Untitled1*

Source on Save | Run | Source

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

13:1 (Top Level) R Script

Console | Terminal | Background Jobs

R 4.2.2 · ~/

```
     [,1] [,2] [,3]
[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
```

Untitled1*

Source on Save | Run | Source

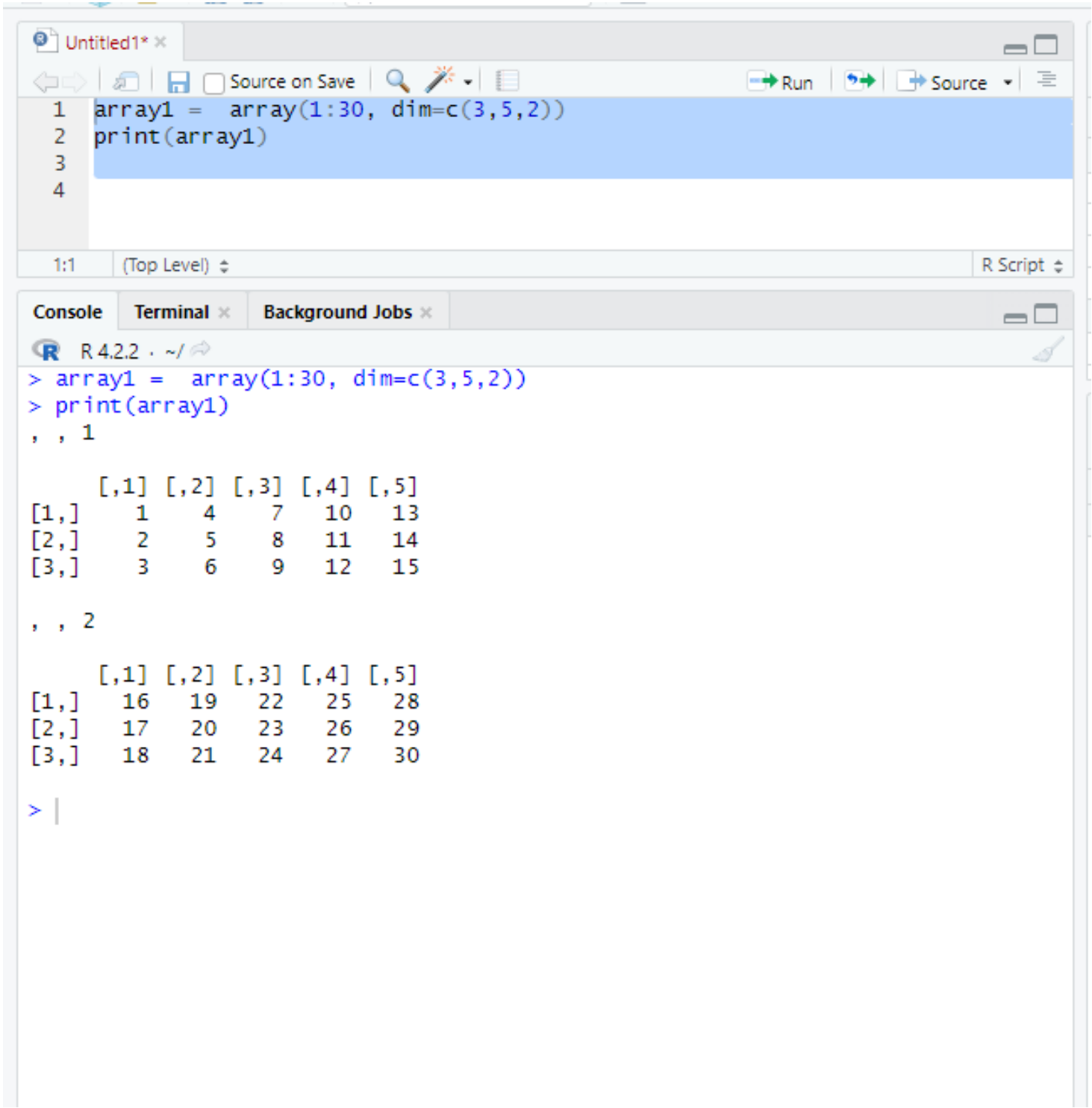
```
num1 = rbind(rep("A",3), rep("B",3), rep("C",3))
print("num1")
print(num1)
num2 = rbind(rep("P",3), rep("Q",3), rep("R",3))
print("num2")
print(num2)
num3 = rbind(rep("X",3), rep("Y",3), rep("Z",3))
print("num3")
print(num3)
a = matrix(t(cbind(num1,num2,num3)),ncol=3, byrow=T)
print("Combine three arrays, taking one row from each one by one:")
print(a)
```

