The `xtableList` Gallery

David J. Scott

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Contents

1 Introduction

This document represents a test of the functions in **xtable** which deal with lists of dataframes.

The first step is to load the package and set some options for this document.

```
library(xtable)
options(xtable.floating = FALSE)
options(xtable.timestamp = "")
options(width = 60)
```

Next we create a list of dataframes with attributes.

```
require(xtable)
data(mtcars)
mtcars <- mtcars[, 1:6]
mtcarsList <- split(mtcars, f = mtcars$cyl)
### Reduce the size of the list elements
mtcarsList[[1]] <- mtcarsList[[1]][1,]
mtcarsList[[2]] <- mtcarsList[[2]][1:2,]
mtcarsList[[3]] <- mtcarsList[[3]][1:3,]
attr(mtcarsList, "subheadings") <- paste0("Number of cylinders = ",
                                          names(mtcarsList))
attr(mtcarsList, "message") <- c("Line 1 of Message",
                                 "Line 2 of Message")
str(mtcarsList)
```

```
## List of 3
##  $ 4:'data.frame': 1 obs. of  6 variables:
##   ..$ mpg : num 22.8
##   ..$ cyl : num 4
##   ..$ disp: num 108
##   ..$ hp  : num 93
##   ..$ drat: num 3.85
##   ..$ wt  : num 2.32
##  $ 6:'data.frame': 2 obs. of  6 variables:
##   ..$ mpg : num [1:2] 21 21
##   ..$ cyl : num [1:2] 6 6
##   ..$ disp: num [1:2] 160 160
##   ..$ hp  : num [1:2] 110 110
##   ..$ drat: num [1:2] 3.9 3.9
##   ..$ wt  : num [1:2] 2.62 2.88
##  $ 8:'data.frame': 3 obs. of  6 variables:
##   ..$ mpg : num [1:3] 18.7 14.3 16.4
##   ..$ cyl : num [1:3] 8 8 8
##   ..$ disp: num [1:3] 360 360 276
##   ..$ hp  : num [1:3] 175 245 180
##   ..$ drat: num [1:3] 3.15 3.21 3.07
##   ..$ wt  : num [1:3] 3.44 3.57 4.07
##  - attr(*, "subheadings")= chr [1:3] "Number of cylinders = 4" "Number of cylinders = 6" "Numb
##  - attr(*, "message")= chr [1:2] "Line 1 of Message" "Line 2 of Message"
```

```
attributes(mtcarsList)
```

```
## $names
## [1] "4" "6" "8"
##
## $subheadings
## [1] "Number of cylinders = 4" "Number of cylinders = 6"
```

```
## [3] "Number of cylinders = 8"
##
## $message
## [1] "Line 1 of Message" "Line 2 of Message"
```

Now create a list of `xtable` objects.

```
xList <- xtableList(mtcarsList)
str(xList)
```

```
## List of 3
##  $ :Classes 'xtable' and 'data.frame': 1 obs. of  6 variables:
##   ..$ mpg : num 22.8
##   ..$ cyl : num 4
##   ..$ disp: num 108
##   ..$ hp  : num 93
##   ..$ drat: num 3.85
##   ..$ wt  : num 2.32
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 4"
##  $ :Classes 'xtable' and 'data.frame': 2 obs. of  6 variables:
##   ..$ mpg : num [1:2] 21 21
##   ..$ cyl : num [1:2] 6 6
##   ..$ disp: num [1:2] 160 160
##   ..$ hp  : num [1:2] 110 110
##   ..$ drat: num [1:2] 3.9 3.9
##   ..$ wt  : num [1:2] 2.62 2.88
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 6"
##  $ :Classes 'xtable' and 'data.frame': 3 obs. of  6 variables:
##   ..$ mpg : num [1:3] 18.7 14.3 16.4
##   ..$ cyl : num [1:3] 8 8 8
##   ..$ disp: num [1:3] 360 360 276
##   ..$ hp  : num [1:3] 175 245 180
##   ..$ drat: num [1:3] 3.15 3.21 3.07
##   ..$ wt  : num [1:3] 3.44 3.57 4.07
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 8"
##  - attr(*, "message")= chr [1:2] "Line 1 of Message" "Line 2 of Message"
##  - attr(*, "class")= chr "xtableList"
```

