

RStudio

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Go to file/function Addins

Project: (None)

```
1 kelvin_to_celsius <- function(temp_c) {  
2   temp_k <- (temp_c - 273.15)  
3   return(temp_k)  
4 }  
5 kelvin_to_celsius(0)
```

Environment History Connections Tutorial

R Global Environment

result	Named num 170
score	num [1:10] 12.5 9 16.5 12 9 20 14.5 1...
sum	0
v	int [1:10] 1 2 3 4 5 6 7 8 9 10
v1	8
v2	12
v3	cp1x [1:4] 3+0i 1+0i 1+0i ...
x	num [1:10] 63 81 56 91 47 57 76 72 62...
xlab	"mpg"
y	num [1:10] 63 81 56 91 47 57 76 72 62...

Functions

factorial	function (n)
kelvin_to_cel...	function (temp_c)

Files Plots Packages Help Viewer Presentation

Console Terminal Background Jobs

R 4.2.2 ~ /

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[workspace loaded from ~/.RData]

```
> kelvin_to_celsius <- function(temp_c) {  
+   temp_k <- (temp_c - 273.15)  
+   return(temp_k)  
+ }  
> kelvin_to_celsius(0)  
[1] 0  
>
```

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Project: (None)

```
1 v <- c(90, 50, 70, 80, 70, 60, 20, 30,
2       80, 90, 20)
3 print(v)
4 mean(v)
5 median(v)
6 getmode <- function(v)
7 {
8   uniqv <- unique(v)
9   uniqv[which.max(tabulate(match(v, uniqv)))]
10 }
11 result <- getmode(v)
12 print(result)
```

Environment History Connections Tutorial

R Global Environment

name	chr [1:10]	"Anastasia" "Dima" "Kather..."
nterms	NA_integer_	
num		"Enter a number: "
num1	NA_integer_	
qualify	chr [1:10]	"yes" "no" "yes" "no" "no"...
result	Named num	170
score	num [1:10]	12.5 9 16.5 12 9 20 14.5 1...
sum		0
v	int [1:10]	1 2 3 4 5 6 7 8 9 10
v1		8
v2		12
v3	cpix [1:4]	3+0i 1+0i 1+0i ...
w	logi [1:153]	FALSE FALSE FALSE FALSE ...

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Console Terminal Background Jobs

```
R 4.2.2 ~ /
> airqdata<-airquality
> print(airqdata)
```

	Ozone	Solar.R	wind	Temp	Month	Day
1	41	190	7.4	67	5	1
2	36	118	8.0	72	5	2
3	12	149	12.6	74	5	3
4	18	313	11.5	62	5	4
5	NA	NA	14.3	56	5	5
6	28	NA	14.9	66	5	6
7	23	299	8.6	65	5	7
8	19	99	13.8	59	5	8
9	8	19	20.1	61	5	9
10	NA	194	8.6	69	5	10
11	7	NA	6.9	74	5	11
12	16	756	0.7	68	5	12

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Go to file/function Addins

Project: (None)

Environment History Connections Tuto

R 119 MiB

Global Environment

v2 num [1:6] 10 11 12 13

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```
1 print("Two vectors of different lengths:")
2 v1 = c(1,3,4,5)
3 v2 = c(10,11,12,13,14,15)
4 print(v1)
5 print(v2)
6 result = array(c(v1,v2),dim = c(3,3,2))
7 print("New array:")
8 print(result)
9 print("The second row of the second matrix of the array:")
10 print(result[2,,2])
11 print("The element in the 3rd row and 3rd column of the 1st matrix:")
12 print(result[3,3,1])
13
```

13:1 (Top Level) R Script

Console Terminal Background Jobs

R 4.2.2 - /

