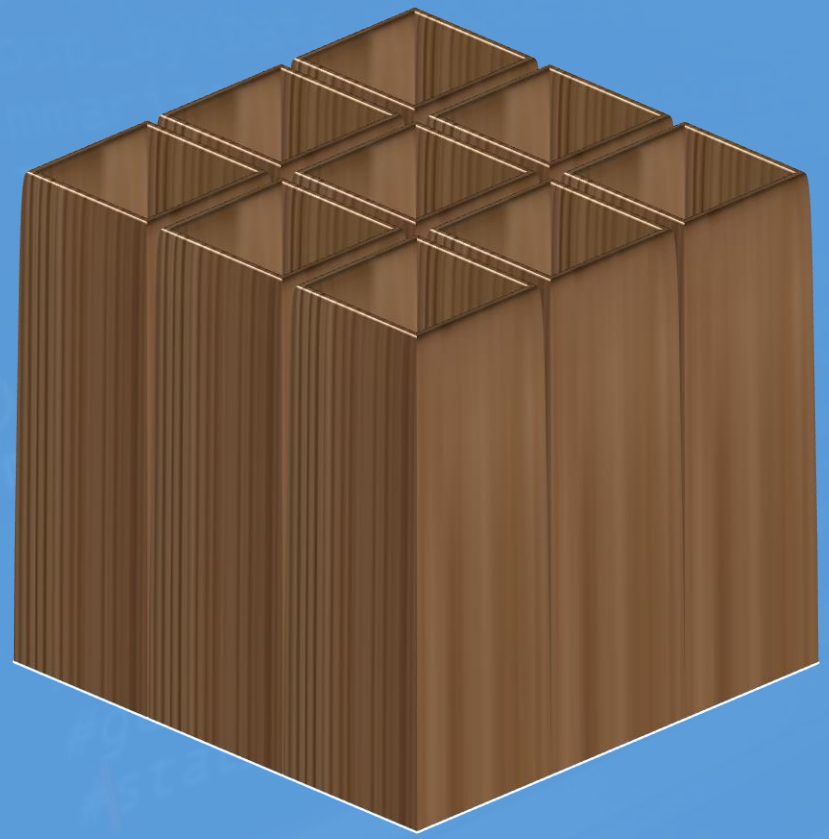
```
> grade <- 6
> subject <- "research"
```

Vectors



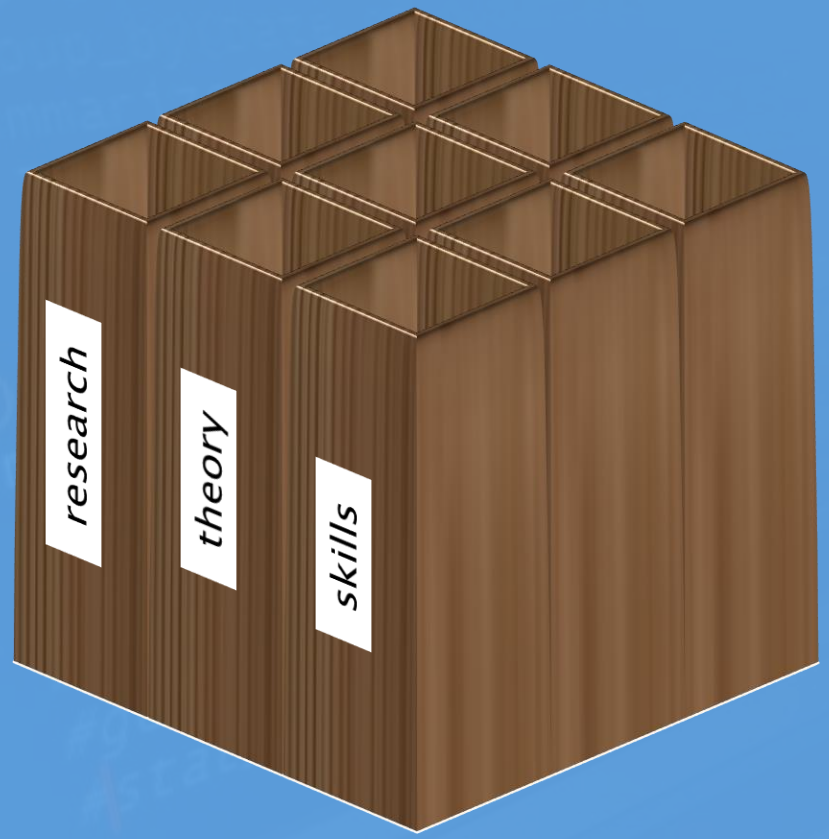
```
> grades <- c(6,3,9)
> grades[2]
[1] 3
```

Matrix



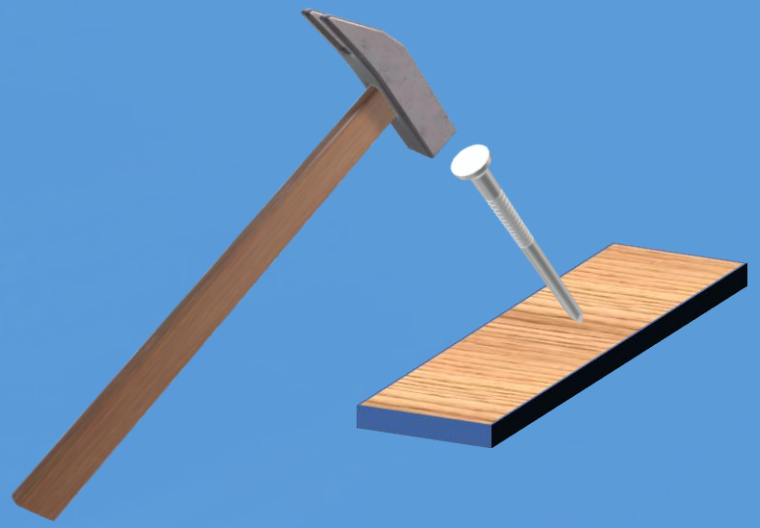
```
> grades <- matrix(
    c(1:9),
    nrow = 3,
    ncol = 3
  )
> grades[3,2]
6
```

dataframes




```
> grades <- data.frame(
    research = c(6,3,9)
    theory = c(8,5,9)
    skills = c(8,7,7)
  )
> grades$skills[2]
7
```

