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Contents

Chapter 1

Ready?

1.1 R(Studio)

- R
- RStudio R R

- OK

1.2 Tips!

- R

1. R by
   R
2. R by &
   Tidyverse R

1.3 R(Studio)

- (https://posit.co/download/rstudio-desktop/)
- 1:Install R R
- 2:Install RStudio RStudio
- R

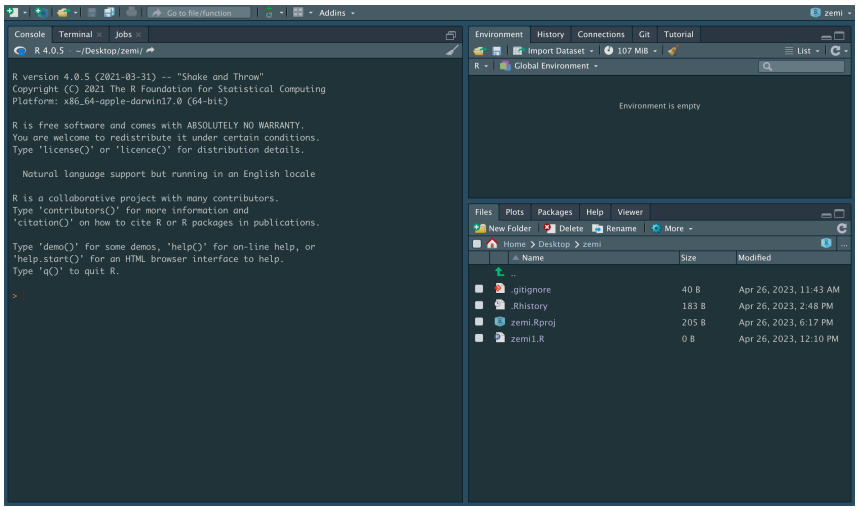
Chapter 2

Go!!

-

2.1 RStudio

- RStudio
-



2.2

-

- Console
-
- > 1+1 **Enter mac return**
- [1] 2
- 2 1+1 [1] 1

2.3 R

- Rstudio

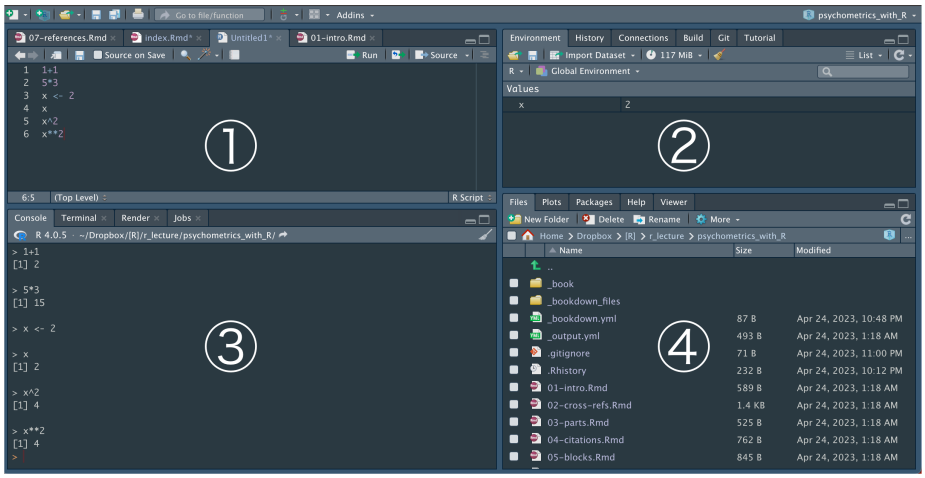
- **R**

R

- RStudio R Script
- R
  untitled1 R

RStudio

-



R

R

- untitled1
- 1 `1+1` **ctrl+Enter mac command+return**
- (`[1] 2`)

- R **ctrl+s mac command+s**

- test.R
- R test.R ×
- R
  test.R
- R

-
- 2 `5-2`
- 2 **ctrl+Enter**
- 2 (`[1] 3`)
- 1 **ctrl+Enter**
- 1 (`[1] 2`)
- **ctrl+Enter**
- **ctrl+shift+Enter mac command+shift+return**
- **ctrl+Enter**

R

1.
2.

3.
   …

2.4

- R
- R

- New Directry → New Project

- Create Project
-
- .Rproj
- mac Document sugoi_project
-
-

1. .Rproj Rstudio
2.

2.5

- zemi
- zemi
- zemi.Rproj

※ **zemi**

Chapter 3

-

1. in R
2. in R

3.1

: +

```
1 + 1
```

```
## [1] 2
```

: -

```
5 - 2
```

```
## [1] 3
```

: *

```
4 * 5
```

```
## [1] 20
```

: /

```
8 / 2
```

```
## [1] 4
```

: ^ ** 4^2

```
4 ^ 2
```

```
## [1] 16
```

```
4 ** 2
```

```
## [1] 16
```

3.2

- [1]
-
-
-

```
x <- 1 # <-

#    #
#
#
```

- x 1
  x OK
- OK
-

```
x
```

```
## [1] 1
```

-

```
y <- 1
z <- 2
y * z # 1*2
```

```
## [1] 2
```

-

```
x <- 1 #x 1
x
```

```
## [1] 1
```

[1] R

```
x <- 2 #x 2
x
```

```
## [1] 2
```

-

```
x <- 2+5
x #   7
```

```
## [1] 7
```

-

```
z <- 2 #z 2
z <- z + 1 #z=2 1       z
z #  z
```

```
## [1] 3
```

-
- moji

```
#   "      "
# '       '
#

moji <- "    "
moji
```

```
## [1] "    "
```

3.3

- R
- sqrt()
- ()

```
sqrt(2)
```

```
## [1] 1.414214
```

- xxx()
- ( )
-
- sqrt(2) 2 1.414214

-
- log()
- 10

```
log(10)
```

```
## [1] 2.302585
```

- 2 base=10 10

```
log(10, base = 10)
```

```
## [1] 1
```

-

- help()
- () help()
- log() help(log)
- Rstudio

3.4

- R

3.4.1

- 1
- c()
-
- 5 2,4,2,3,5 v

```
v <- c(2, 4, 2, 3, 5) #
v # v
```

```
## [1] 2 4 2 3 5
```

- 2,3,4,5,6

```
v <- c(2:6) # n:m n m
v
```

```
## [1] 2 3 4 5 6
```

- =
-
-

```
v+2  #
```

```
## [1] 4 5 6 7 8
```

```
2*v  #
```

```
## [1]  4  6  8 10 12
```

- v v-2 v/2 v^2

- R
- 2

```
v1 <- c(1, 2)
v2 <- c(2, 4)
```

- +
- 1 2 (2 4)

```
v1 + v2
```

```
## [1] 3 6
```

- * 1 2

```
v1 * v2
```

```
## [1] 2 8
```

-
- R %*%

```
v1 %*% v2
```

```
##      [,1]
## [1,]   10
```

- =

```
# v1 3    v2 2
#  v2 1    v1

v1 <- c(1, 2, 3)  #3
```