Create an alternative version where the lists have different values for `digits`.

```
xList1 <- xtableList(mtcarsList, digits = c(0,2,0,0,0,1,2))
str(xList1)
```

```
## List of 3
##  $ :Classes 'xtable' and 'data.frame': 1 obs. of  6 variables:
##   ..$ mpg : num 22.8
##   ..$ cyl : num 4
##   ..$ disp: num 108
##   ..$ hp  : num 93
##   ..$ drat: num 3.85
```

```
##   ..$ wt  : num 2.32
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 0 0 0 1 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 4"
##  $ :Classes 'xtable' and 'data.frame': 2 obs. of  6 variables:
##   ..$ mpg : num [1:2] 21 21
##   ..$ cyl : num [1:2] 6 6
##   ..$ disp: num [1:2] 160 160
##   ..$ hp  : num [1:2] 110 110
##   ..$ drat: num [1:2] 3.9 3.9
##   ..$ wt  : num [1:2] 2.62 2.88
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 0 0 0 1 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 6"
##  $ :Classes 'xtable' and 'data.frame': 3 obs. of  6 variables:
##   ..$ mpg : num [1:3] 18.7 14.3 16.4
##   ..$ cyl : num [1:3] 8 8 8
##   ..$ disp: num [1:3] 360 360 276
##   ..$ hp  : num [1:3] 175 245 180
##   ..$ drat: num [1:3] 3.15 3.21 3.07
##   ..$ wt  : num [1:3] 3.44 3.57 4.07
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 0 0 0 1 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 8"
##  - attr(*, "message")= chr [1:2] "Line 1 of Message" "Line 2 of Message"
##  - attr(*, "class")= chr "xtableList"
```

```
xList2 <- xtableList(mtcarsList, digits = c(0,2,0,0,0,1,2),
                             caption = "Caption to List",
                             label = "tbl:xtableList")
str(xList2)
```

```
## List of 3
##  $ :Classes 'xtable' and 'data.frame': 1 obs. of  6 variables:
##   ..$ mpg : num 22.8
##   ..$ cyl : num 4
##   ..$ disp: num 108
##   ..$ hp  : num 93
##   ..$ drat: num 3.85
##   ..$ wt  : num 2.32
##   ..- attr(*, "caption")= chr "Caption to List"
##   ..- attr(*, "label")= chr "tbl:xtableList"
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 0 0 0 1 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 4"
##  $ :Classes 'xtable' and 'data.frame': 2 obs. of  6 variables:
##   ..$ mpg : num [1:2] 21 21
##   ..$ cyl : num [1:2] 6 6
##   ..$ disp: num [1:2] 160 160
##   ..$ hp  : num [1:2] 110 110
##   ..$ drat: num [1:2] 3.9 3.9
##   ..$ wt  : num [1:2] 2.62 2.88
##   ..- attr(*, "caption")= chr "Caption to List"
```

```
##   ..- attr(*, "label")= chr "tbl:xtableList"
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 0 0 0 1 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 6"
##  $ :Classes 'xtable' and 'data.frame': 3 obs. of  6 variables:
##   ..$ mpg : num [1:3] 18.7 14.3 16.4
##   ..$ cyl : num [1:3] 8 8 8
##   ..$ disp: num [1:3] 360 360 276
##   ..$ hp  : num [1:3] 175 245 180
##   ..$ drat: num [1:3] 3.15 3.21 3.07
##   ..$ wt  : num [1:3] 3.44 3.57 4.07
##   ..- attr(*, "caption")= chr "Caption to List"
##   ..- attr(*, "label")= chr "tbl:xtableList"
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 0 0 0 1 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##   ..- attr(*, "subheading")= chr "Number of cylinders = 8"
##  - attr(*, "message")= chr [1:2] "Line 1 of Message" "Line 2 of Message"
##  - attr(*, "caption")= chr "Caption to List"
##  - attr(*, "label")= chr "tbl:xtableList"
##  - attr(*, "class")= chr "xtableList"
```

