ascii

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ascii
by David Hajage

Contents

List of Tables

ascii is a R package for writing asciidoc, txt2tags, reStructuredText or org documents with embeded R code.

1 news

1.1 2009/xx/xx

- version 0.4
- remove extra `\n` when there is no R output
- change the name of Sphinx related functions to ReST
- add methods for `freq()`, `compmeans()` and `CrossTable()` in package `descr`
- remove `cgroup` and `rgroup` arguments in `ascii()` function
- four new arguments : `tgroup` (top), `bgroup` (bottom), `lgroup` (left) and `rgroup` (right)
- new arguments `escape` and `list.escape` in `print.ascii()` function

1.2 2009/10/28

- "results=ascii" for all drivers
- method for `ftable` objects
- method for `packageDescription` objects
- method for `sessionInfo` objects
- fix warning with asciidoc list output

1.3 2009/10/24

- small bug fix

1.4 2009/10/24

- version 0.3
- `list.type` can be `"label"`
- `ascii.simple.list` method
- `rownames` and `colnames` arguments
- `cgroup` for txt2tags output
- improve col alignment in txt2tags output
- sphinx driver and output
- org driver and output
- improve row and col span (cgroup and rgroup)
- remove `SweaveAscii()` function
- `Asciidoc()`, `T2t()`, `Sphinx()` and `Org()` (wrapper for `Sweave("file.Rnw", RweaveXx-x)`)

1.5 2009/07/16

- version 0.2
- digit and format accept matrix, (each cell can have its own number of digits a nd format)
- new arguments (`cgroup`, `rgroup`, ...) to define major column and row heading s like in Hmisc::latex() (only for asciidoc output)
- column style and alignment use cell specifiers
- remove SweaveSyntaxAscii (bug when `]` is used inside `Sexpr:[]`)

1.6 2009/05/11

- `\SweaveOpts{}` now works
- add `SweaveSyntaxAscii` (`SweaveOpts:[]`, `Sexpr:[]`)
- add a simple wrapper for `Sweave()` (`SweaveAscii()`) that use `RweaveAsciidoc` and `SweaveSyntaxAscii` as default

1.7 2009/04/27

- add a `caption.level` argument
- improve `ascii.describe` output (package `Hmisc`)

1.8 2009/04/08

- update DESCRIPTION (with homepage)
- support for `describe` function in package `Hmisc`

2 short example

```
<<>>=
x <- matrix(1:4, 2, 2)
x
@
```

gives :

```
> x <- matrix(1:4, 2, 2)
> x
     [,1] [,2]
[1,]    1    3
[2,]    2    4
```

```
<<results=ascii,echo=FALSE>>=
ascii(x, caption = "A simple matrix", width = 30)
@
```

gives :

Table 1 A simple matrix

1.00	3.00
2.00	4.00

3 what ascii provides

ascii provided :

- a generic method for common R objects: `ascii()`. Default argument depends of R object,
- several Sweave drivers: `RweaveAsciidoc()`, `RweaveT2t()`, `RweaveReST()` and `RweaveOrg()`.
- some simple wrappers for `Sweave("yourfile.Rnw", RweaveXxx)` named `Asciidoc()`, `T2t()`, `ReST()` and `Org()`.

4 features/options

See `?ascii` for a complete description of all arguments.

	asciidoc	**txt2tags**	**rest**	**org**
Arguments				
include.rownames	yes	yes	yes	yes
include.colnames	yes	yes	yes	yes
rownames	yes	yes	yes	yes
colnames	yes	yes	yes	yes
format	yes	yes	yes	yes
digits	yes	yes	yes	yes
decimal.mark	yes	yes	yes	yes
na.print	yes	yes	yes	yes
caption	yes	yes	yes	yes
caption.level	yes	yes	yes	yes
width	yes	no	no	no
frame	yes	yes (all or none)	no	no
grid	yes	no	no	no
valign	yes	no	no	no
header	yes	yes	yes	yes
footer	yes	yes	no	no
align	yes	yes	no	no
col.width	yes	no	no	no
style	yes	yes	yes	yes
tgroup	yes	yes	yes	no
n.tgroup	yes	yes	yes	no
talign	yes	yes	no	no
tvalign	yes	no	no	no
tstyle	yes	yes	yes	no
bgroup	yes	no	yes	no
n.bgroup	yes	no	yes	no
balign	yes	no	no	no
bvalign	yes	no	no	no
bstyle	yes	no	yes	no
lgroup	yes	no	yes	no
n.lgroup	yes	no	yes	no
lalign	yes	no	no	no
lvalign	yes	no	no	no
lstyle	yes	no	yes	no
rgroup	yes	no	yes	no
n.rgroup	yes	no	yes	no
ralign	yes	no	no	no
rvalign	yes	no	no	no
rstyle	yes	no	yes	no
list.type	yes	yes	yes	yes

	asciidoc	txt2tags	rest	org
condense	yes	yes	yes	yes
Output				
html	yes	yes	yes	yes
docbook	yes	yes	no	yes
latex	yes (experimental)	yes	yes (col and row spans not implemented yet)	yes
Feature				
syntax color	yes (but not for R...)	no	yes	yes

