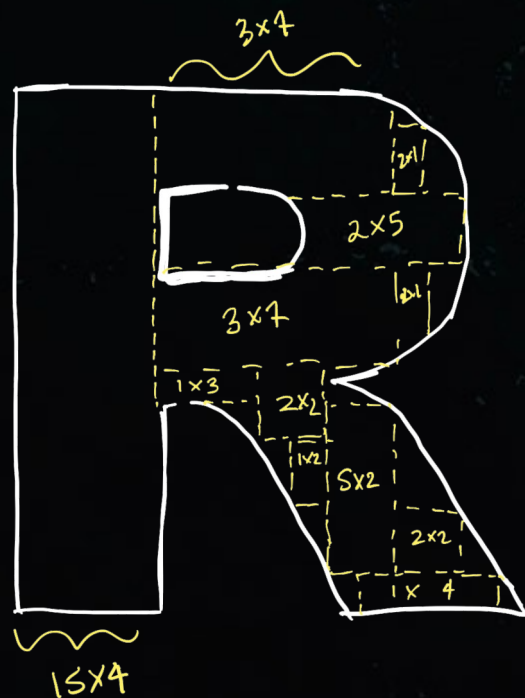


Introduction to R

Martín Amodeo

DBBF UNS
IADO CONICET-UNS
Bahía Blanca, Argentina

CIT, Changshu, China

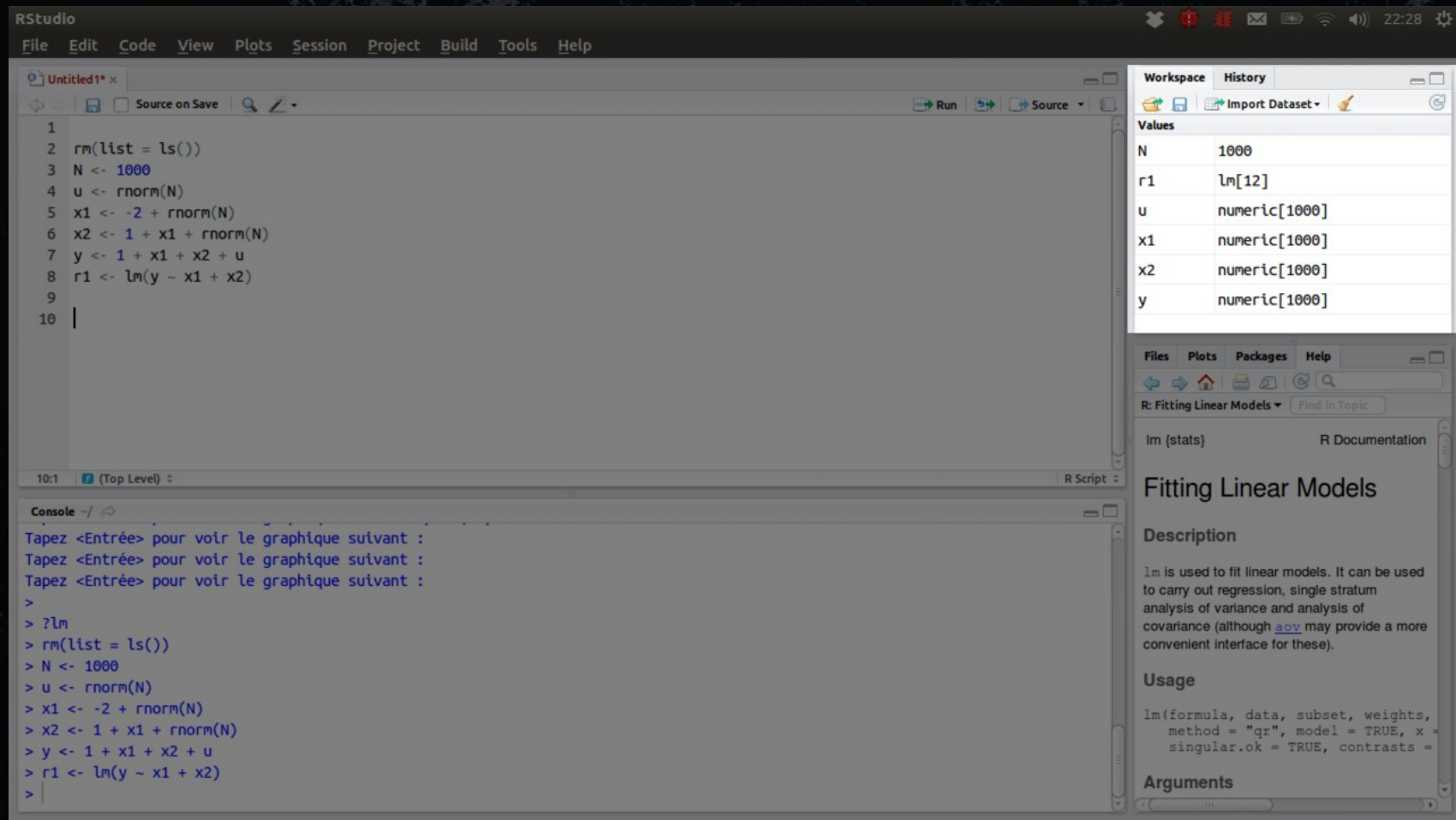


内容 *Content*

- 什么是物体？ *¿what is an object?*
- 什么是工作空间？ *¿what is the workspace?*
- 标签命名规则：如何命名对象、变量和文件？ *Rules for labels
¿how to name objects, variables, files?*

Objects





Workspace

The memory of R while we are using it



Workspace

Keep your workscape clean and
tidy!



Clean your workspace frequently and start running your script again from the beginning

Always save your script!



Save your script

The screenshot displays the RStudio environment with the following components:

- Source Editor:** Contains an R script named 'Untitled1*' with the following code:

```
1  
2 rm(list = ls())  
3 N <- 1000  
4 u <- rnorm(N)  
5 x1 <- -2 + rnorm(N)  
6 x2 <- 1 + x1 + rnorm(N)  
7 y <- 1 + x1 + x2 + u  
8 r1 <- lm(y ~ x1 + x2)  
9  
10 |
```
- Console:** Shows the execution of the script with the following output:

```
Tapez <Entrée> pour voir le graphique suivant :  
Tapez <Entrée> pour voir le graphique suivant :  
Tapez <Entrée> pour voir le graphique suivant :  
>  
> ?lm  
> rm(list = ls())  
> N <- 1000  
> u <- rnorm(N)  
> x1 <- -2 + rnorm(N)  
