Use of R Software

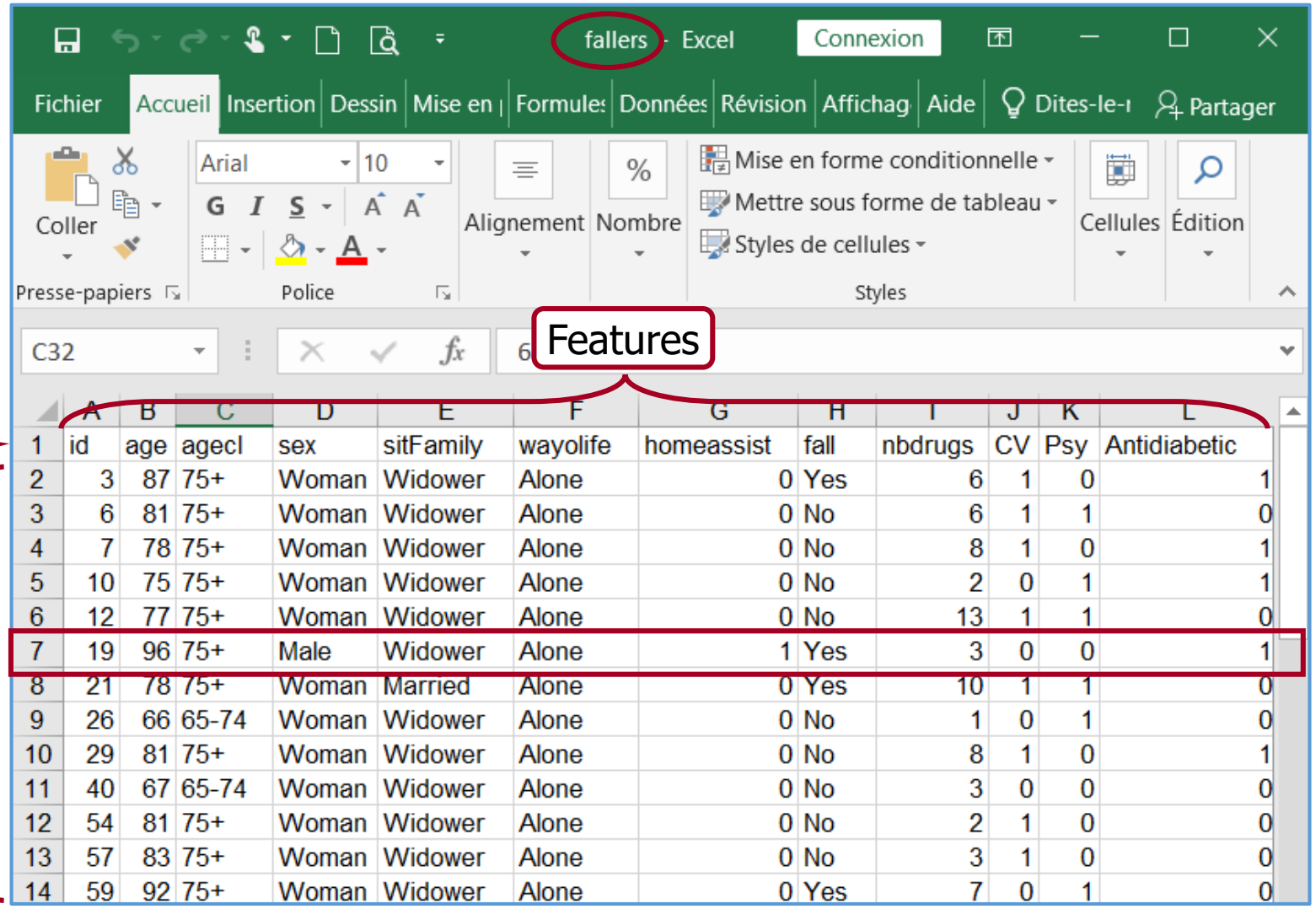
Principle and Basics

Pr Roch Giorgi

roch.giorgi@univ-amu.fr

SESSTIM, Faculty of Medical and Paramedical Sciences, Aix-Marseille University, Marseille, France
https://sesstim.univ-amu.fr/

Data File in Excel (1)



	A	B	C	D	E	F	G	H	I	J	K	L
1	id	age	agecl	sex	sitFamily	wayolife	homeassist	fall	nbdrugs	CV	Psy	Antidiabetic
2	3	87	75+	Woman	Widower	Alone	0	Yes	6	1	0	1
3	6	81	75+	Woman	Widower	Alone	0	No	6	1	1	0
4	7	78	75+	Woman	Widower	Alone	0	No	8	1	0	1
5	10	75	75+	Woman	Widower	Alone	0	No	2	0	1	1
6	12	77	75+	Woman	Widower	Alone	0	No	13	1	1	0
7	19	96	75+	Male	Widower	Alone	1	Yes	3	0	0	1
8	21	78	75+	Woman	Married	Alone	0	Yes	10	1	1	0
9	26	66	65-74	Woman	Widower	Alone	0	No	1	0	1	0
10	29	81	75+	Woman	Widower	Alone	0	No	8	1	0	1
11	40	67	65-74	Woman	Widower	Alone	0	No	3	0	0	0
12	54	81	75+	Woman	Widower	Alone	0	No	2	1	0	0
13	57	83	75+	Woman	Widower	Alone	0	No	3	1	0	0
14	59	92	75+	Woman	Widower	Alone	0	Yes	7	0	1	0