5 ascii examples

ascii provides methods for:

```
> methods(ascii)
 [1] ascii.anova*              ascii.aov*
 [3] ascii.aovlist*            ascii.cast_df*
 [5] ascii.character*          ascii.coxph*
 [7] ascii.CrossTable*         ascii.data.frame*
 [9] ascii.default*            ascii.density*
[11] ascii.describe*           ascii.describe.single*
[13] ascii.factor*             ascii.ftable*
[15] ascii.glm*                ascii.htest*
[17] ascii.integer*            ascii.list*
[19] ascii.lm*                 ascii.matrix*
[21] ascii.numeric*            ascii.packageDescription*
[23] ascii.prcomp*             ascii.sessionInfo*
[25] ascii.simple.list*        ascii.smooth.spline*
[27] ascii.summary.aov*        ascii.summary.aovlist*
[29] ascii.summary.glm*        ascii.summary.lm*
[31] ascii.summary.prcomp*     ascii.summary.table*
[33] ascii.survdiff*           ascii.table*
[35] ascii.ts*                 ascii.zoo*

   Non-visible functions are asterisked
```

5.1 sessionInfo

```
> ascii(sessionInfo())
R version::
   R version 2.10.0 (2009-10-26), i486-pc-linux-gnu
locale::
   LC_CTYPE=fr_FR.UTF-8, LC_NUMERIC=C, LC_TIME=fr_FR.UTF-8, LC_COLLATE=fr_FR.UTF ↩
       -8, LC_MONETARY=C, LC_MESSAGES=fr_FR.UTF-8, LC_PAPER=fr_FR.UTF-8, LC_NAME= ↩
       C, LC_ADDRESS=C, LC_TELEPHONE=C, LC_MEASUREMENT=fr_FR.UTF-8,  ↩
       LC_IDENTIFICATION=C
attached base packages::
  stats, graphics, grDevices, utils, datasets, methods, base
other attached packages::
   ascii_0.4, proto_0.3-8
loaded via a namespace (and not attached)::
  tools_2.10.0
```

R version R version 2.10.0 (2009-10-26), i486-pc-linux-gnu

locale LC_CTYPE=fr_FR.UTF-8, LC_NUMERIC=C, LC_TIME=fr_FR.UTF-8, LC_COLLATE=fr_FR.UTF-8, LC_MONETARY=C, LC_MESSAGES=fr_FR.UTF-8, LC_PAPER=fr_FR.UTF-8, LC_NAME=C, LC_ADDRESS=C, LC_TELEPHONE=C, LC_MEASUREMENT=fr_FR.UTF-8, LC_IDENTIFICATION=C

attached base packages stats, graphics, grDevices, utils, datasets, methods, base

other attached packages ascii_0.4, proto_0.3-8

loaded via a namespace (and not attached) tools_2.10.0

5.2 vector

```
> ascii(1:4)
|==========================
| 1.00 | 2.00 | 3.00 | 4.00
|==========================
```

1.00	2.00	3.00	4.00

5.3 matrix

```
> ascii(VADeaths, include.rownames = T, include.colnames = T, caption = "VADeaths ↩
    ",
+     header = T, col.width = c(1, 2, 2, 2, 2, 2), valign = "middle",
+     align = "lrrrr", frame = "topbot")
.VADeaths
[frame="topbot",valign="middle",options="header",cols="1,2,2,2,2"]
|=================================================================================
<.^|       >.^| Rural Male >.^| Rural Female >.^| Urban Male >.^| Urban Female
<.^| 50-54 >.^| 11.70      >.^| 8.70         >.^| 15.40      >.^| 8.40
<.^| 55-59 >.^| 18.10      >.^| 11.70        >.^| 24.30      >.^| 13.60
<.^| 60-64 >.^| 26.90      >.^| 20.30        >.^| 37.00      >.^| 19.30
<.^| 65-69 >.^| 41.00      >.^| 30.90        >.^| 54.60      >.^| 35.10
<.^| 70-74 >.^| 66.00      >.^| 54.30        >.^| 71.10      >.^| 50.00
|=================================================================================
```

