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Chapter 1

Introduction

This file documents the `knitLatex` package. The purpose of this package is to provide \LaTeX helpers designed to work with the `knitr` package. The package provides functions. Three of which, `xTab`, `sTab`, and `lTab` create `table`, `supertabular`, and `longtable` environments in \LaTeX respectively. The fourth function `knitr_sethooks` serves two purposes. First, it fixes a well-known bug in `knitr` which occurs when using custom hooks in a “`results=‘asis’`” environment. Secondly, `knitr_sethooks` provides a custom command called ‘`com`’. When “`com=TRUE`” is set in a chunk, the resulting chunk is turned into a \LaTeX command which can be referenced by the chunk label. For example, the chunk “`<<mychuck>>`” can be referenced with `\mychuck` anywhere in the document and the resultant \LaTeX will be the same as what normally would have appeared in the spot of the chunk.

The examples in the following chapters show the `knitr` chunk as a comment, followed by the code in the chunk with the results as they would appear in a \LaTeX document. It is not the purpose of this file to document all the options available within each function, but rather to show how they can be used (with and without “`com = TRUE`”) in a \LaTeX document. For a more detailed description of the options available, consult the individual vignettes (entitled ‘`xTab`’, ‘`sTab`’ and ‘`lTab`’), as well as the individual documentations (i.e. ‘`?xTab`’, ‘`?sTab`’, and ‘`?lTab`’).

Chapter 2

Preamble

The preamble to this document is as follows:

```
\usepackage{longtable,supertabular,hyperref}

#<<setup, include=FALSE>>=
# devtools::load_all is required to load the package because it is still in
# development. For the user, you simply need require(knitLatex)
devtools::load_all('~/ignore/knitLatex', export_all=FALSE)
knitr_sethooks()
cars <- mtcars[1:10,1:5]
megacars <- rbind(mtcars, mtcars, mtcars)

#<<mylongtable, echo=FALSE, com=TRUE, results='asis'>>=
lTab(megacars,
      label = 'tab:mylongtable',
      caption.head = 'My Long Table')

#<<mysupertabular, echo=FALSE, com=TRUE, results='asis'>>=
sTab(megacars,
      label = 'tab:mysupertabular',
      caption.top = 'My Supertabular')

#<<myplot, echo = FALSE, com=TRUE, fig.cap='my plot', results = 'asis'>>=
boxplot(mpg ~ gear, megacars)

@
```

Chapter 3

xTab

This chapter demonstrates a table environment. Because we set the label option as ‘tab:mytable’ we can type the following:

```
observe table \ref{tab:mytable} on page \pageref{tab:mytable}.
```

and produce this:

observe table 3.1 on page 4.

```
#<<mytable, results = 'asis'>>=  
xTab(cars, label='tab:mytable', caption.bottom='My Table')
```

mpg	cyl	disp	hp	drat
21	6	160	110	3.9
21	6	160	110	3.9
22.8	4	108	93	3.85
21.4	6	258	110	3.08
18.7	8	360	175	3.15
18.1	6	225	105	2.76
14.3	8	360	245	3.21
24.4	4	146.7	62	3.69
22.8	4	140.8	95	3.92
19.2	6	167.6	123	3.92

Table 3.1: My Table

Chapter 4

sTab

This chapter demonstrates a supertabular environment created with sTab. The following table was produced in the preamble with this code (uncommented, of course):

```
#<<mysupertabular, echo=FALSE, com=TRUE, results='asis'>>=
sTab(megacars,
     label = 'tab:mysupertabular',
     caption.top = 'My Supertabular')
```

We then produce the table with the following command:

```
\mysupertabular
```

Table 4.1: My Supertabular

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2

Chapter 5

lTab

This chapter demonstrates a longtable environment create with lTab. The following table was produced in the preamble with this code (uncommented, of course):

```
#<<mylongtable, echo=FALSE, com=TRUE, results='asis'>>=
lTab(megacars,
     label = 'tab:mylongtable',
     caption.head = 'My Long Table')
```

We then produce the table with the following command:

```
\mylongtable
```

Table 5.1: My Long Table

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4

Table 5.1: My Long Table

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2

Table 5.1: My Long Table

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4
22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1
14.3	8	360	245	3.21	3.57	15.84	0	0	3	4
24.4	4	146.7	62	3.69	3.19	20	1	0	4	2
22.8	4	140.8	95	3.92	3.15	22.9	1	0	4	2
19.2	6	167.6	123	3.92	3.44	18.3	1	0	4	4
17.8	6	167.6	123	3.92	3.44	18.9	1	0	4	4
16.4	8	275.8	180	3.07	4.07	17.4	0	0	3	3
17.3	8	275.8	180	3.07	3.73	17.6	0	0	3	3
15.2	8	275.8	180	3.07	3.78	18	0	0	3	3
10.4	8	472	205	2.93	5.25	17.98	0	0	3	4
10.4	8	460	215	3	5.424	17.82	0	0	3	4
14.7	8	440	230	3.23	5.345	17.42	0	0	3	4
32.4	4	78.7	66	4.08	2.2	19.47	1	1	4	1
30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
33.9	4	71.1	65	4.22	1.835	19.9	1	1	4	1
21.5	4	120.1	97	3.7	2.465	20.01	1	0	3	1
15.5	8	318	150	2.76	3.52	16.87	0	0	3	2
15.2	8	304	150	3.15	3.435	17.3	0	0	3	2
13.3	8	350	245	3.73	3.84	15.41	0	0	3	4
19.2	8	400	175	3.08	3.845	17.05	0	0	3	2
27.3	4	79	66	4.08	1.935	18.9	1	1	4	1
26	4	120.3	91	4.43	2.14	16.7	0	1	5	2
30.4	4	95.1	113	3.77	1.513	16.9	1	1	5	2
15.8	8	351	264	4.22	3.17	14.5	0	1	5	4
19.7	6	145	175	3.62	2.77	15.5	0	1	5	6
15	8	301	335	3.54	3.57	14.6	0	1	5	8
21.4	4	121	109	4.11	2.78	18.6	1	1	4	2

