RBasic

Marco Chiapello

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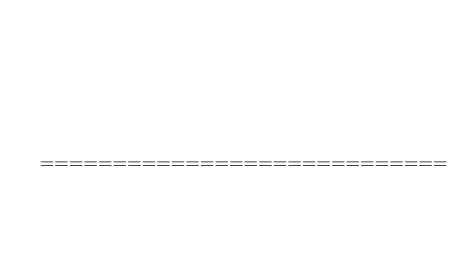
Outlook

Wednesday afternoon

- Introduction
- Data types
- Data manipulation
- Read Data
- Plotting

Thursday morning

- Exercise
- Work on your data
- Write functions



Introduction

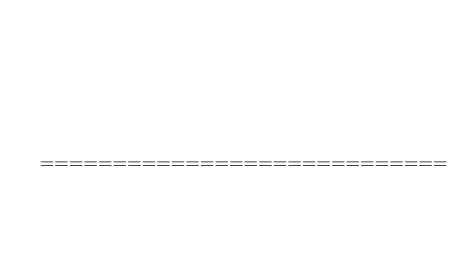
R is a free software.

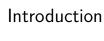
R is a statistical software.

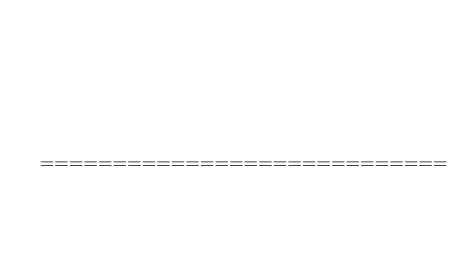
 ${\sf R}$ is powerfull. (This presentation has been made in ${\sf R})$

R has a wide community of supporters

R is popular.







R and RStudio installation

R => http://www.r-project.org
RStudio => http://www.rstudio.com

Data types

```
1 Vector
x \leftarrow c(1,2,3,4,5,6,7,8,9)
Х
## [1] 1 2 3 4 5 6 7 8 9
 2 Matrix
y \leftarrow matrix(x, nrow = 3)
у
## [,1] [,2] [,3]
## [1,] 1 4
## [2,] 2 5 8
## [3,] 3
               6
                    9
```

Data manipulation

```
1 + 1
## [1] 2
4 - 5
## [1] -1
2 * 2
## [1] 4
4 / 2
## [1] 2
```

Data manipulation

```
Built-in functions
sqrt(25)
## [1] 5
abs(-2)
## [1] 2
log2(2)
## [1] 1
```