Table 2 VADeaths

	Rural Male	Rural Female	Urban Male	Urban Female
50-54	11.70	8.70	15.40	8.40
55-59	18.10	11.70	24.30	13.60
60-64	26.90	20.30	37.00	19.30
65-69	41.00	30.90	54.60	35.10
70-74	66.00	54.30	71.10	50.00

5.4 data.frame

```
> ascii(iris[1:10, ], include.rownames = F, caption = "iris", width = 75,
+     align = "c", valign = "bottom", frame = "topbot", grid = "none")
.iris
[frame="topbot",grid="none",valign="bottom",options="header",width="75%"]
|================================================================================== ↩

^.>| Sepal.Length ^.>| Sepal.Width ^.>| Petal.Length ^.>| Petal.Width ^.>|  ↩
    Species
^.>| 5.10         ^.>| 3.50        ^.>| 1.40         ^.>| 0.20        ^.>| setosa
^.>| 4.90         ^.>| 3.00        ^.>| 1.40         ^.>| 0.20        ^.>| setosa
^.>| 4.70         ^.>| 3.20        ^.>| 1.30         ^.>| 0.20        ^.>| setosa
^.>| 4.60         ^.>| 3.10        ^.>| 1.50         ^.>| 0.20        ^.>| setosa
^.>| 5.00         ^.>| 3.60        ^.>| 1.40         ^.>| 0.20        ^.>| setosa
^.>| 5.40         ^.>| 3.90        ^.>| 1.70         ^.>| 0.40        ^.>| setosa
^.>| 4.60         ^.>| 3.40        ^.>| 1.40         ^.>| 0.30        ^.>| setosa
```

```
^.>| 5.00         ^.>| 3.40        ^.>| 1.50         ^.>| 0.20        ^.>| setosa
^.>| 4.40         ^.>| 2.90        ^.>| 1.40         ^.>| 0.20        ^.>| setosa
^.>| 4.90         ^.>| 3.10        ^.>| 1.50         ^.>| 0.10        ^.>| setosa
|=============================================================================== ↩
```

Table 3 iris

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.10	3.50	1.40	0.20	setosa
4.90	3.00	1.40	0.20	setosa
4.70	3.20	1.30	0.20	setosa
4.60	3.10	1.50	0.20	setosa
5.00	3.60	1.40	0.20	setosa
5.40	3.90	1.70	0.40	setosa
4.60	3.40	1.40	0.30	setosa
5.00	3.40	1.50	0.20	setosa
4.40	2.90	1.40	0.20	setosa
4.90	3.10	1.50	0.10	setosa