Further versions with no subheadings, and no message

```
attr(mtcarsList, "subheadings") <- NULL
xList3 <- xtableList(mtcarsList)
str(xList3)
```

```
## List of 3
##  $ :Classes 'xtable' and 'data.frame': 1 obs. of  6 variables:
##   ..$ mpg : num 22.8
##   ..$ cyl : num 4
##   ..$ disp: num 108
##   ..$ hp  : num 93
##   ..$ drat: num 3.85
##   ..$ wt  : num 2.32
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##  $ :Classes 'xtable' and 'data.frame': 2 obs. of  6 variables:
##   ..$ mpg : num [1:2] 21 21
##   ..$ cyl : num [1:2] 6 6
##   ..$ disp: num [1:2] 160 160
##   ..$ hp  : num [1:2] 110 110
##   ..$ drat: num [1:2] 3.9 3.9
##   ..$ wt  : num [1:2] 2.62 2.88
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##  $ :Classes 'xtable' and 'data.frame': 3 obs. of  6 variables:
##   ..$ mpg : num [1:3] 18.7 14.3 16.4
##   ..$ cyl : num [1:3] 8 8 8
##   ..$ disp: num [1:3] 360 360 276
##   ..$ hp  : num [1:3] 175 245 180
##   ..$ drat: num [1:3] 3.15 3.21 3.07
##   ..$ wt  : num [1:3] 3.44 3.57 4.07
```

```
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##  - attr(*, "message")= chr [1:2] "Line 1 of Message" "Line 2 of Message"
##  - attr(*, "class")= chr "xtableList"
```

```
attr(mtcarsList, "message") <- NULL
xList4 <- xtableList(mtcarsList)
str(xList4)
```

```
## List of 3
##  $ :Classes 'xtable' and 'data.frame': 1 obs. of  6 variables:
##   ..$ mpg : num 22.8
##   ..$ cyl : num 4
##   ..$ disp: num 108
##   ..$ hp  : num 93
##   ..$ drat: num 3.85
##   ..$ wt  : num 2.32
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##  $ :Classes 'xtable' and 'data.frame': 2 obs. of  6 variables:
##   ..$ mpg : num [1:2] 21 21
##   ..$ cyl : num [1:2] 6 6
##   ..$ disp: num [1:2] 160 160
##   ..$ hp  : num [1:2] 110 110
##   ..$ drat: num [1:2] 3.9 3.9
##   ..$ wt  : num [1:2] 2.62 2.88
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##  $ :Classes 'xtable' and 'data.frame': 3 obs. of  6 variables:
##   ..$ mpg : num [1:3] 18.7 14.3 16.4
##   ..$ cyl : num [1:3] 8 8 8
##   ..$ disp: num [1:3] 360 360 276
##   ..$ hp  : num [1:3] 175 245 180
##   ..$ drat: num [1:3] 3.15 3.21 3.07
##   ..$ wt  : num [1:3] 3.44 3.57 4.07
##   ..- attr(*, "align")= chr [1:7] "r" "r" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 2 2 2 2 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "f" "f" "f" ...
##  - attr(*, "class")= chr "xtableList"
```

2 Single Column Names

Print the list of `xtable` objects with a single header of the column names.

First the default.

```
print.xtableList(xList)
```

	mpg	cyl	disp	hp	drat	wt
Number of cylinders = 4						
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
Number of cylinders = 6						
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
Number of cylinders = 8						
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

Booktabs should work.

```
print.xtableList(xList, booktabs = TRUE)
```

	mpg	cyl	disp	hp	drat	wt
Number of cylinders = 4						
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
Number of cylinders = 6						
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
Number of cylinders = 8						
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

With digits being specified.

```
print.xtableList(xList1, booktabs = TRUE)
```

	mpg	cyl	disp	hp	drat	wt
Number of cylinders = 4						
Datsun 710	22.80	4	108	93	3.9	2.32
Number of cylinders = 6						
Mazda RX4	21.00	6	160	110	3.9	2.62
Mazda RX4 Wag	21.00	6	160	110	3.9	2.88
Number of cylinders = 8						
Hornet Sportabout	18.70	8	360	175	3.1	3.44
Duster 360	14.30	8	360	245	3.2	3.57
Merc 450SE	16.40	8	276	180	3.1	4.07

Line 1 of Message
Line 2 of Message

Row and column names, subheadings, and the message can be sanitized.

```
large <- function(x){
  paste0('{\\Large{\\bfseries ', x, '}}')
}
italic <- function(x){
  paste0('{\\emph{ ', x, '}}')
}
bold <- function(x){
  paste0('{\\bfseries ', x, '}')
}
red <- function(x){
  paste0('{\\color{red} ', x, '}')
}
```

```
print.xtableList(xList,
                 sanitize.rownames.function = italic,
                 sanitize.colnames.function = large,
                 sanitize.subheadings.function = bold,
                 sanitize.message.function = red,
                 booktabs = TRUE)
```

	mpg	cyl	disp	hp	drat	wt
Number of cylinders = 4						
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
Number of cylinders = 6						
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
Number of cylinders = 8						
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