13:1 (Top Level) R Script

Console | Terminal | Background Jobs

R 4.2.2 · ~/

```
[1] num3
> print(num3)
     [,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"
```


Untitled1*
Source on Save
Run
Source
1 array1 = array(1:30, dim=c(3,5,2))
2 print(array1)
3
4
1:1
(Top Level)
R Script
Console
Terminal
Background Jobs
R 4.2.2 · ~/
> array1 = array(1:30, dim=c(3,5,2))
> print(array1)
, , 1
[,1] [,2] [,3] [,4] [,5]
[1,] 1 4 7 10 13
[2,] 2 5 8 11 14
[3,] 3 6 9 12 15
, , 2
[,1] [,2] [,3] [,4] [,5]
[1,] 16 19 22 25 28
[2,] 17 20 23 26 29
[3,] 18 21 24 27 30
>

Untitled1*

Source on Save | Run | Source

```
1  a <- array(seq(from = 50, length.out = 15, by = 2), c(5, 3))
2  print("Content of the array:")
3  print("5x3 array of sequence of even integers greater than 50:")
4  print(a)
5
6
```

6:1 (Top Level) R Script

Console | Terminal | Background Jobs

R 4.2.2 · ~/

```
> a <- array(seq(from = 50, length.out = 15, by = 2), c(5, 3))
> print("Content of the array:")
[1] "Content of the array:"
> print("5x3 array of sequence of even integers greater than 50:")
[1] "5x3 array of sequence of even integers greater than 50:"
> print(a)
     [,1] [,2] [,3]
[1,]   50   60   70
[2,]   52   62   72
[3,]   54   64   74
[4,]   56   66   76
[5,]   58   68   78
>
```

Untitled1* | data frame question from 5-9.R

Source on Save | Run | Source

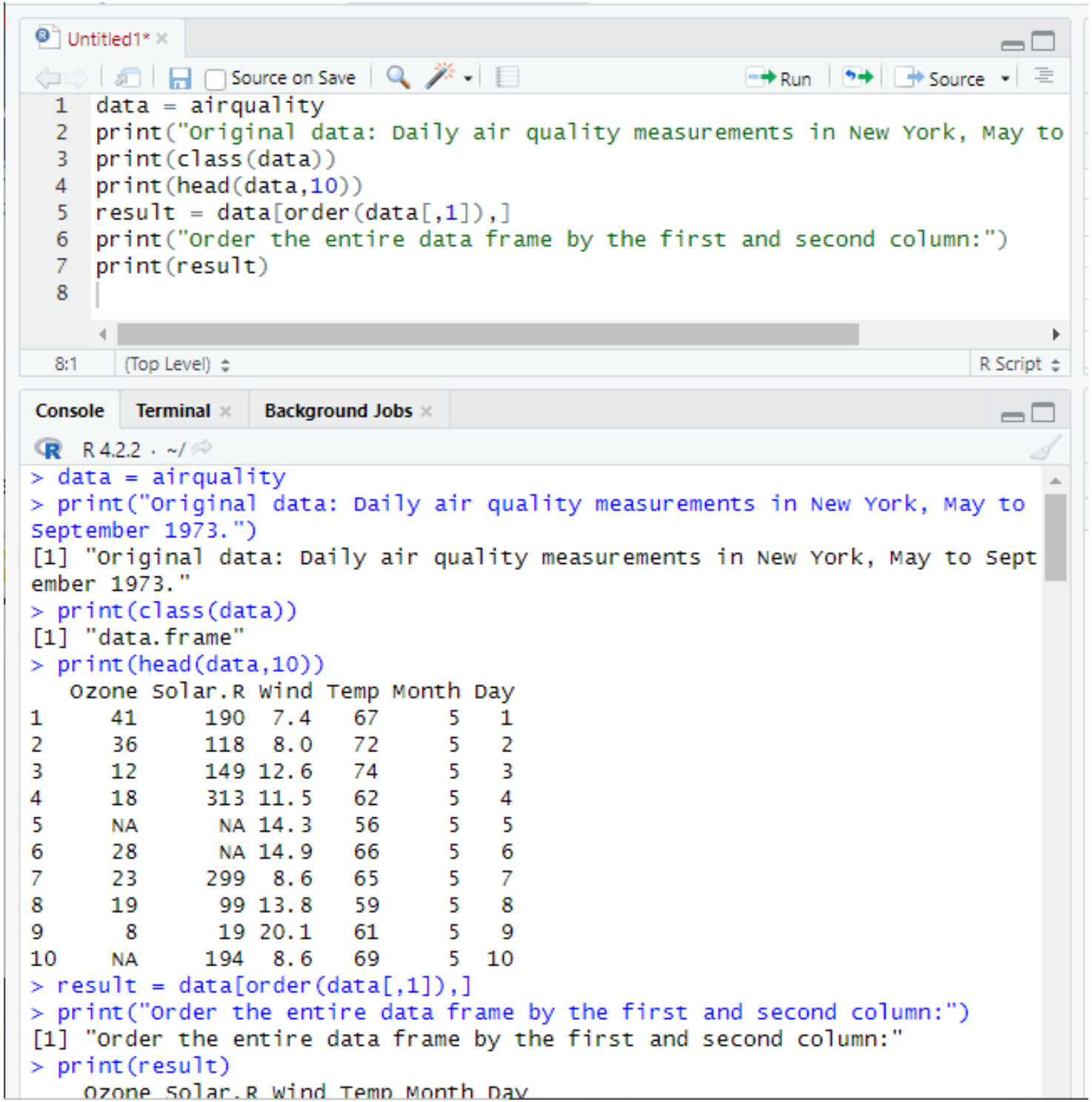
```
1  exam_data<-data.frame(name=c('anastasia','dima','kathrine','james','er
2                        score=c(12.5,9,16.5,12,9,20,14.5,13.5,8,19),
3                        attempt=c(1,3,2,3,2,3,1,1,2,1),
4                        qualify=c('yes','no','yes','no','no','yes','yes
5  print(exam_data)
6  x<-exam_data[c(3,5),c(1,3)]
7  x
8
9  exam_data$country=c("USA",'USA','USA','USA','UK','USA','USA','INDIA',
10 print(exam_data)
11
12
13 exam_data<-data.frame(name=c('anastasia','dima','kathrine','james','er
14                       score=c(12.5,9,16.5,12,9,20,14.5,13.5,8,19),
15                       attempt=c(1,3,2,3,2,3,1,1,2,1),
16                       qualify=c('yes','no','yes','no','no','yes','yes
17 print(exam_data)
18 new_exam_data<-data.frame(name=c("robert","sophia"),score=c(10.5,9),at
19 new_exam_data
20 exam=rbind(exam_data,new_exam_data)
21 exam
22
```