5.5 row (and col) headings

```
> library(reshape)
> ff_d <- melt(french_fries, id = 1:4, na.rm = TRUE)
> toto <- cast(ff_d, treatment + subject ~ variable, mean, margins = "treatment")
> ascii(toto[, -1], lgroup = c("Treatment", paste("Treatment:",
+     as.character(unique(toto[, 1])))), n.lgroup = c(1, table(toto[,
+     1])), rstyle = "s", lvalign = "middle")
[options="header"]
|=============================================================================
.1+.^| Treatment | subject | potato | buttery | grassy | rancid | painty
.13+.^| Treatment: 1 | 3       | 6.22   | 0.37    | 0.19   | 2.11   | 3.11
| 10       | 9.96   | 6.75    | 0.58   | 4.02   | 1.38
| 15       | 3.36   | 0.72    | 0.42   | 3.96   | 3.26
| 16       | 6.50   | 3.26    | 0.76   | 4.12   | 1.23
| 19       | 9.38   | 3.06    | 2.02   | 5.36   | 2.77
| 31       | 8.84   | 0.44    | 0.09   | 5.94   | 3.21
| 51       | 10.68  | 2.64    | 1.05   | 5.15   | 1.96
| 52       | 5.06   | 0.81    | 0.88   | 4.29   | 2.65
| 63       | 6.78   | 0.03    | 0.00   | 6.05   | 3.85
| 78       | 3.62   | 0.73    | 0.54   | 1.50   | 3.49
| 79       | 8.06   | 0.28    | 0.34   | 0.57   | 0.00
| 86       | 4.18   | 1.77    | 0.81   | 5.49   | 4.11
| (all)    | 6.89   | 1.78    | 0.65   | 4.07   | 2.58
.13+.^| Treatment: 2 | 3       | 6.74   | 0.59    | 0.11   | 3.14   | 2.48
| 10       | 9.99   | 6.98    | 0.47   | 2.15   | 0.82
| 15       | 4.41   | 1.31    | 0.34   | 2.29   | 2.06
| 16       | 6.45   | 3.37    | 1.05   | 3.40   | 0.46
| 19       | 8.64   | 2.45    | 1.14   | 5.41   | 4.16
| 31       | 8.03   | 0.62    | 0.16   | 6.05   | 5.06
| 51       | 9.98   | 3.79    | 1.57   | 4.67   | 2.25
| 52       | 5.51   | 1.02    | 1.18   | 4.22   | 2.19
| 63       | 8.41   | 0.10    | 0.01   | 5.09   | 4.36
| 78       | 3.78   | 0.29    | 0.76   | 1.55   | 2.73
| 79       | 7.94   | 0.69    | 0.26   | 1.03   | 0.00
| 86       | 3.99   | 2.06    | 0.78   | 4.52   | 2.84
| (all)    | 7.00   | 1.97    | 0.66   | 3.62   | 2.46
.13+.^| Treatment: 3 | 3       | 5.29   | 0.77    | 0.09   | 2.86   | 2.87
| 10       | 10.03  | 6.45    | 0.14   | 3.11   | 0.69
| 15       | 3.96   | 0.99    | 0.44   | 2.55   | 2.37
| 16       | 6.86   | 2.70    | 1.12   | 3.20   | 0.56
```

```
| 19       | 8.74   | 1.73    | 2.07   | 7.24   | 3.90
| 31       | 9.03   | 0.65    | 0.17   | 6.58   | 5.13
| 51       | 10.22  | 3.13    | 1.35   | 4.92   | 2.54
| 52       | 5.47   | 0.86    | 0.77   | 3.16   | 2.66
| 63       | 8.06   | 0.07    | 0.12   | 6.18   | 3.10
| 78       | 4.00   | 0.70    | 0.67   | 1.19   | 3.52
| 79       | 7.73   | 0.57    | 0.12   | 1.18   | 0.03
| 86       | 3.87   | 1.63    | 0.94   | 4.11   | 3.03
| (all)    | 6.97   | 1.72    | 0.68   | 3.87   | 2.53
|=========================================================================
```

Treatment	subject	potato	buttery	grassy	rancid	painty
Treatment: 1	3	6.22	0.37	0.19	2.11	3.11
	10	9.96	6.75	0.58	4.02	1.38
	15	3.36	0.72	0.42	3.96	3.26
	16	6.50	3.26	0.76	4.12	1.23
	19	9.38	3.06	2.02	5.36	2.77
	31	8.84	0.44	0.09	5.94	3.21
	51	10.68	2.64	1.05	5.15	1.96
	52	5.06	0.81	0.88	4.29	2.65
	63	6.78	0.03	0.00	6.05	3.85
	78	3.62	0.73	0.54	1.50	3.49
	79	8.06	0.28	0.34	0.57	0.00
	86	4.18	1.77	0.81	5.49	4.11
	(all)	6.89	1.78	0.65	4.07	2.58
Treatment: 2	3	6.74	0.59	0.11	3.14	2.48
	10	9.99	6.98	0.47	2.15	0.82
	15	4.41	1.31	0.34	2.29	2.06
	16	6.45	3.37	1.05	3.40	0.46
	19	8.64	2.45	1.14	5.41	4.16
	31	8.03	0.62	0.16	6.05	5.06
	51	9.98	3.79	1.57	4.67	2.25
	52	5.51	1.02	1.18	4.22	2.19
	63	8.41	0.10	0.01	5.09	4.36
	78	3.78	0.29	0.76	1.55	2.73
	79	7.94	0.69	0.26	1.03	0.00
	86	3.99	2.06	0.78	4.52	2.84
	(all)	7.00	1.97	0.66	3.62	2.46
Treatment: 3	3	5.29	0.77	0.09	2.86	2.87
	10	10.03	6.45	0.14	3.11	0.69
	15	3.96	0.99	0.44	2.55	2.37
	16	6.86	2.70	1.12	3.20	0.56
	19	8.74	1.73	2.07	7.24	3.90
	31	9.03	0.65	0.17	6.58	5.13
	51	10.22	3.13	1.35	4.92	2.54
	52	5.47	0.86	0.77	3.16	2.66
	63	8.06	0.07	0.12	6.18	3.10
	78	4.00	0.70	0.67	1.19	3.52
	79	7.73	0.57	0.12	1.18	0.03
	86	3.87	1.63	0.94	4.11	3.03
	(all)	6.97	1.72	0.68	3.87	2.53