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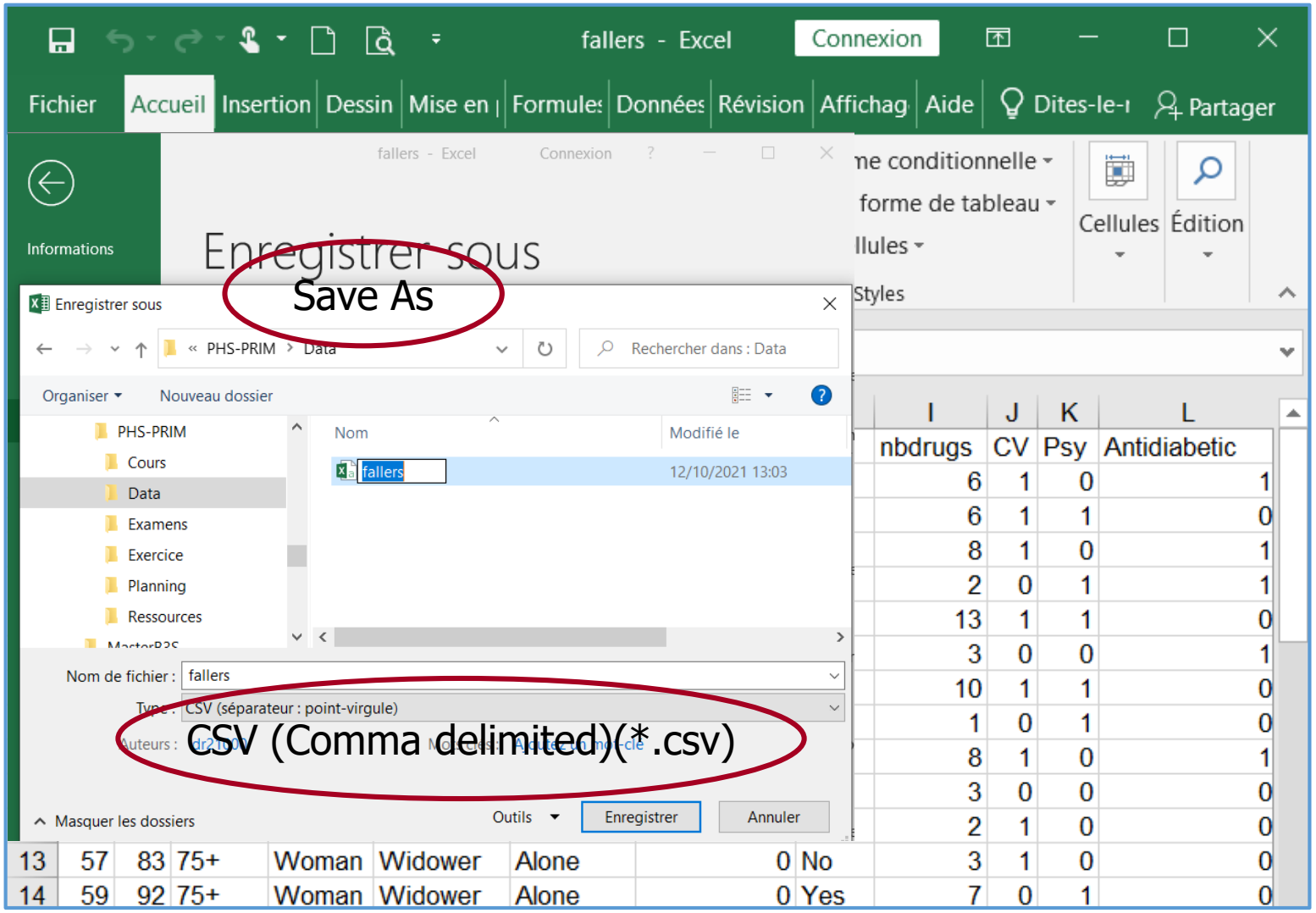
Data File in Excel (2)