> x2 <- 1 + x1 + rnorm(N)  
> y <- 1 + x1 + x2 + u  
> r1 <- lm(y ~ x1 + x2)  
>
```
- Workspace:** Lists the objects in the current environment:

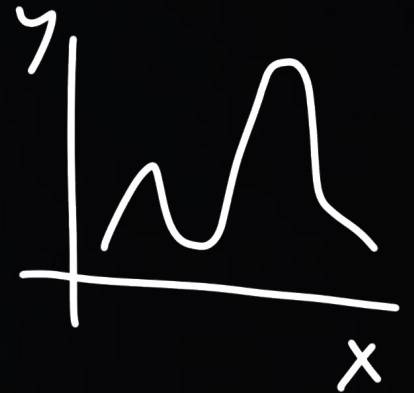
Object	Value
N	1000
r1	lm[12]
u	numeric[1000]
x1	numeric[1000]
x2	numeric[1000]
y	numeric[1000]
- Help:** Displays the documentation for the `lm` function, titled 'Fitting Linear Models'. It includes a description of the function's purpose, its usage, and its arguments.

Workflow

$f()$



v1	v2	v3	v4
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:
:	:	:	:



Objects



`<-`

```
name <- function()
```

```
name <- value
```

Functions and objects



data \leftarrow 2

result \leftarrow f(arg = data)

f(arg = result)

Functions and objects

```
log(86)
```

```
bill <- 86  
log(bill)
```

Rules for names

- Roman letters and numbers (cannot start with number)
- No empty spaces
- No special characters
- Can use “_” o “.” to separate words
- Be consistent with uppercase and lowercase
- Recommendation: use always lowercase, be short, easy to understand and write

Rules for names

FORBIDDEN:

materia_orgánica
Materia orgánica
materiaOrganica(mg)
Datos tesis(posta)
Datos mo
1Figura

RECOMMENDED:

materia_organica
mat_org
datos
datos_mo
resultado_glm
fig1