5.6 summary.table

```
> ascii(summary(table(1:4, 1:4)))
* Number of cases in table: 4
* Number of factors: 2
* Test for independence of all factors:
```

```
** Chisq = 12, df = 9, p-value = 0.2133
** Chi-squared approximation may be incorrect
```

- Number of cases in table: 4
- Number of factors: 2
- Test for independence of all factors:
  - Chisq = 12, df = 9, p-value = 0.2133
  - Chi-squared approximation may be incorrect

5.7 labeled list

```
> ascii(version)
platform::
   i486-pc-linux-gnu
arch::
  i486
os::
   linux-gnu
system::
  i486, linux-gnu
status::

major::
   2
minor::
   10.0
year::
   2009
month::
   10
day::
  26
svn rev::
  50208
language::
   R
version.string::
   R version 2.10.0 (2009-10-26)
```

platform i486-pc-linux-gnu

arch i486

os linux-gnu

system i486, linux-gnu

status , major 2

minor 10.0

year 2009

month 10

day 26

svn rev 50208

language R

version.string R version 2.10.0 (2009-10-26)

5.8 glm

```
> counts <- c(18, 17, 15, 20, 10, 20, 25, 13, 12)
> outcome <- gl(3, 1, 9)
> treatment <- gl(3, 3)
> d.AD <- data.frame(treatment, outcome, counts)
> glm.D93 <- glm(counts ~ outcome + treatment, family = poisson())
> glm.D93
Call:  glm(formula = counts ~ outcome + treatment, family = poisson())

Coefficients:
(Intercept)     outcome2     outcome3   treatment2   treatment3
  3.045e+00   -4.543e-01   -2.930e-01    8.717e-16    4.557e-16

Degrees of Freedom: 8 Total (i.e. Null);  4 Residual
Null Deviance:      10.58
Residual Deviance: 5.129        AIC: 56.76
> ascii(glm.D93, caption = "glm.D93")
.glm.D93
[options="header"]
|=============================================================
|             | Estimate | Std. Error | z value | Pr(>\|z\|)
| (Intercept) | 3.04     | 0.17       | 17.81   | 0.00
| outcome2    | -0.45    | 0.20       | -2.25   | 0.02
| outcome3    | -0.29    | 0.19       | -1.52   | 0.13
| treatment2  | 0.00     | 0.20       | 0.00    | 1.00
| treatment3  | 0.00     | 0.20       | 0.00    | 1.00
|=============================================================
> ascii(anova(glm.D93), caption = "anova glm.D93", include.rownames = T)
.anova glm.D93
[options="header"]
|=====================================================
|           | Df   | Deviance | Resid. Df | Resid. Dev
| NULL      |      |          | 8.00      | 10.58
| outcome   | 2.00 | 5.45     | 6.00      | 5.13
| treatment | 2.00 | 0.00     | 4.00      | 5.13
|=====================================================
```

Table 4 glm.D93

	Estimate	**Std. Error**	**z value**	**Pr(>|z|)**
(Intercept)	3.04	0.17	17.81	0.00
outcome2	-0.45	0.20	-2.25	0.02
outcome3	-0.29	0.19	-1.52	0.13
treatment2	0.00	0.20	0.00	1.00
treatment3	0.00	0.20	0.00	1.00

Table 5 anova glm.D93

	Df	**Deviance**	**Resid. Df**	**Resid. Dev**
NULL			8.00	10.58
outcome	2.00	5.45	6.00	5.13
treatment	2.00	0.00	4.00	5.13