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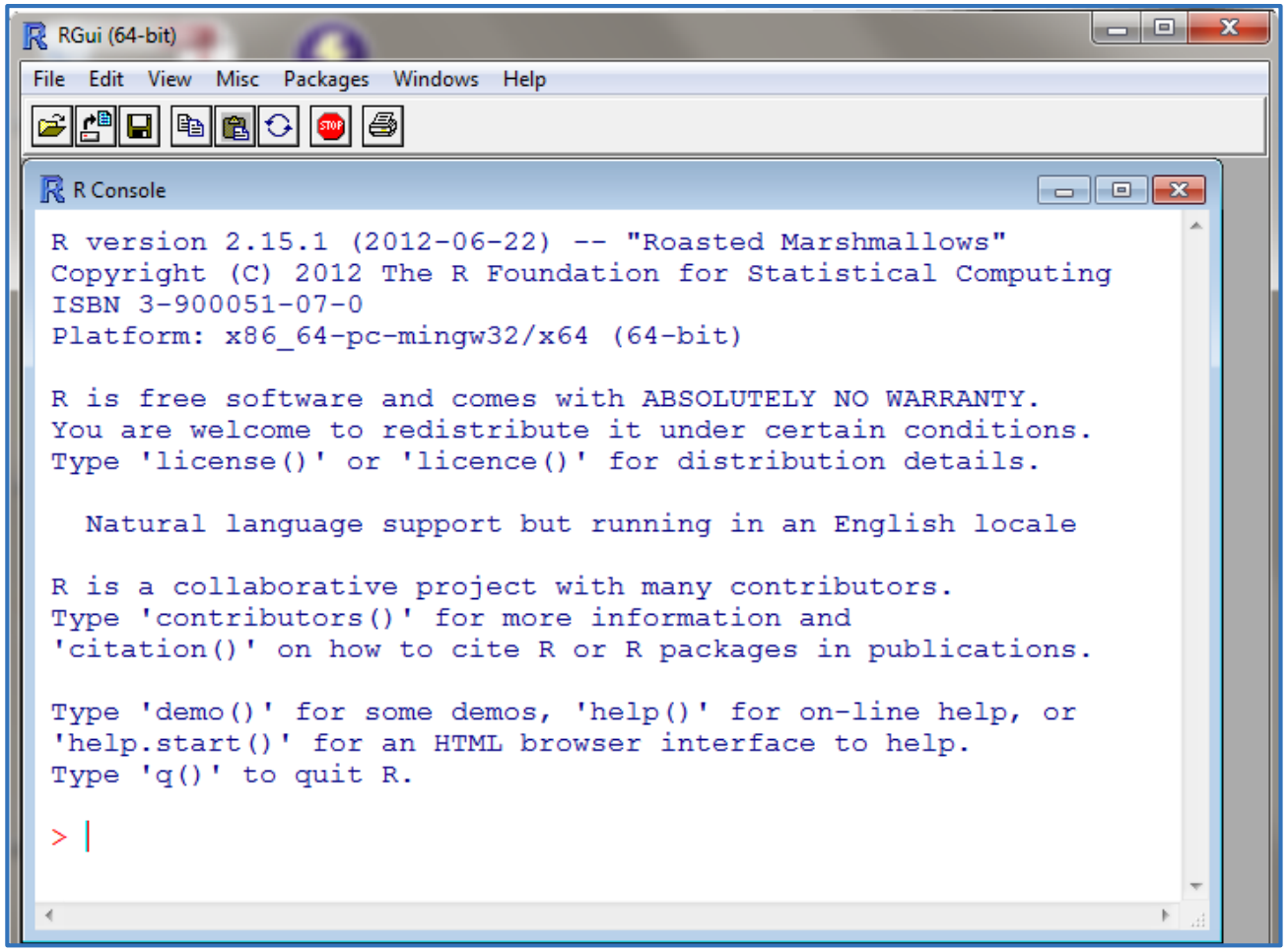
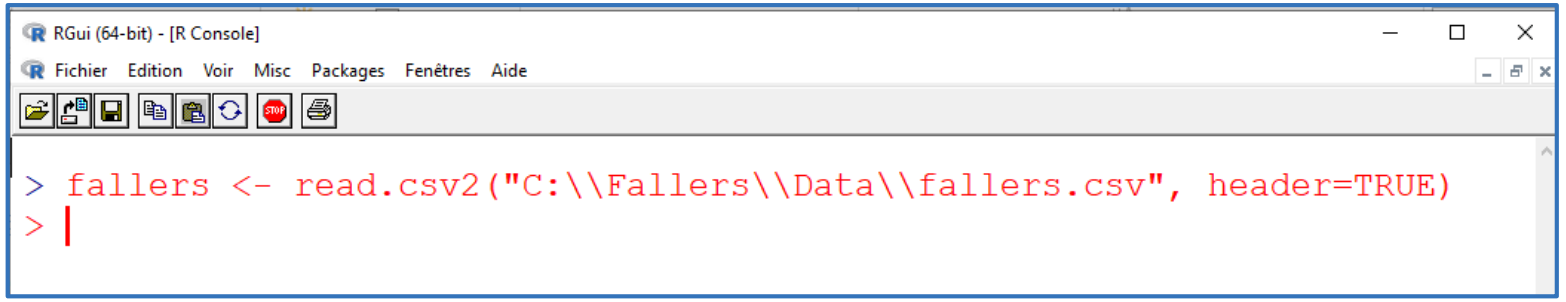
R Console