A label and caption can be added.

```
print.xtableList(xList2, floating = TRUE)
```

	mpg	cyl	disp	hp	drat	wt
Number of cylinders = 4						
Datsun 710	22.80	4	108	93	3.9	2.32
Number of cylinders = 6						
Mazda RX4	21.00	6	160	110	3.9	2.62
Mazda RX4 Wag	21.00	6	160	110	3.9	2.88
Number of cylinders = 8						
Hornet Sportabout	18.70	8	360	175	3.1	3.44
Duster 360	14.30	8	360	245	3.2	3.57
Merc 450SE	16.40	8	276	180	3.1	4.07
Line 1 of Message						
Line 2 of Message						

Table 1: Caption to List

Rotated column names?

```
print.xtableList(xList, rotate.colnames = TRUE)
```

	mpg	cyl	disp	hp	drat	wt
Number of cylinders = 4						
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
Number of cylinders = 6						
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
Number of cylinders = 8						
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07
Line 1 of Message						
Line 2 of Message						

No subheadings?

```
print.xtableList(xList3)
```

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07
Line 1 of Message						
Line 2 of Message						

No message?

```
print.xtableList(xList4)
```

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

3 Multiple Column Names

Print the list of `xtable` objects with multiple headers of the column names.

First the default with multiple column name headers.

```
print.xtableList(xList, colnames.format = "multiple")
```

Number of cylinders = 4

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32

Number of cylinders = 6

	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88

Number of cylinders = 8

	mpg	cyl	disp	hp	drat	wt
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

Using booktabs:

```
print.xtableList(xList, colnames.format = "multiple",
                 booktabs = TRUE)
```

Number of cylinders = 4

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32

Number of cylinders = 6

	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88

Number of cylinders = 8

	mpg	cyl	disp	hp	drat	wt
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

With sanitization.

```
print.xtableList(xList, colnames.format = "multiple",
                 sanitize.rownames.function = italic,
                 sanitize.colnames.function = large,
                 sanitize.subheadings.function = bold,
                 sanitize.message.function = red,
                 booktabs = TRUE)
```

Number of cylinders = 4

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32

Number of cylinders = 6

	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88

Number of cylinders = 8

	mpg	cyl	disp	hp	drat	wt
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

A label and caption can be added.

```
print.xtableList(xList2, colnames.format = "multiple",
                 floating = TRUE)
```

Number of cylinders = 4

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4	108	93	3.9	2.32

Number of cylinders = 6

	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6	160	110	3.9	2.62
Mazda RX4 Wag	21.00	6	160	110	3.9	2.88

Number of cylinders = 8

	mpg	cyl	disp	hp	drat	wt
Hornet Sportabout	18.70	8	360	175	3.1	3.44
Duster 360	14.30	8	360	245	3.2	3.57
Merc 450SE	16.40	8	276	180	3.1	4.07

Line 1 of Message
Line 2 of Message

Table 2: Caption to List

Rotated column names?

```
print.xtableList(xList, colnames.format = "multiple",
                 rotate.colnames = TRUE)
```

Number of cylinders = 4

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32

Number of cylinders = 6

	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88

Number of cylinders = 8

	mpg	cyl	disp	hp	drat	wt
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

No subheadings?

```
print.xtableList(xList3, colnames.format = "multiple")
```

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
	mpg	cyl	disp	hp	drat	wt
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

Line 1 of Message
Line 2 of Message

No message?

```
print.xtableList(xList4, colnames.format = "multiple")
```

	mpg	cyl	disp	hp	drat	wt
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
	mpg	cyl	disp	hp	drat	wt
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Duster 360	14.30	8.00	360.00	245.00	3.21	3.57
Merc 450SE	16.40	8.00	275.80	180.00	3.07	4.07