5.9 describe

```
> library(Hmisc)
> label(esoph$agegp) <- "Age group"
> label(esoph$alcgp) <- "Alcohol group"
```

```
> label(esoph$tobgp) <- "Tobacco group"
> label(esoph$ncontrols) <- "Number of control"
> label(esoph$age) <- "Age"
> units(esoph$age) <- "Years"
> ascii(describe(esoph))
.esoph
* 6 Variable
* 88 Observations

*agegp : Age group*

|======================
| n  | missing | unique
| 88 | 0       | 6
|======================

|=========================================================
|           | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75+
| Frequency | 15    | 15    | 16    | 16    | 15    | 11
| %         | 17    | 17    | 18    | 18    | 17    | 12
|=========================================================

*alcgp : Alcohol group*

|======================
| n  | missing | unique
| 88 | 0       | 4
|======================

0-39g/day (23, 26%), 40-79 (23, 26%), 80-119 (21, 24%), 120+ (21, 24%)

*tobgp : Tobacco group*

|======================
| n  | missing | unique
| 88 | 0       | 4
|======================

0-9g/day (24, 27%), 10-19 (24, 27%), 20-29 (20, 23%), 30+ (20, 23%)

*ncases*

|=============================================================================
| n  | missing | unique | Mean  | .05 | .10 | .25 | .50 | .75 | .90 | .95
| 88 | 0       | 10     | 2.273 | 0.0 | 0.0 | 0.0 | 1.0 | 4.0 | 5.3 | 6.0
|=============================================================================

|=====================================================
|           | 0  | 1  | 2  | 3  | 4 | 5 | 6 | 8 | 9 | 17
| Frequency | 29 | 16 | 11 | 9  | 8 | 6 | 5 | 1 | 2 | 1
| %         | 33 | 18 | 12 | 10 | 9 | 7 | 6 | 1 | 2 | 1
|=====================================================

*ncontrols : Number of control*

|=================================================================================
| n  | missing | unique | Mean  | .05  | .10  | .25  | .50  | .75  | .90  | .95
| 88 | 0       | 30     | 11.08 |  1.0 |  1.0 |  3.0 |  6.0 | 14.0 | 29.1 | 40.0
|=================================================================================

lowest:  1  2  3  4  5, highest: 40 46 48 49 60

*age : Age [Years]*
```

```
|======================
| n  | missing | unique
| 88 | 0       | 6
|======================

|=========================================================
|           | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75+
| Frequency | 15    | 15    | 16    | 16    | 15    | 11
| %         | 17    | 17    | 18    | 18    | 17    | 12
|=========================================================
```

ESOPH

- 6 Variable
- 88 Observations

agegp : Age group

n	missing	unique
88	0	6

	25-34	35-44	45-54	55-64	65-74	75+
Frequency	15	15	16	16	15	11
%	17	17	18	18	17	12

alcgp : Alcohol group

n	missing	unique
88	0	4

0-39g/day (23, 26%), 40-79 (23, 26%), 80-119 (21, 24%), 120+ (21, 24%)
tobgp : Tobacco group

n	missing	unique
88	0	4

0-9g/day (24, 27%), 10-19 (24, 27%), 20-29 (20, 23%), 30+ (20, 23%)
ncases

n	missing	unique	Mean	.05	.10	.25	.50	.75	.90	.95
88	0	10	2.273	0.0	0.0	0.0	1.0	4.0	5.3	6.0

	0	1	2	3	4	5	6	8	9	17
Frequency	29	16	11	9	8	6	5	1	2	1
%	33	18	12	10	9	7	6	1	2	1

ncontrols : Number of control

n	missing	unique	Mean	.05	.10	.25	.50	.75	.90	.95
88	0	30	11.08	1.0	1.0	3.0	6.0	14.0	29.1	40.0

lowest: 1 2 3 4 5, highest: 40 46 48 49 60
age : Age [Years]

n	missing	unique
88	0	6

	25-34	35-44	45-54	55-64	65-74	75+
Frequency	15	15	16	16	15	11
%	17	17	18	18	17	12

5.10 CrossTable

```
> library(descr)
> ascii(CrossTable(warpbreaks$wool, warpbreaks$tension, dnn = c("Wool",
+     "Tension")))
*Cell Contents*

* N
* Expected N
* Chi-square contribution
* N / Row Total
* N / Col Total
* N / Table Total

[options="header"]
|=========================================
.1+s|  | L     | M     | H     | Total
.6+s| A | 9     | 9     | 9     | 27
| 9.0   | 9.0   | 9.0   |
| 0.000 | 0.000 | 0.000 |
| 0.333 | 0.333 | 0.333 | 0.500
| 0.500 | 0.500 | 0.500 |
| 0.167 | 0.167 | 0.167 |
.6+s| B | 9     | 9     | 9     | 27
| 9.0   | 9.0   | 9.0   |
| 0.000 | 0.000 | 0.000 |
| 0.333 | 0.333 | 0.333 | 0.500
| 0.500 | 0.500 | 0.500 |
| 0.167 | 0.167 | 0.167 |
.2+s| Total | 18    | 18    | 18    | 54
| 0.333 | 0.333 | 0.333 |
|=========================================

*Statistics for All Table Factors*

Pearson's Chi-squared test::
   Chi^2 = 0, d.f. = 2, p = 1
```