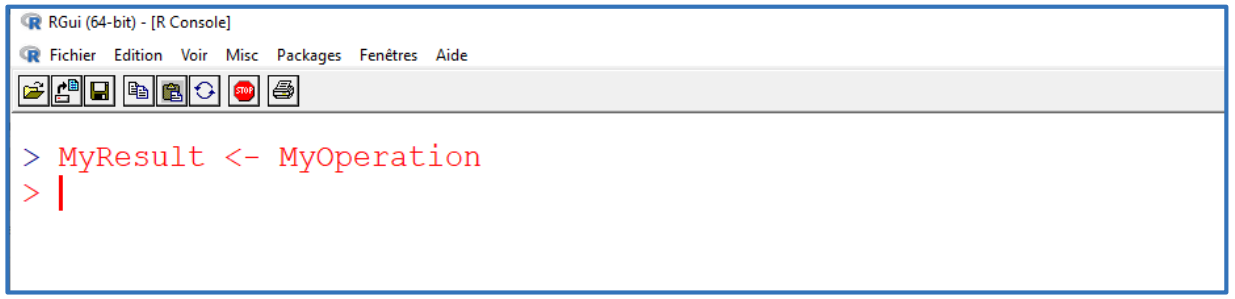
http://www.r-project.org/

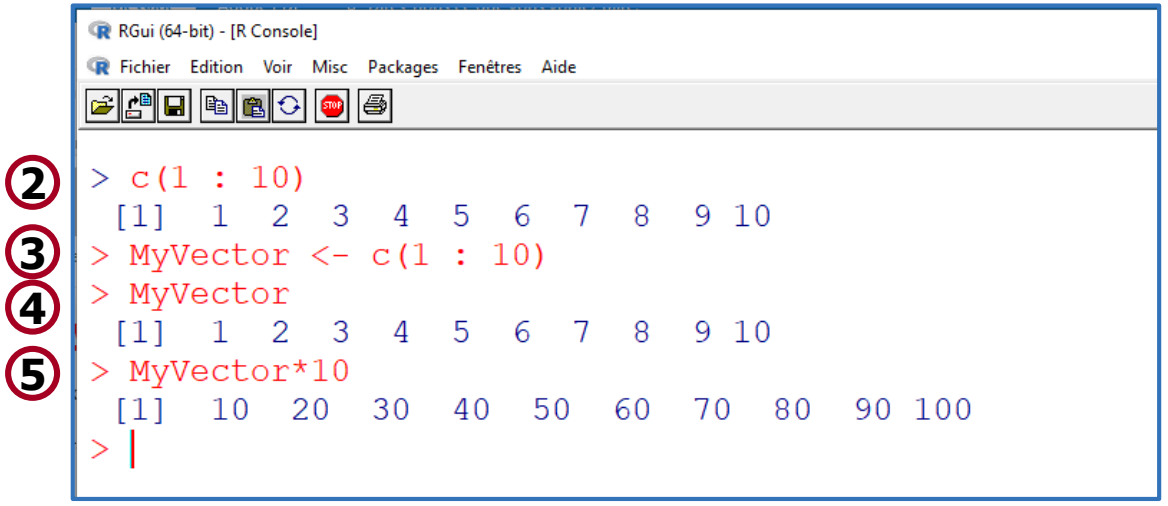


Reads a Data File



Writing Rules (1)