4 lsmeans

Summaries from the `lsmeans` function from the **lsmeans** package can easily be produced using the function `xtableLSMeans`. This function produces a list of **xtable** objects.

```
library(lsmeans)
```

```
## Loading required package:  estimability
```

```
warp.lm <- lm(breaks ~ wool*tension, data = warpbreaks)
warp.lsm <- lsmeans(warp.lm, ~ tension | wool)
warp.sum <- summary(warp.lsm, adjust = "mvt")
warp.xtblList <- xtableLSMeans(warp.sum, digits = c(0,0,2,2,0,2,2))
str(warp.xtblList)
```

```
## List of 2
##  $ :Classes 'xtable' and 'data.frame': 3 obs. of  6 variables:
##   ..$ tension : Factor w/ 3 levels "L","M","H": 1 2 3
##   ..$ lsmean  : num [1:3] 44.6 24 24.6
##   ..$ SE      : num [1:3] 3.65 3.65 3.65
##   ..$ df      : num [1:3] 48 48 48
##   ..$ lower.CL: num [1:3] 35.5 15 15.5
##   ..$ upper.CL: num [1:3] 53.6 33 33.6
##   ..- attr(*, "align")= chr [1:7] "r" "l" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 0 2 2 0 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "s" "f" "f" ...
##   ..- attr(*, "subheading")= chr "wool = A"
##  $ :Classes 'xtable' and 'data.frame': 3 obs. of  6 variables:
##   ..$ tension : Factor w/ 3 levels "L","M","H": 1 2 3
##   ..$ lsmean  : num [1:3] 28.2 28.8 18.8
##   ..$ SE      : num [1:3] 3.65 3.65 3.65
##   ..$ df      : num [1:3] 48 48 48
##   ..$ lower.CL: num [1:3] 19.21 19.77 9.77
##   ..$ upper.CL: num [1:3] 37.2 37.8 27.8
##   ..- attr(*, "align")= chr [1:7] "r" "l" "r" "r" ...
##   ..- attr(*, "digits")= num [1:7] 0 0 2 2 0 2 2
##   ..- attr(*, "display")= chr [1:7] "s" "s" "f" "f" ...
##   ..- attr(*, "subheading")= chr "wool = B"
##  - attr(*, "message")= chr [1:3] "" "Confidence level used: 0.95" "Conf-level adjustment: mvt
##  - attr(*, "class")= chr "xtableList"
```

```
print.xtableList(warp.xtblList, colnames.format = "multiple",
                 include.rownames = FALSE)
```

```
## % latex table generated in R 3.2.3 by xtable 1.8-2 package
## %
## \begin{tabular}{lrrrrr}
##
## \multicolumn{6}{l}{wool = A}\\
## \hline
## tension & lsmean & SE & df & lower.CL & upper.CL \\\hline
##
## L & 44.56 & 3.65 & 48 & 35.55 & 53.56 \\
##   M & 24.00 & 3.65 & 48 & 14.99 & 33.01 \\
##   H & 24.56 & 3.65 & 48 & 15.55 & 33.56 \\
##    \hline\\
## \multicolumn{6}{l}{wool = B}\\
## \hline
## tension & lsmean & SE & df & lower.CL & upper.CL \\\hline
## L & 28.22 & 3.65 & 48 & 19.21 & 37.23 \\
##   M & 28.78 & 3.65 & 48 & 19.77 & 37.79 \\
##   H & 18.78 & 3.65 & 48 & 9.77 & 27.79 \\
##    \hline
## \multicolumn{6}{l}{}\\
##
## \multicolumn{6}{l}{Confidence level used: 0.95}\\
```

```
##
## \multicolumn{6}{l}{Conf-level adjustment: mvt method for 3 estimates}\\
## \end{tabular}
```

```
print.xtableList(warp.xtblList, colnames.format = "multiple",
                 include.rownames = FALSE)
```

wool = A

tension	lsmean	SE	df	lower.CL	upper.CL
L	44.56	3.65	48	35.55	53.56
M	24.00	3.65	48	14.99	33.01
H	24.56	3.65	48	15.55	33.56

wool = B

tension	lsmean	SE	df	lower.CL	upper.CL
L	28.22	3.65	48	19.21	37.23
M	28.78	3.65	48	19.77	37.79
H	18.78	3.65	48	9.77	27.79

Confidence level used: 0.95
Conf-level adjustment: mvt method for 3 estimates

```
print.xtableList(warp.xtblList, colnames.format = "multiple",
                 booktabs = TRUE,
                 include.rownames = FALSE)
```

wool = A

tension	lsmean	SE	df	lower.CL	upper.CL
L	44.56	3.65	48	35.55	53.56
M	24.00	3.65	48	14.99	33.01
H	24.56	3.65	48	15.55	33.56

wool = B

tension	lsmean	SE	df	lower.CL	upper.CL
L	28.22	3.65	48	19.21	37.23
M	28.78	3.65	48	19.77	37.79
H	18.78	3.65	48	9.77	27.79

Confidence level used: 0.95
Conf-level adjustment: mvt method for 3 estimates