TMC 204
Statistical Data Analysis with R
Unit 3
Exporting Data from R(Part 4)

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write.csv()

Description:

It will convert the data into data frame or matrix before writing it to CSV file

Syntax:

write.csv(data , file, row.names=FALSE)

Return:

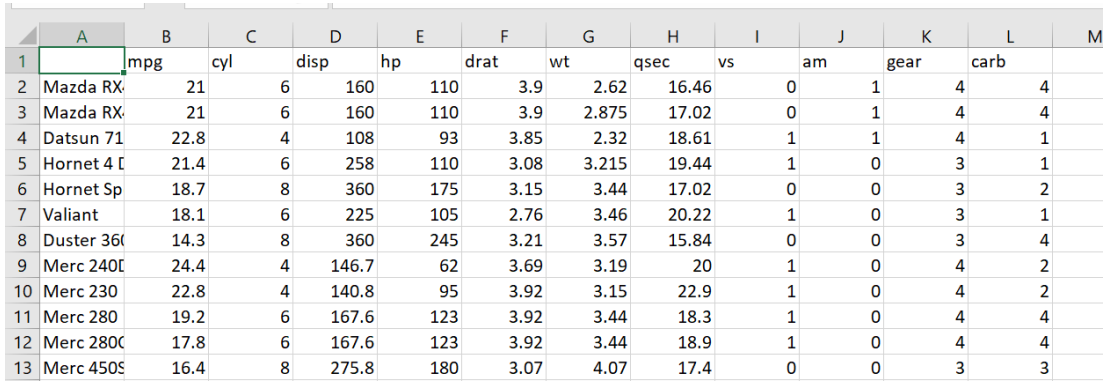
CSV file

Documentation:

help(write.csv)

Example:

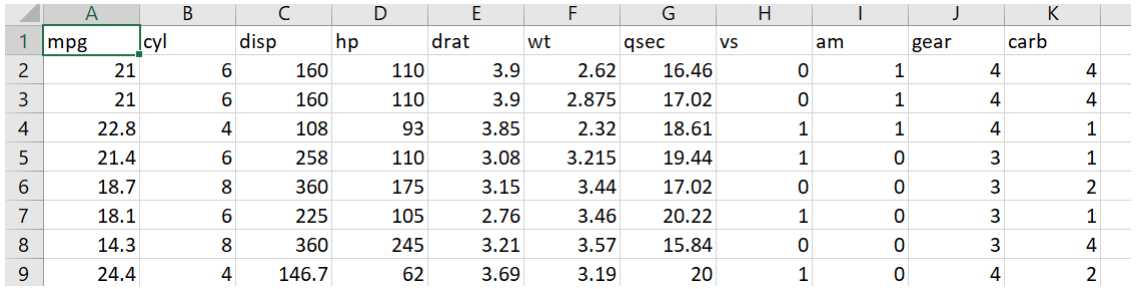
```
> write.csv(mtcars, "mt.csv")
> readLines("mt.csv")
 [1] "\"\",\"mpg\",\"cyl\",\"disp\",\"hp\",\"drat\",\"wt\",\"qsec\",\"vs\",\"am\",\"gear\",\"carb\""
 [2] "\"Mazda RX4\",21,6,160,110,3.9,2.62,16.46,0,1,4,4"
 [3] "\"Mazda RX4 Wag\",21,6,160,110,3.9,2.875,17.02,0,1,4,4"
 [4] "\"Datsun 710\",22.8,4,108,93,3.85,2.32,18.61,1,1,4,1"
 [5] "\"Hornet 4 Drive\",21.4,6,258,110,3.08,3.215,19.44,1,0,3,1"
```



	A	B	C	D	E	F	G	H	I	J	K	L	M
1		mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb	
2	Mazda RX	21	6	160	110	3.9	2.62	16.46	0	1	4	4	
3	Mazda RX	21	6	160	110	3.9	2.875	17.02	0	1	4	4	
4	Datsun 71	22.8	4	108	93	3.85	2.32	18.61	1	1	4	1	
5	Hornet 4 D	21.4	6	258	110	3.08	3.215	19.44	1	0	3	1	
6	Hornet Sp	18.7	8	360	175	3.15	3.44	17.02	0	0	3	2	
7	Valiant	18.1	6	225	105	2.76	3.46	20.22	1	0	3	1	
8	Duster 36(	14.3	8	360	245	3.21	3.57	15.84	0	0	3	4	
9	Merc 240I	24.4	4	146.7	62	3.69	3.19	20	1	0	4	2	
10	Merc 230	22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2	
11	Merc 280	19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4	
12	Merc 280(	17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4	
13	Merc 450S	16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3	