① 



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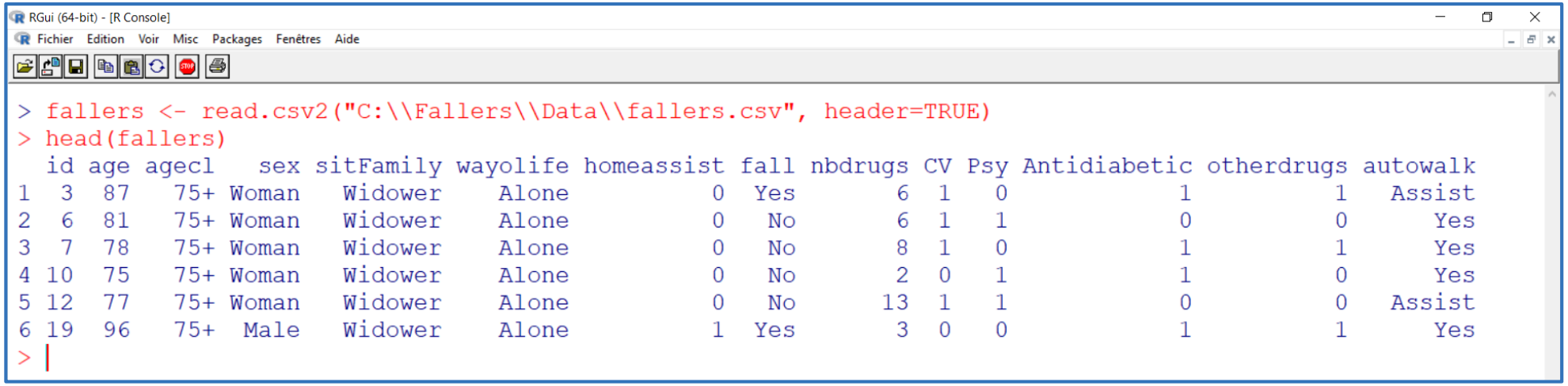
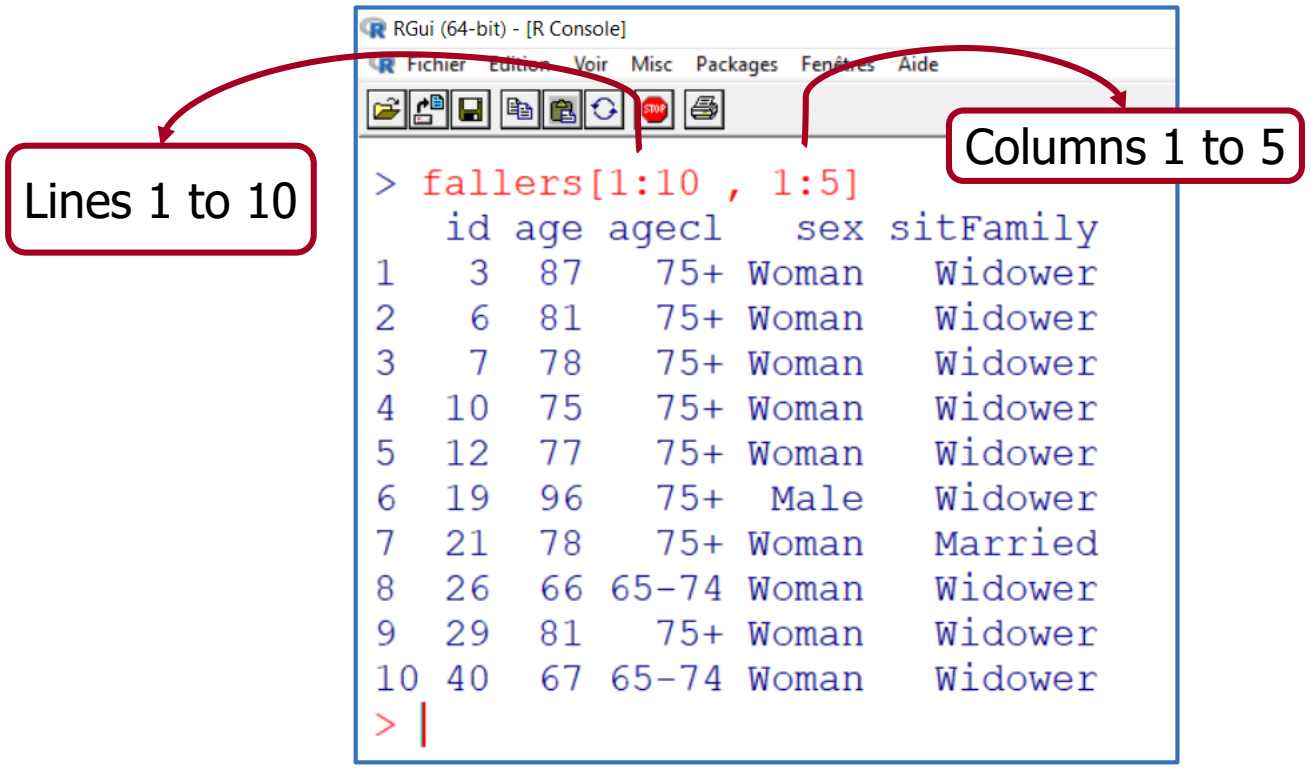
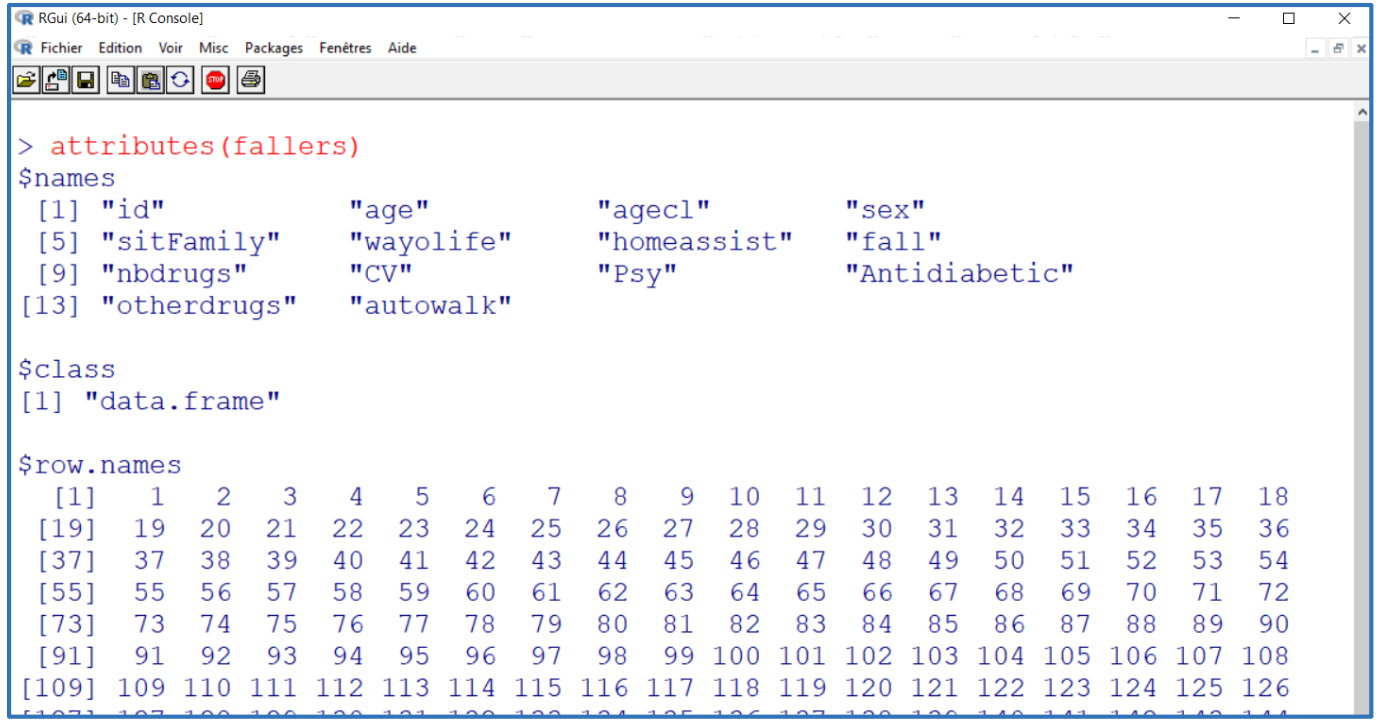
Data Checking