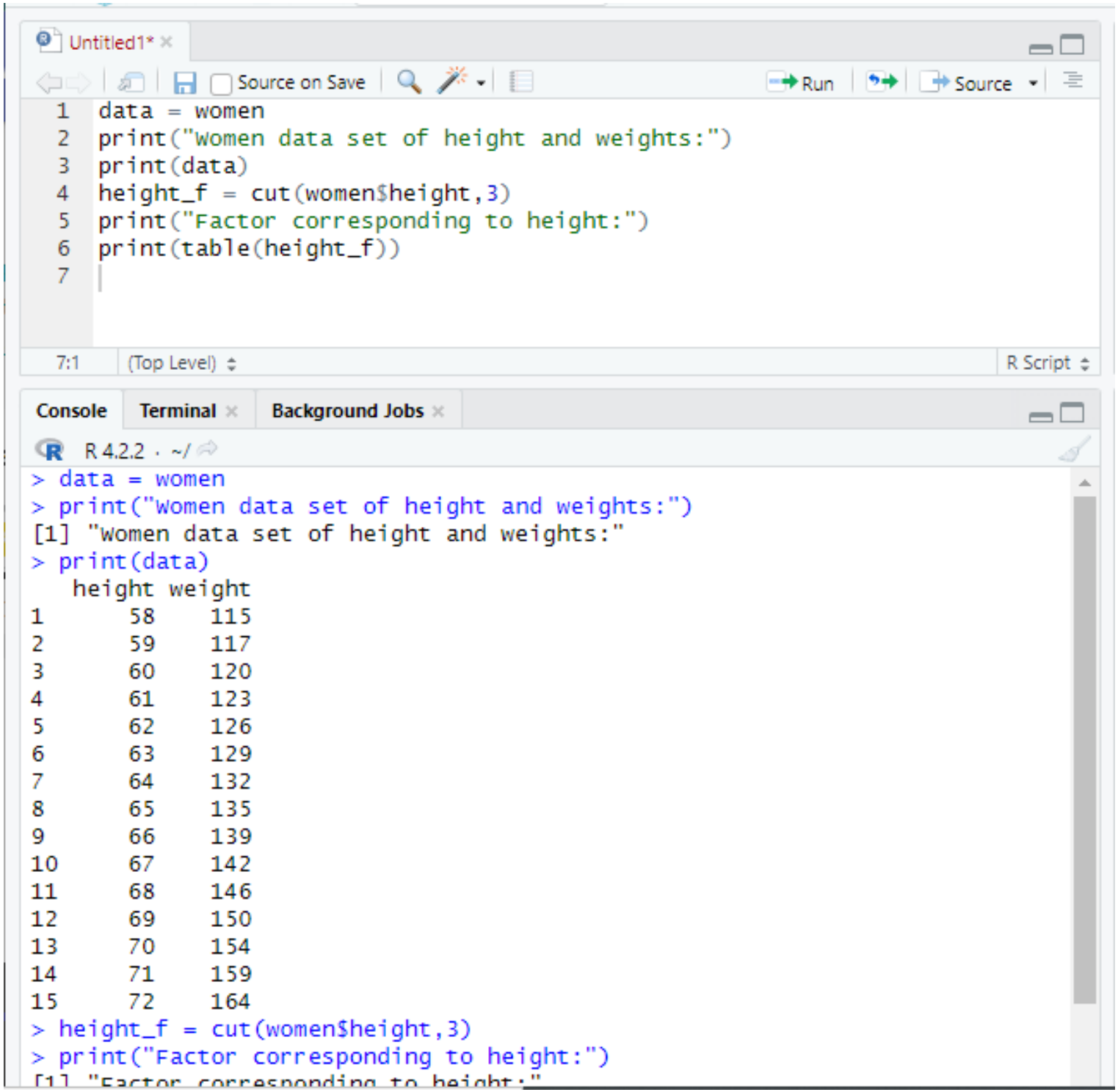
18:56 (Top Level) R Script

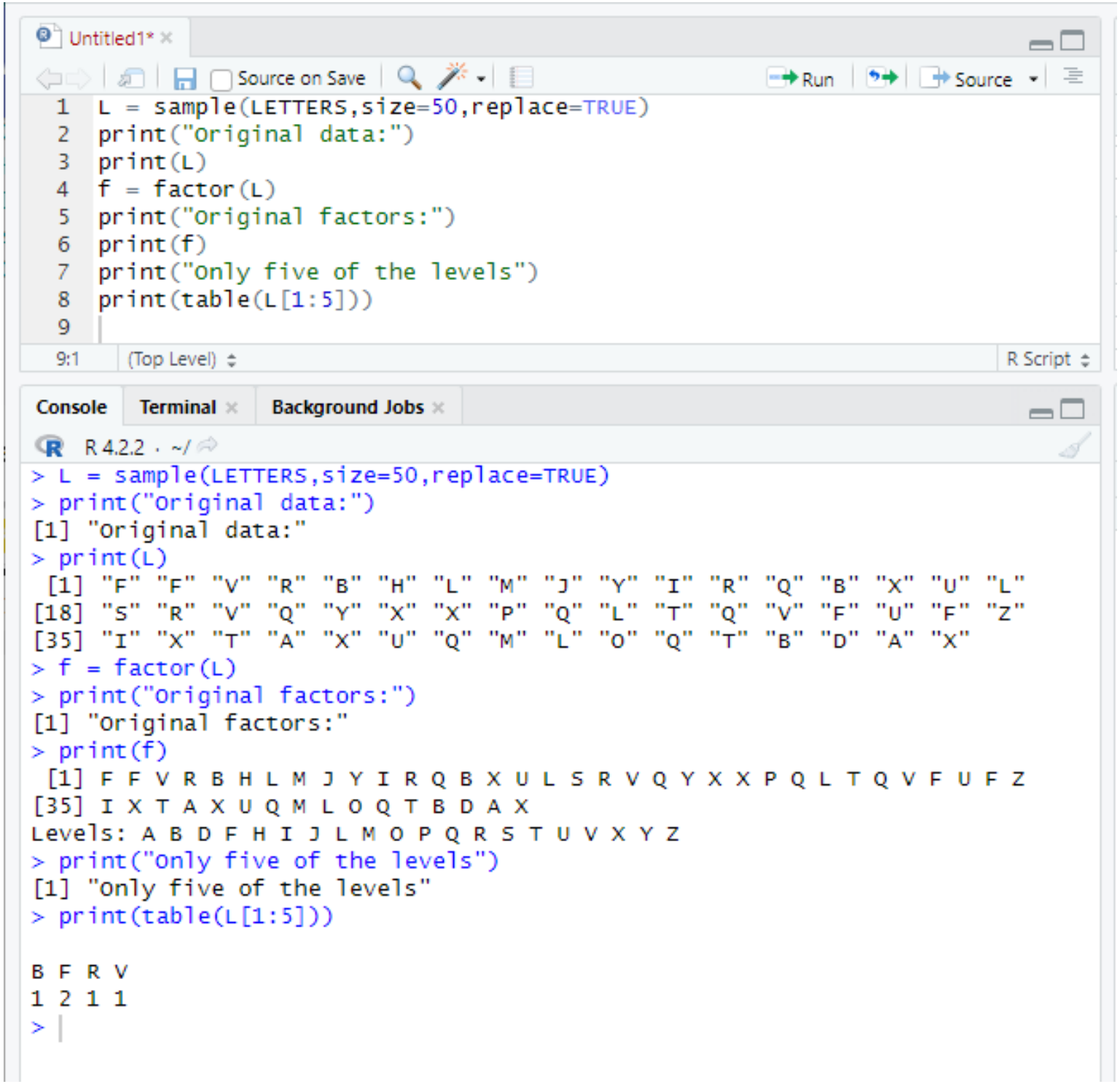
Console | Terminal | Background Jobs

R 4.2.2 · ~/

```
> print(exam_data)
       name score attempt qualify
1  anastasia  12.5       1     yes
2       dima   9.0       3      no
3   kathrine  16.5       2     yes
4      james  12.0       3      no
5      emily   9.0       2      no
6    michael  20.0       3     yes
7     mathew  14.5       1     yes
8      laura  13.5       1      no
9      kevin   8.0       2      no
```


Untitled1*
Source on Save
Run
Source
1 data = airquality
2 print("Original data: Daily air quality measurements in New York, May to
3 print(class(data))
4 print(head(data,10))
5 result = data[order(data[,1]),]
6 print("Order the entire data frame by the first and second column:")
7 print(result)
8
8:1
(Top Level)
R Script
Console
Terminal
Background Jobs
R 4.2.2 · ~/
> data = airquality
> print("Original data: Daily air quality measurements in New York, May to September 1973.")
