

Sheth L.U.J & Sir M.V College  
SAS/SPSS/R  
Practical no.3

Aim: Exploring data: View() or print() (R).

Output:

```
1 install.packages(c("readr", "psych"))
2 library(readr)
3 library(psych)
4 my_data <- read_csv("iris.csv")
5 head(my_data)
```

Warning: Rtools is required to build R packages but is not currently installed. Please download and install the appropriate version of Rtools before proceeding:  
<https://cran.rstudio.com/bin/windows/rtools/>  
Installing packages: file 'C:\Users\Sangeeta Jaykumar\AppData\Local\Temp\Rtmpapqpat\downloaded\_packages' (as 'lib' is unspecified)  
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.3/readr\_2.1.6.zip'  
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.3/psych\_2.5.6.zip'  
package 'readr' successfully unpacked and MD5 sums checked  
package 'psych' successfully unpacked and MD5 sums checked  
The downloaded binary packages are in  
C:\Users\Sangeeta Jaykumar\AppData\Local\Temp\Rtmpapqpat\downloaded\_packages.

```
> library(readr)
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```

sepal.length	sepal.width	petal.length	petal.width	species
5.1	3.5	1.4	0.2	setosa
4.8	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa

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5 head(my_data)
6 tail(my_data)
7 dim(my_data)
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```
[1] 150 5
```

The screenshot displays the RStudio interface with the following components:

- Source Editor:** Contains R code for installing packages, loading data, and displaying dimensions.
 

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7 dim(my_data)
8 cat("Dimensions (Rows, Columns): ", dim(my_data), "\n")
9
```
- Environment:** Shows the loaded data objects:
  - `book1`: 15 obs. of 16 variables
  - `heart`: 1025 obs. of 14 variables
  - `iris`: 150 obs. of 5 variables
  - `my_data`: 150 obs. of 5 variables
- Files:** Lists the file explorer contents, including folders like "My Pictures", "My Videos", and files like "Rplot1.R".
- Console:** Displays the output of the executed code, showing the dimensions of the data:
 

```
the downloaded binary packages are in
C:\Users\Sangeeta Jaykumar\AppData\Local\Temp\kthpqp0p0\downloaded_packages.
> library(readr)
> library(psych)
> my_data <- read_csv("iris.csv")
> head(my_data)
  sepal_length sepal_width petal_length petal_width species
1          5.1         3.5         1.4         0.2 setosa
2          4.9         3.0         1.4         0.2 setosa
3          4.7         3.2         1.3         0.2 setosa
4          4.6         3.1         1.5         0.2 setosa
5          5.0         3.6         1.4         0.2 setosa
6          5.4         3.9         1.7         0.4 setosa
> library(readr)
> dim(my_data)
[1] 150 5
> cat("Dimensions (Rows, Columns): ", dim(my_data), "\n")
Dimensions (Rows, Columns): 150 5
```



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6 tail(my_data)
7 dim(my_data)
8 cat("Dimensions (Rows, Columns): ", dim(my_data), "\n")
9 str(my_data)
10 summary(my_data)
11
```

Environment History Connections Tutorial

Data

- Book1 15 obs. of 16 variables
- heart 1025 obs. of 14 variables
- iris 150 obs. of 5 variables
- my\_data 150 obs. of 5 variables

File Edit Packages Help View Presentation

Home

- My Recent
- My Projects
- My Videos
- OpenAI
- Proctor Games
- Market Sales.csv
- Base Tuition.csv
- heart.csv
- iris.csv
- Proctor Cancer.csv
- sepal\_width.csv
- sepal\_width.csv
- Student Mental Health.csv
- student\_exam\_scores.csv
- Superstore.csv
- taxi.csv
- Rock.csv

100% CPU

12:51 PM 24-11-2023

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11 names(my_data)
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7 dim(my_data)
8 cat("Dimensions (Rows, Columns): ", dim(my_data), "\n")
9 str(my_data)
10 summary(my_data)
11 names(my_data)
12 cat("Column Names: ", names(my_data), "\n")
13

```

```

> str(my_data)
'data.frame':   150 obs. of  5 variables:
 1 sepal_length: num  5.1 4.9 4.7 4.6 5 5.4 4.6 5.4 4 4.0 ...
 2 sepal_width:  num  3.5 3.3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
 3 petal_length:  num  1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
 4 petal_width:  num  0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
 5 species:      chr  "setosa" "setosa" "setosa" "setosa" ...

> summary(my_data)
   sepal_length  sepal_width  petal_length  petal_width   species
Min.   :4.300   Min.   :2.000   Min.   :1.000   Min.   :0.100   Length:150
1st Qu.:5.100   1st Qu.:2.800   1st Qu.:1.600   1st Qu.:0.100   Class:character
Median :5.800   Median :3.000   Median :4.350   Median :1.300   Mode :character
Mean   :5.843   Mean   :3.054   Mean   :4.359   Mean   :1.139
2nd Qu.:6.400   2nd Qu.:3.100   3rd Qu.:5.100   3rd Qu.:1.800
Max.   :7.900   Max.   :4.400   Max.   :6.900   Max.   :2.500

> names(my_data)
[1] "sepal_length" "sepal_width" "petal_length" "petal_width" "species"
> cat("Column Names: ", names(my_data), "\n")
Column Names:  sepal_length sepal_width petal_length petal_width species

```

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7 dim(my_data)
8 cat("Dimensions (Rows, Columns): ", dim(my_data), "\n")
9 str(my_data)
10 summary(my_data)
11 names(my_data)
12 cat("Column Names: ", names(my_data), "\n")
13 descr(my_data)
14

```

```

> summary(my_data)
   sepal_length  sepal_width  petal_length  petal_width   species
Min.   :4.300   Min.   :2.000   Min.   :1.000   Min.   :0.100   Length:150
1st Qu.:5.100   1st Qu.:2.800   1st Qu.:1.600   1st Qu.:0.100   Class:character
Median :5.800   Median :3.000   Median :4.350   Median :1.300   Mode :character
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> names(my_data)
[1] "sepal_length" "sepal_width" "petal_length" "petal_width" "species"
> cat("Column Names: ", names(my_data), "\n")
Column Names:  sepal_length sepal_width petal_length petal_width species

> descr(my_data)
vars      n mean    sd median trimmed mod min max range skew kurtosis   jar
sepal_length 1 150 5.84 0.81  5.80  5.81  4.3 7.9  3.6  0.33  -0.63  0.07
sepal_width  2 150 3.05 0.43  3.00  3.04  0.1 4.4  2.4  0.33  -0.20  0.04
petal_length  3 150 4.36 1.76  4.35  4.35  1.6 6.9  5.3  0.27  -1.42  0.14
petal_width  4 150 1.20 0.76  1.30  1.18  0.1 2.5  2.4  -0.10  -1.36  0.06
species      5 150 2.00 0.82  2.00  2.00  1.0 3.0  2.0  0.00  -1.52  0.07

```