Chapter 6

Figure

Even though the `knitLatex` package is primarily designed to be used with \LaTeX tables, here is an example of using the ‘com’ hook with a figure.

```
#<<myplot, echo = FALSE, com=TRUE, fig.cap='my plot', results = 'asis'>>=  
boxplot(mpg ~ gear, megacars)
```

With a figure, “com = TRUE” can only be used with “results = ‘asis’”. To use the regular figure environment, you must use a traditional in-line chunk as demonstrated in the following example. Note that there is no visible difference between this figure and the previous one. This is because I have not defined the `knitrout` environment. If I had, this figure would be displayed accordingly.

```
#<<myotherplot, fig.cap = 'my other plot'>>=  
boxplot(mpg ~ gear, megacars)
```

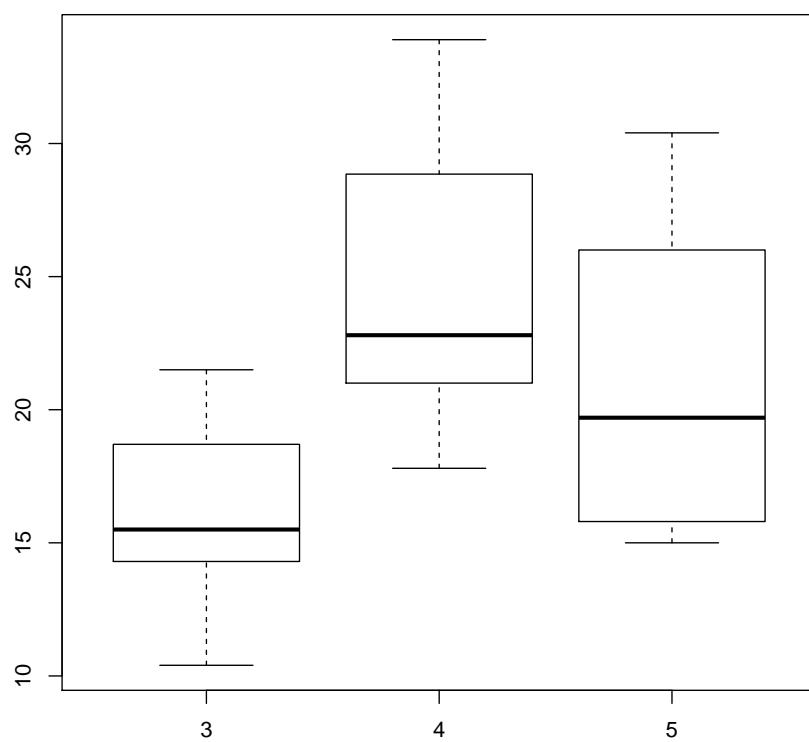


Figure 6.1: my plot

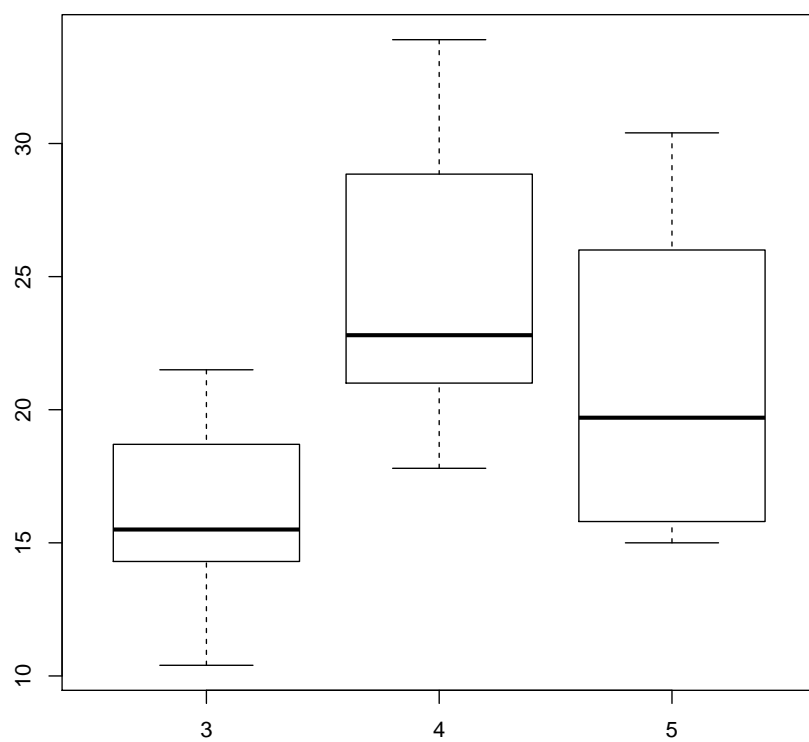


Figure 6.2: my other plot