Cell Contents

- N
- Expected N
- Chi-square contribution
- N / Row Total
- N / Col Total
- N / Table Total

	L	**M**	**H**	**Total**
A	9	9	9	27
	9.0	9.0	9.0	
	0.000	0.000	0.000	
	0.333	0.333	0.333	0.500
	0.500	0.500	0.500	

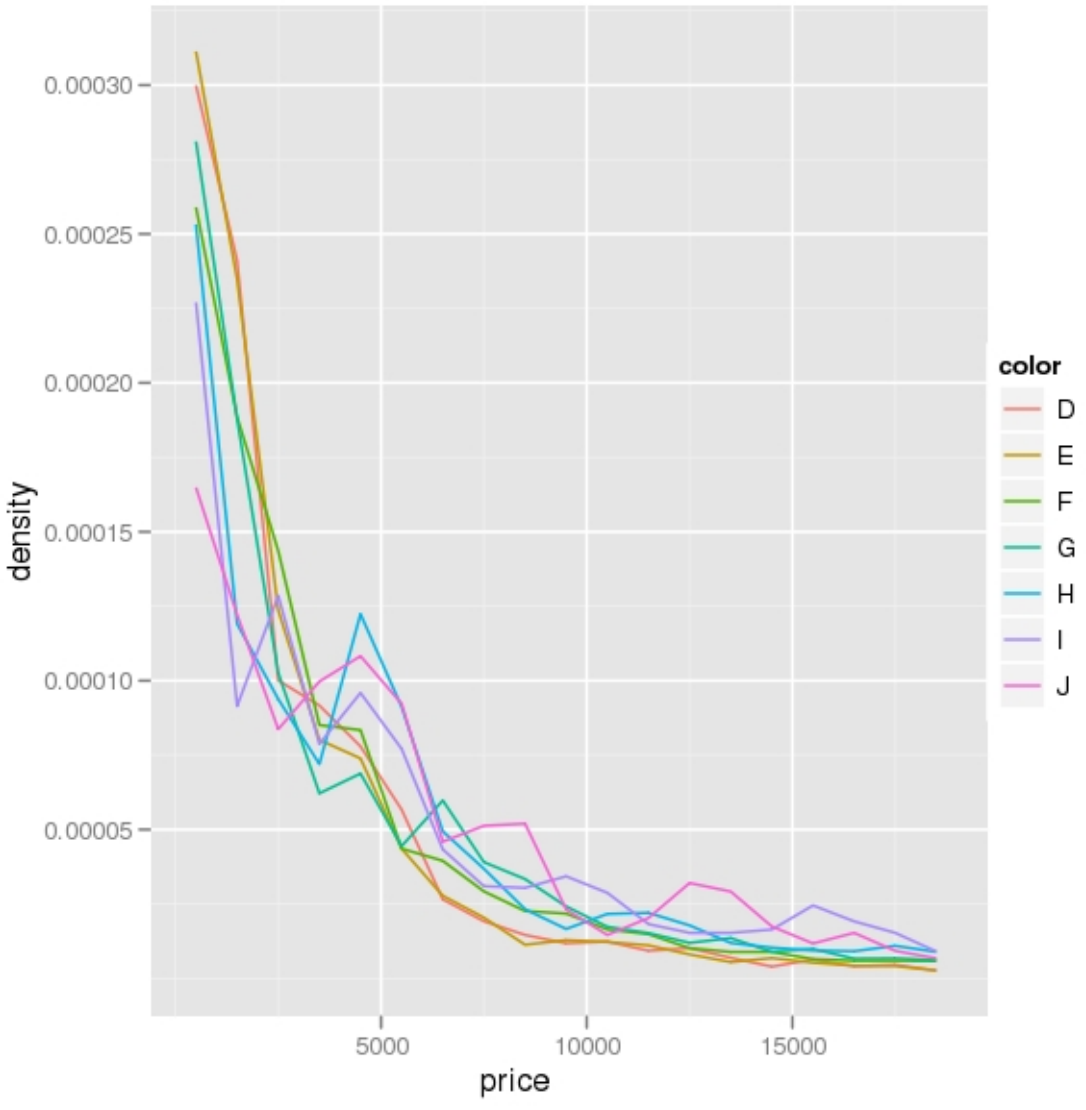
	L	M	H	Total
	0.167	0.167	0.167	
B	9	9	9	27
	9.0	9.0	9.0	
	0.000	0.000	0.000	
	0.333	0.333	0.333	0.500
	0.500	0.500	0.500	
	0.167	0.167	0.167	
Total	18	18	18	54
	0.333	0.333	0.333	