Function



```
>  hammer(plank,nail)
>
```

Function

```
> pwn <- plank %>% hammer(nail) %>%
>   screwdriver(screw)
```

Function

```
> ?read.csv
>
```

Data Input

Description

Reads a file in table format and creates a data frame from it, with cases corresponding to lines and variables to fields in the file.

Usage

```
read.csv(file, header = TRUE, sep = ",",
quote = "\"", dec = ".", ...)
```

Arguments

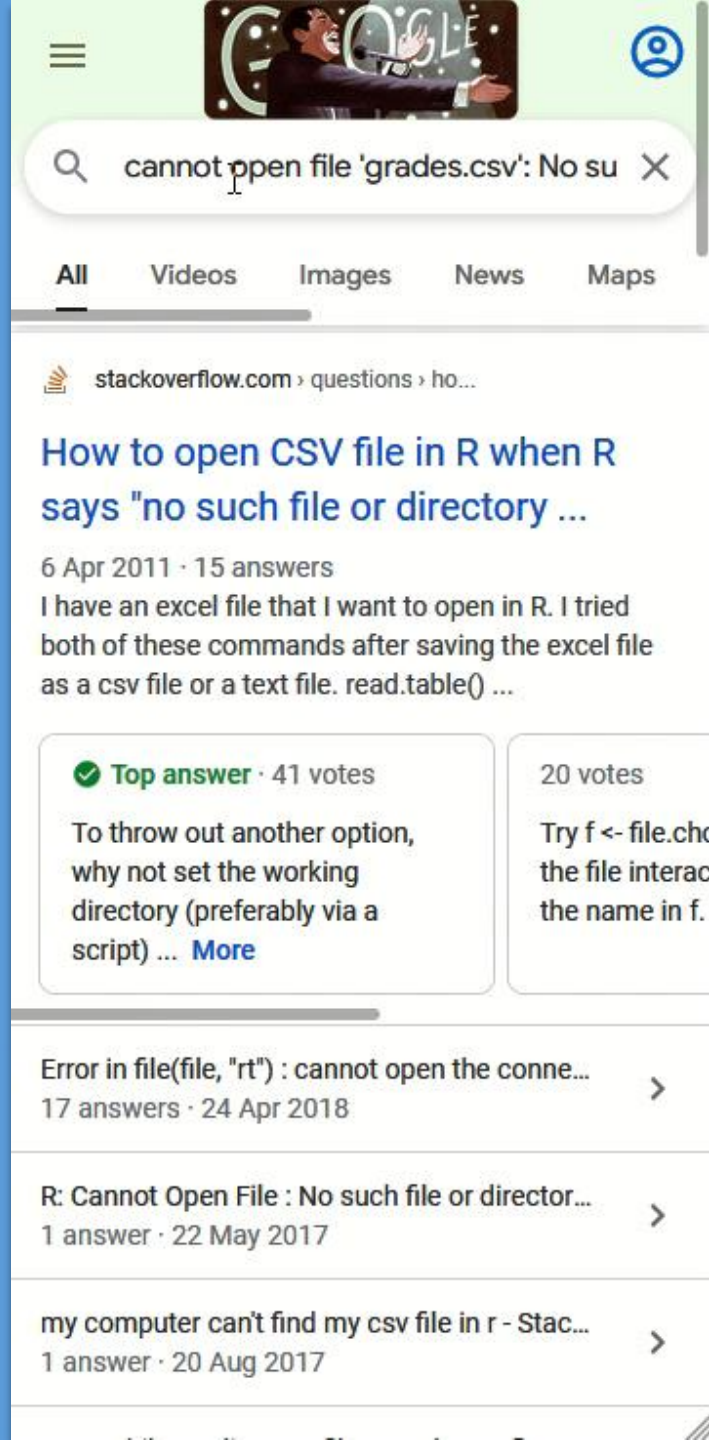
file	the name of the file which the data are to be read from.
header	a logical value indicating whether the file contains the names of the variables as its first line.
sep	the field separator character
quote	the set of quoting characters.
dec	the character used in the file for decimal points.

Examples

```
read.csv(tf, fill = TRUE)
ncol <- max(count.fields(tf, sep
= ","))
read.csv(tf, fill = TRUE, header
= FALSE,
         col.names = paste0("V",
seq_len(ncol)))
```

Function

```
> grades <- read.csv("grades.csv")
cannot open file 'grades.csv': No such file or directory
```



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Function

```
> setwd("C:/users/wouter/downloads")
> grades <- read.csv("grades.csv")
```

Function

```
> setwd("C:/users/wouter/downloads")
> grades <- read_spss("grades.sav")
could not find function "read_spss"
```

Package

```
> install.packages("haven")
> library(haven)
```