Writing Rules (2)



Properties



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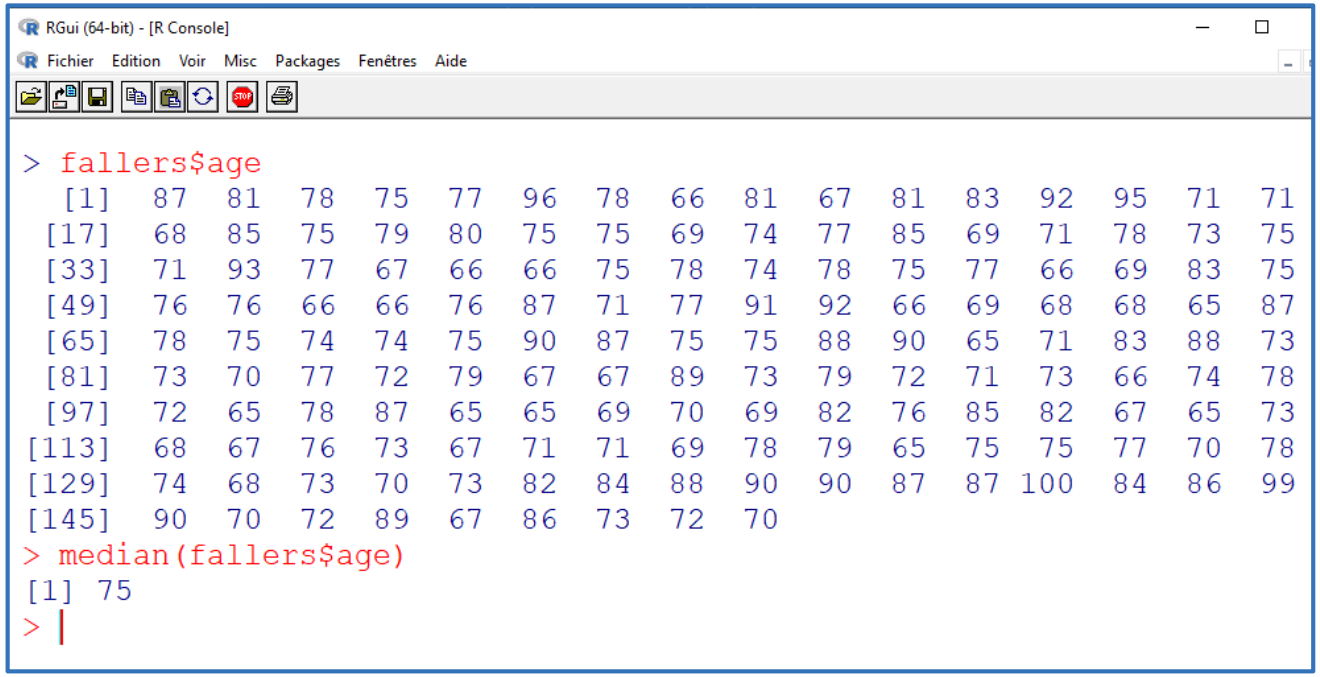