[1] "Original data: Daily air quality measurements in New York, May to September 1973."
> print(class(data))
[1] "data.frame"
> print(head(data,10))
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
> result = data[order(data[,1]),]
> print("Order the entire data frame by the first and second column:")
[1] "Order the entire data frame by the first and second column:"
> print(result)
Ozone Solar.R Wind Temp Month Day


Untitled1*
Source on Save
Run
Source
1 data = women
2 print("Women data set of height and weights:")
3 print(data)
4 height_f = cut(women$height,3)
5 print("Factor corresponding to height:")
6 print(table(height_f))
7
7:1
(Top Level)
R Script
Console
Terminal
Background Jobs
R 4.2.2 · ~/
> data = women
> print("Women data set of height and weights:")
[1] "Women data set of height and weights:"
> print(data)
height weight
1 58 115
2 59 117
3 60 120
4 61 123
5 62 126
6 63 129
7 64 132
8 65 135
9 66 139
10 67 142
11 68 146
12 69 150
13 70 154
14 71 159
15 72 164
> height_f = cut(women$height,3)
> print("Factor corresponding to height:")


Untitled1*
Source on Save
Run
Source
1 L = sample(LETTERS,size=50,replace=TRUE)
2 print("Original data:")
3 print(L)
4 f = factor(L)
5 print("Original factors:")
6 print(f)
7 print("Only five of the levels")
8 print(table(L[1:5]))
9
9:1
(Top Level)
R Script
Console
Terminal
Background Jobs
R 4.2.2 · ~/
> L = sample(LETTERS,size=50,replace=TRUE)
> print("Original data:")
[1] "Original data:"
> print(L)
[1] "F" "F" "V" "R" "B" "H" "L" "M" "J" "Y" "I" "R" "Q" "B" "X" "U" "L"
[18] "S" "R" "V" "Q" "Y" "X" "X" "P" "Q" "L" "T" "Q" "V" "F" "U" "F" "Z"
[35] "I" "X" "T" "A" "X" "U" "Q" "M" "L" "O" "Q" "T" "B" "D" "A" "X"
> f = factor(L)
> print("Original factors:")
[1] "Original factors:"
> print(f)
[1] F F V R B H L M J Y I R Q B X U L S R V Q Y X X P Q L T Q V F U F Z
[35] I X T A X U Q M L O Q T B D A X
Levels: A B D F H I J L M O P Q R S T U V X Y Z
> print("Only five of the levels")
[1] "Only five of the levels"
> print(table(L[1:5]))
B F R V
1 2 1 1
>