```
[1,] 1 5 12
[2,] 3 10 13
[3,] 4 11 14

, , 2
 [1,] [,2] [,3]
[1,] 15 4 11
[2,] 1 5 12
[3,] 3 10 13

> print("The second row of the second matrix of the array:")
[1] "The second row of the second matrix of the array:"
> print(result[2,,2])
[1] 1 5 12
> print("The element in the 3rd row and 3rd column of the 1st matrix:")
[1] "The element in the 3rd row and 3rd column of the 1st matrix:"
> print(result[3,3,1])
[1] 14
>
```

RStudio

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Go to file/function Addins

Project: (None)

Environment History Connections Tuto

R • Global Environment • 119 MiB

num3 chr [1:9] "X" "Y" "Z"

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```
1 num1 = rbind(rep("A",3), rep("B",3), rep("C",3))
2 print("num1")
3 print(num1)
4 num2 = rbind(rep("p",3), rep("q",3), rep("r",3))
5 print("num2")
6 print(num2)
7 num3 = rbind(rep("X",3), rep("Y",3), rep("Z",3))
8 print("num3")
9 print(num3)
10 a = matrix(t(cbind(num1,num2,num3)),ncol=3, byrow=T)
11 print("Combine three arrays, taking one row from each one by one:")
12 print(a)
```

11:00 (Top Level) R Script

Console Terminal Background Jobs

```
R 4.2.2 - /-
> print(num1)
      [,1] [,2] [,3]
[1,] "X"  "X"  "X"
[2,] "Y"  "Y"  "Y"
[3,] "Z"  "Z"  "Z"
> a = matrix(t(cbind(num1,num2,num3)),ncol=3, byrow=T)
> print("Combine three arrays, taking one row from each one by one:")
[1] "Combine three arrays, taking one row from each one by one:"
> print(a)
      [,1] [,2] [,3]
[1,] "A"  "A"  "A"
[2,] "p"  "p"  "p"
[3,] "X"  "X"  "X"
[4,] "B"  "B"  "B"
[5,] "q"  "q"  "q"
[6,] "Y"  "Y"  "Y"
[7,] "C"  "C"  "C"
[8,] "r"  "r"  "r"
[9,] "Z"  "Z"  "Z"
```

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Go to file/function Addins

Package reshape required but is not installed. [Install](#) [Don't Show Again](#)

```
1 #3
2 library(reshape)
3 t=airquality
4 #t)
5 summary(t)
6 #t)
7 melt(t)
8 #t)
9 t1=melt(t,id.vars=c("Month","Day"))
10 print(head(t1))
11 #t)
12 t2=cast(t1, Month + Day ~ variable)
13 t2
14 #v)
15 t2=cast(t1,Month~Day,mean)
16 t2
```

Environment History Connections Tutorial

R Global Environment

n	11L
name	chr [1:10] "Anastasia" "Dina" "Kather...
nterms	NA_integer_
num	"Enter a number: "
num1	NA_integer_
qualify	chr [1:10] "yes" "no" "yes" "no" "no"...
result	Named num 170
score	num [1:10] 12.5 9 16.5 12 9 20 14.5 1...
sum	0
v	int [1:10] 1 2 3 4 5 6 7 8 9 10
v1	8
v2	12
v3	cp1x [1:4] 3+0i 1+0i 1+0i ...

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1:1 (Top Level) R Script

Console Terminal Background Jobs

R 4.2.2 ~ /

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Go to file/function Addins

Run Source

```
1 #4
2 library(dplyr)
3 #1)
4 u <- airquality
5 missing_values <- colSums(is.na(u))
6 for (i in 1:ncol(u)) {
7   if (missing_values[i]/nrow(u) < 0.1) {
8     u <- u[!is.na(u[,i]),]
9   } else {
10    mean_val <- mean(u[,i], na.rm = TRUE)
11    u[is.na(u[,i]),i] <- mean_val
12  }
13 }
14 print(u)
15 #ii)
16 x=u[, "ozone"]
17 y=u[, "solar.R"]
18 m1<- lm(x~y)
19 m1
20 #iii)
21 plot(x, y, main = "Air Quality", xlab = "Ozone", ylab = "solar")
22 abline(lm(x~y,u1=u),col="blue")
```

194 (Top Level) R Script

Console Terminal Background Jobs

R 4.2.2 ~ /

>

Environment History Connections Tutorial

R Global Environment

n	11L
name	chr [1:10] "Anastasia" "Dina" "Kather...
nterms	NA_integer_
num	"Enter a number: "
num1	NA_integer_
qualify	chr [1:10] "yes" "no" "yes" "no" "no"...
result	Named num 170
score	num [1:10] 12.5 9 16.5 12 9 20 14.5 1...
sum	0
v	int [1:10] 1 2 3 4 5 6 7 8 9 10
v1	8
v2	12
v3	cp1x [1:4] 3+0i 1+0i 1+0i ...

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