Statistics for All Table Factors

Pearson's Chi-squared test Chi^2 = 0, d.f. = 2, p = 1

5.11 plot

```
> library(ggplot2)
> p <- qplot(price, ..density.., data = diamonds, geom = "freqpoly",
+     binwidth = 1000, colour = color)
> print(p)
```



5.12 other outputs

```
> library(reshape)
> names(airquality) <- tolower(names(airquality))
> aqm <- melt(airquality, id = c("month", "day"), na.rm = TRUE)
> res <- cast(aqm, month ~ variable, mean, margins = "grand_row")
> res
  month    ozone  solar.r      wind     temp
1     5 23.61538 181.2963 11.622581 65.54839
2     6 29.44444 190.1667 10.266667 79.10000
3     7 59.11538 216.4839  8.941935 83.90323
4     8 59.96154 171.8571  8.793548 83.96774
5     9 31.44828 167.4333 10.180000 76.90000
6 (all) 42.12931 185.9315  9.957516 77.88235
> print(ascii(res), "t2t")
|| month | ozone | solar.r | wind  | temp  |
| 5     | 23.62 | 181.30  | 11.62 | 65.55 |
| 6     | 29.44 | 190.17  | 10.27 | 79.10 |
| 7     | 59.12 | 216.48  | 8.94  | 83.90 |
| 8     | 59.96 | 171.86  | 8.79  | 83.97 |
| 9     | 31.45 | 167.43  | 10.18 | 76.90 |
| (all) | 42.13 | 185.93  | 9.96  | 77.88 |
> print(ascii(res), "rest")
+-------+-------+---------+-------+-------+
| month | ozone | solar.r | wind  | temp  |
+=======+=======+=========+=======+=======+
| 5     | 23.62 | 181.30  | 11.62 | 65.55 |
+-------+-------+---------+-------+-------+
| 6     | 29.44 | 190.17  | 10.27 | 79.10 |
+-------+-------+---------+-------+-------+
| 7     | 59.12 | 216.48  | 8.94  | 83.90 |
+-------+-------+---------+-------+-------+
| 8     | 59.96 | 171.86  | 8.79  | 83.97 |
+-------+-------+---------+-------+-------+
| 9     | 31.45 | 167.43  | 10.18 | 76.90 |
+-------+-------+---------+-------+-------+
| (all) | 42.13 | 185.93  | 9.96  | 77.88 |
+-------+-------+---------+-------+-------+
> print(ascii(res), "org")
|-------+-------+---------+-------+-------+
| month | ozone | solar.r | wind  | temp  |
|-------+-------+---------+-------+-------+
| 5     | 23.62 | 181.30  | 11.62 | 65.55 |
| 6     | 29.44 | 190.17  | 10.27 | 79.10 |
| 7     | 59.12 | 216.48  | 8.94  | 83.90 |
| 8     | 59.96 | 171.86  | 8.79  | 83.97 |
| 9     | 31.45 | 167.43  | 10.18 | 76.90 |
| (all) | 42.13 | 185.93  | 9.96  | 77.88 |
|-------+-------+---------+-------+-------+
```

Follow those links to see real examples:

- with text2tags
- with reStructuredText
- with org

6 convert

`Sweave` process creates a `yourdocument.xxx` file from `yourdocument.Rnw`.

```
Sweave("youdocument.Rnw", RweaveXxx)
```

You can convert it to html format with the following command:

```
asciidoc yourdocument.txt
or
txt2tags -t html yourdocument.t2t
or
rst2html-highlight --stylesheet-path=pygments-default.css -s rest.rst rest.html
or
Alt-X org-export-as-html
```

or to other formats...

For example, you can see the source of this documentation, the file generated by `Sweave`, the same file in docbook format, the same file converted to pdf with dblatex, and the same file converted to odt with docbook2odf.

7 more informations

asciidoc http://www.methods.co.nz/asciidoc

txt2tags http://txt2tags.sourceforge.net

docutils and reStructuredText http://docutils.sourceforge.net/

org-mode http://orgmode.org/

There is another way to create org documents with embedded R code : org-babel. Thanks to Erik Iverson for informing me about org-mode and org-babel.

8 ascii for real

- Derek H. Ogle has written some vignettes for the book 'Analysis and Interpretation of Freshwater Fisheries Data' using `ascii`.
- This blog uses `ascii` and blogpost to generate and publish post.
- This blog too but with another method.