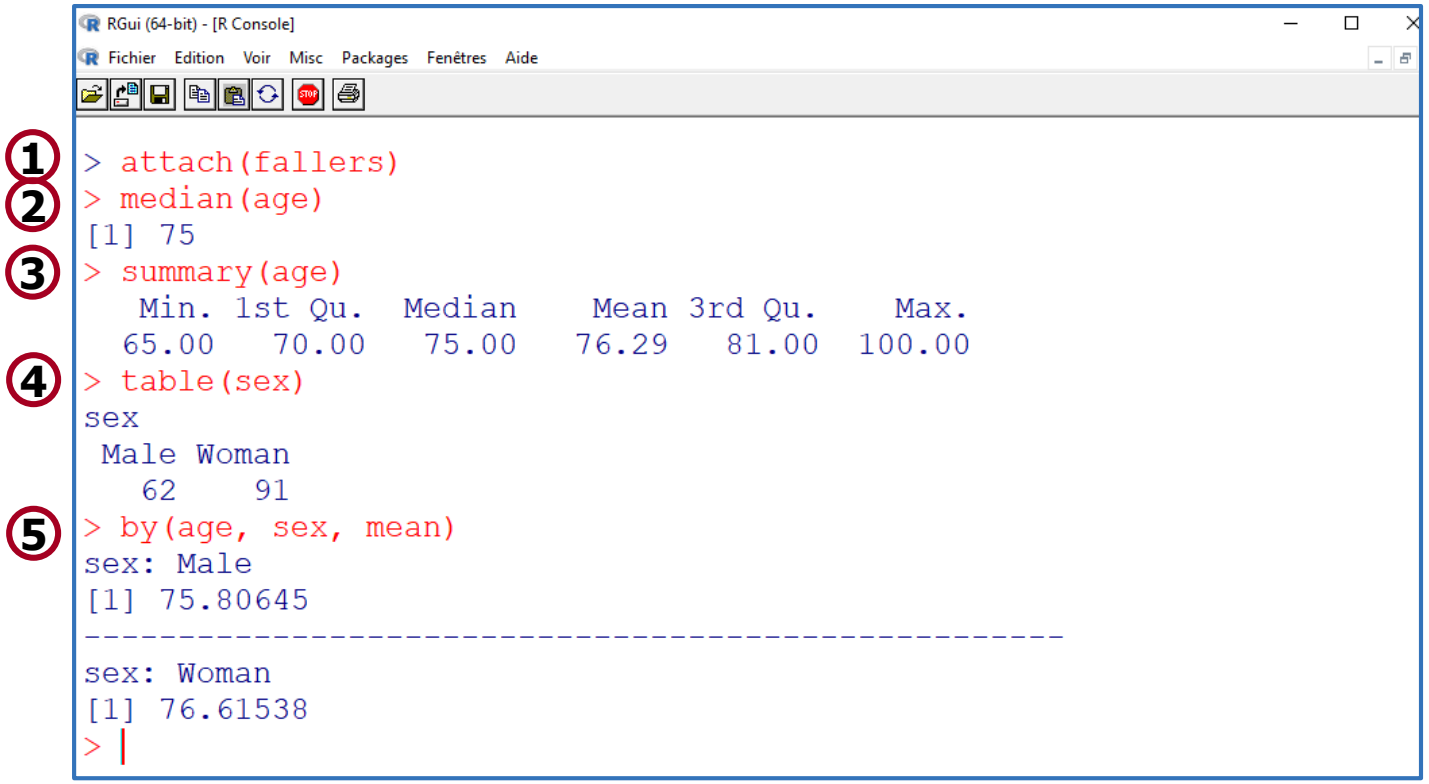
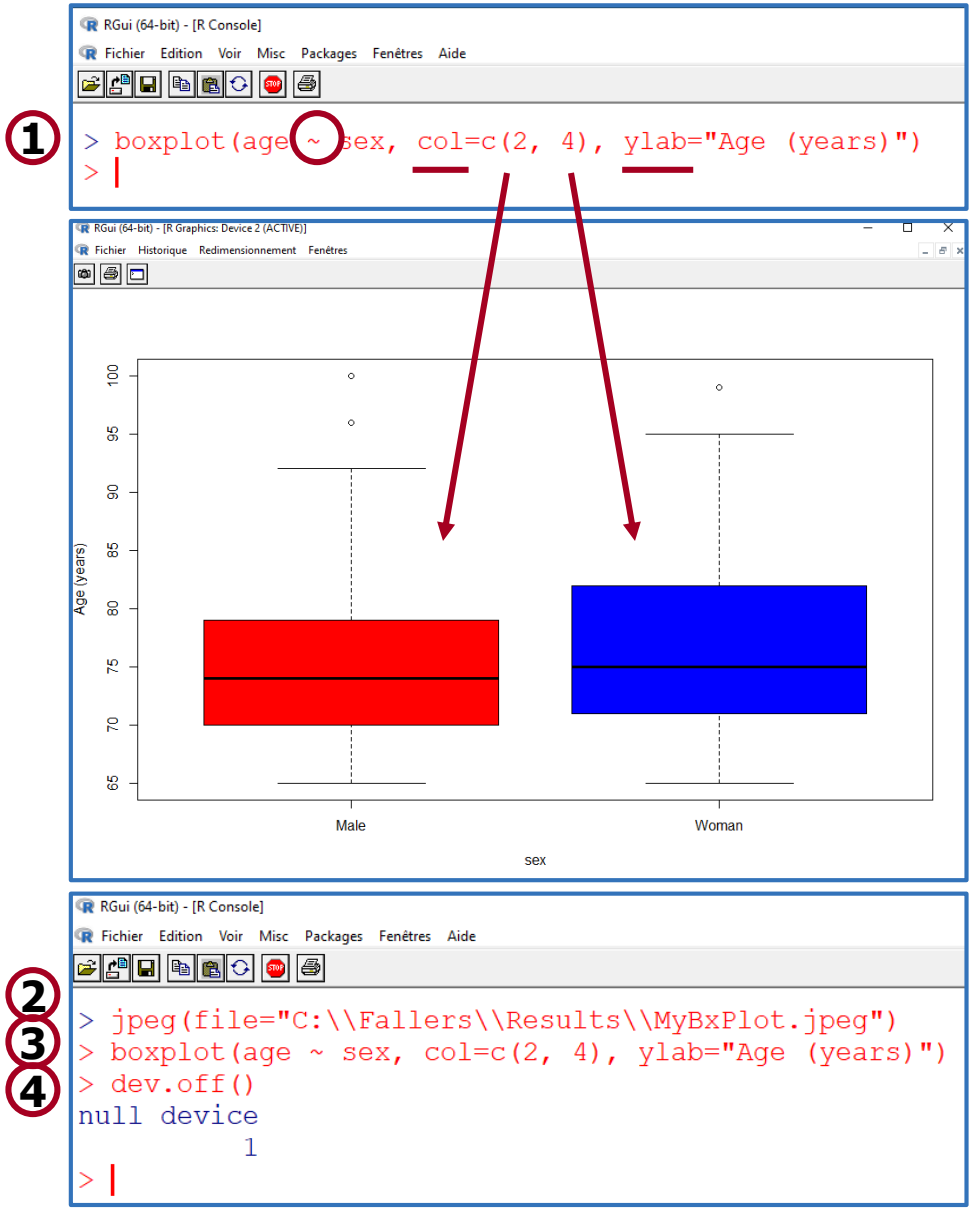
Use (1)