Without rownames

```
> write.csv(mtcars, "mt.csv", row.names=FALSE)
> readLines("mt.csv")
 [1] "\"mpg\",\"cyl\",\"disp\",\"hp\",\"drat\",\"wt\",\"qsec\",\"vs\",\"am\",\"gear\",\"carb\""
 [2] "21,6,160,110,3.9,2.62,16.46,0,1,4,4"
 [3] "21,6,160,110,3.9,2.875,17.02,0,1,4,4"
 [4] "22.8,4,108,93,3.85,2.32,18.61,1,1,4,1"
 [5] "21.4,6,258,110,3.08,3.215,19.44,1,0,3,1"
```



	A	B	C	D	E	F	G	H	I	J	K
1	mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
2	21	6	160	110	3.9	2.62	16.46	0	1	4	4
3	21	6	160	110	3.9	2.875	17.02	0	1	4	4
4	22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
5	21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
6	18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
7	18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
8	14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
9	24.4	4	146.7	62	3.69	3.19	20	1	0	4	2

sink()

Description:

It will divert the R output to a file/connection instead of the console.

Syntax:

sink(file=NULL, append=FALSE, type=c(“output”, “message”), split=“FALSE”)

Returns:

File with output

Documentation:

help(sink)

Example 1:

```
> sink(file="write.txt", append=TRUE, type="output")   #start writing to txt file
> x<-1:5
> x*2
> readLines("write.txt")
> sink()    #stop writing to file
> readLines("write.txt")
[1] "My name is Aditya Joshi"
[2] "and my age is 21"
[3] "1 2 3 4 5"
[4] "1 2 3 4 5"
[5] "1-2-3-4-5"
[6] "[1]  2  4  6  8 10"
[7] "[1] \"My name is Aditya Joshi\" \"and my age is 21\"      "
[8] "[3] \"1 2 3 4 5\"            \"1 2 3 4 5\"            "
[9] "[5] \"1-2-3-4-5\"            \"[1]  2  4  6  8 10\"    "
```

Example 2:

```
> sink("example.txt")
> x<-sample(1:10)
> y<-sample(1:10)
> cat(".....\n")
> cat(" t test between x and y \n")
> cat(".....\n")
> t.test(x, y)
> sink()
> readLines("example.txt")
```

```
[1] "....."
 [2] " t test between x and y "
 [3] "....."
 [4] ""
 [5] "\tWelch Two Sample t-test"
 [6] ""
 [7] "data:  x and y"
 [8] "t = 0, df = 18, p-value = 1"
 [9] "alternative hypothesis: true
difference in means is not equal to 0"
[10] "95 percent confidence interval:"
[11] " -2.844662  2.844662"
[12] "sample estimates:"
[13] "mean of x mean of y "
[14] "     5.5      5.5 "
[15] ""
```

sample 23-03-2020 20:27 Text Document

example - Notepad

File Edit Format View Help

```
.....
 t test between x and y
.....

        Welch Two Sample t-test

data:  x and y
t = 0, df = 18, p-value = 1
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
 -2.844662  2.844662
sample estimates:
mean of x mean of y
      5.5       5.5
```

dump()

Description:

It takes a vector of name of R objects and produces text representation of objects on a file

Syntax:

dump(list, file="dumpdata.R", append= FALSE, control="all", envir=parent.frame(), evaluate=TRUE)

Returns:

R file with text representation of R objects

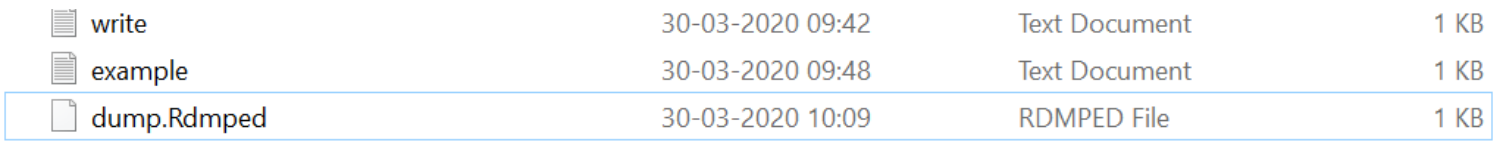
Documentation:

help(dump)

Example:

```
> x<-sample(1:10)
> y<-sample(1:10)
> xy<-list(x=x, y=y)                    #creates a list
> dump("xy", file="dump.Rdmped")        #write xy to dump.R file
> unlink("dump.R")                      #close connection to dump.R file
> rm("x","y", "xy")                     #remove objects
> X                                     # x is not available in workspace
Error: object 'x' not found
> source("dump.Rdmped")                 #source dump.R file
> xy
$x
 [1] 10  8  1  5  4  2  7  9  3  6

$y
 [1]  7  6  8  2  3  4  9  5 10  1
```



save()

Description:

It writes and external representation of the R objects to specified file

Syntax:

save(R Object, file_name)

Return/Creates:

R file with external representation of R objects

Documentation:

help(save)

Example:

```
> x<-sample(1:10)
> save(x, file="x.RData")    #save data in R Data file
> rm(x)
> load("x.Rdata")   #load x into workspace
> x
 [1]  2  3  8  7  5  6  4 10  1  9
```

Source: slideshare:r-squared.in