ascii

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ascii is a R package for writing asciidoc or txt2tags document with embeded R commands.

1 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

2 what ascii provides

ascii provided :

- a generic method for common R objects: `ascii()`. Default argument depends of R object.
- two Sweave drivers: `Sweave("yourfile.Rnw", RweaveAsciidoc())` or `Sweave("yourfile.Rnw", RweaveT2t(`

3 ascii manual

Table 2: ascii

`x`	An R object of class found among `methods(ascii)`.
`include.rownames`	logical. If `TRUE` the rows names are printed. Default value depends of class of `x`.
`include.colnames`	logical. If `TRUE` the columns names are printed. Default value depends of class of `x`.

Table 2: (continued)

format	Character vector of length equal to the number of columns of the resulting table (otherwise it will be replicated or truncated as necessary) indicating the format for the corresponding columns. These values are passed to the formatC function. Use "d" (for integers), "f", "e", "E", "g", "G", "fg" (for reals), or "s" (for strings). "f" gives numbers in the usual xxx.xxx format; "e" and "E" give n.ddde+nn or n.dddE+nn (scientific format); "g" and "G" put x[i] into scientific format only if it saves space to do so. "fg" uses fixed format as "f", but digits as number of *significant* digits. Note that this can lead to quite long result strings. Default depends on the class of x.
digits	Numeric vector of length equal to the number of columns of the resulting table (otherwise it will be replicated or truncated as necessary) indicating the number of digits to display in the corresponding columns. Default is 2. decimal.mark: The character to be used to indicate the numeric decimal point. Default is ".".
na.print	The character string specifying how NA should be formatted specially. Default is "".
caption	Character vector of length 1 containing the table+s caption or title. Set to "" to suppress the caption. Default value is "".
width	Numeric vector of length one containing the table width relative to the available width (expressed as a percentage value, 1... 99). Default is 0 (all available width).
frame	Character vector of length one. Defines the table border, and can take the following values: "topbot" (top and bottom), "all" (all sides), "none" and "sides" (left and right). The default value is "".
grid	Character vector of length one. Defines which ruler lines are drawn between table rows and columns, and can take the following values: "all", "rows", "cols" and "none". Default is "".
valign	Character vector of length one indicating vertical alignment of all cells in table. Can take the following values: "top", "bottom" and "middle". Default is "".
header	logical. If TRUE the first line of the table is emphasized. The default value depends of class of x.
footer	logical. If TRUE the last line of the table is emphasized. The default value depends of class of x.
align	Character vector of length one indicating the alignment of the corresponding columns. Can be composed with "r" (right), "l" (left) and "c" (center). Default value is "".
col.width	Numeric vector of length equal to the number of columns of the resulting table (otherwise it will be replicated or truncated as necessary) indicating width of the corresponding columns (integer proportional values). Default is 1.
style	Character vector of length one indicating the style of the corresponding columns. Can be composed with "d" (default), "e" (emphasis), "m" (monospaced), "a" (cells can contain any of the AsciiDoc elements that are allowed inside document), "l" (literal), "v" (verse; all line breaks are retained). Default is "".
...	Additional arguments. (Currently ignored.)

Table 3: print.ascii

`x`	An object of class `"ascii"`
`type`	Type of syntax produce. Possible values for `type` are `"asciidoc"`, `"t2t"` or `"textile"`. Default value produce AsciiDoc syntax.
`...`	Additional arguments. (Currently ignored.)

4 ascii gallery

4.1 Vector

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

1.00	2.00	3.00	4.00

4.2 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 4: 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

4.3 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",cols="^,^,^,^,^",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 5: 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

4.4 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

4.5 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(summary(glm.D93), caption = "summary glm.D93")
.summary 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 6: 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 7: summary 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 8: 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

4.6 Survdiff

```
> library(survival)
> survdiff.aml <- survdiff(Surv(time, status) ~ x, data = aml)
> ascii(survdiff.aml, caption = "survdiff.aml", digits = c(0, 0,
+     2, 2, 2, 0, 5), format = c(rep("f", 6), "E"))
.survdiff.aml
[options="header"]
|=========================================================================
|               |N |Observed|Expected|(O-E)^2/E|(O-E)^2/V|df|p
|x=Maintained   |11|7       |10.69   |1.27     |3.40     |1 |6.53393E-02
|x=Nonmaintained|12|11      |7.31    |1.86     |3.40     |  |
|=========================================================================
```

Table 9: survdiff.aml

	N	Observed	Expected	(O-E)^2/E	(O-E)^2/V	df	p
x=Maintained	11	7	10.69	1.27	3.40	1	6.53393E-02
x=Nonmaintained	12	11	7.31	1.86	3.40		

5 Convert

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

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

```
asciidoc yourdocument.txt
```

or to docbook format with:

```
asciidoc -b docbook yourdocument.txt
```

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.