RGui (64-bit) - [R Console]
Fichier Edition Voir Misc Packages Fenêtres Aide
1
> fallers$age
[1] 87 81 78 75 77 96 78 66 81 67 81 83 92 95 71 71
[17] 68 85 75 79 80 75 75 69 74 77 85 69 71 78 73 75
[33] 71 93 77 67 66 66 75 78 74 78 75 77 66 69 83 75
[49] 76 76 66 66 76 87 71 77 91 92 66 69 68 68 65 87
[65] 78 75 74 74 75 90 87 75 75 88 90 65 71 83 88 73
[81] 73 70 77 72 79 67 67 89 73 79 72 71 73 66 74 78
[97] 72 65 78 87 65 65 69 70 69 82 76 85 82 67 65 73
[113] 68 67 76 73 67 71 71 69 78 79 65 75 75 77 70 78
[129] 74 68 73 70 73 82 84 88 90 90 87 87 100 84 86 99
[145] 90 70 72 89 67 86 73 72 70
2
> median(fallers$age)
[1] 75
>

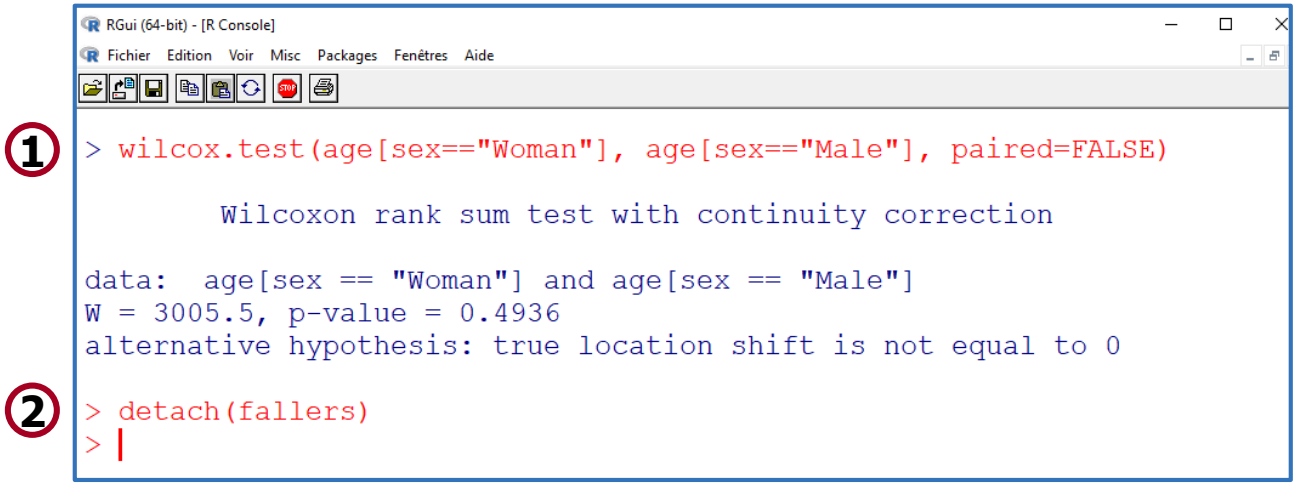
Use (2)


RGui (64-bit) - [R Console]
Fichier Edition Voir Misc Packages Fenêtres Aide
1
2
3
4
5
> attach(fallers)
> median(age)
[1] 75
> summary(age)
Min. 1st Qu. Median Mean 3rd Qu. Max.
65.00 70.00 75.00 76.29 81.00 100.00
> table(sex)
sex
Male Woman
62 91
> by(age, sex, mean)
sex: Male
[1] 75.80645
sex: Woman
[1] 76.61538
>

Use (3)


RGui (64-bit) - [R Console]
Fichier Edition Voir Misc Packages Fenêtres Aide
1
> boxplot(age ~ sex, col=c(2, 4), ylab="Age (years)")
>
RGui (64-bit) - [R Graphics: Device 2 (ACTIVE)]
Fichier Historique Redimensionnement Fenêtres
Age (years)
100
95
90
85
80
75
70
65
Male
Woman
sex
RGui (64-bit) - [R Console]
Fichier Edition Voir Misc Packages Fenêtres Aide
2
3
4
> jpeg(file="C:\\Fallers\\Results\\MyBxPlot.jpeg")
> boxplot(age ~ sex, col=c(2, 4), ylab="Age (years)")
> dev.off()
null device
1
>

Use (4)


RGui (64-bit) - [R Console]
Fichier Edition Voir Misc Packages Fenêtres Aide
1
> wilcox.test(age[sex=="Woman"], age[sex=="Male"], paired=FALSE)
Wilcoxon rank sum test with continuity correction
data: age[sex == "Woman"] and age[sex == "Male"]
W = 3005.5, p-value = 0.4936
alternative hypothesis: true location shift is not equal to 0
2
> detach(fallers)
>