

# r2asciidoc

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r2asciidoc (<http://eusebe.github.com/r2asciidoc>) is a R package for writing document with embeded R commands.

## 1. Short example

As you can see, r2asciidoc is simple.

```
<<>>=  
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 r2asciidoc provides

r2asciidoc provided :

- a Sweave driver: `Sweave("yourfile.Rnw", RweaveAscii())` to use it
- a generic method for common R objects: `ascii()`. Default argument depends of R object.

<code>x</code>	R object
	include rownames ? (logical)
<code>include.rownames</code>	
	include colnames ? (logical)
<code>include.colnames</code>	
<code>format</code>	equal to "d" (for integers), "f", "e", "E", "g", "G", "fg" (for reals). Default is "f". "f" gives numbers in the usual <i>xxx.xxx</i> format; "e" and "E" give <i>n.ddde+nn</i> or <i>n.dddE+nn</i> (scientific format); "g" and "G" put <i>x[i]</i> into scientific format only if it saves space to do so. "fg" uses fixed format as "f", but <i>digits</i> as the minimum number of <i>significant</i> digits.
<code>digits</code>	the desired number of digits after the decimal point.
<code>decimal.mark</code>	the character to be used to indicate the numeric decimal point.
<code>na.print</code>	the character to be used for NA
<code>caption</code>	the title (character)
<code>width</code>	the desired width of the table
<code>frame</code>	defines the table border. Can take the following values: "tobpot" (top and bottom), "all" (all sides), "none" and "sides" (left and right). Default is "all".
<code>grid</code>	defines which ruler lines are drawn between table rows and columns. Can take "none", "cols", "rows" and "all". Default is "all".
<code>valign</code>	vertically align all cells in a table. Can take "top", "bottom" and "middle".
<code>header</code>	emphase the first line of a table (logical).
<code>footer</code>	emphase the last line of a table (logical).
<code>align</code>	column alignment. Can be "r" (right), "l" (left) or "c" (center).
<code>col.width</code>	columns width (integer proportional value).
<code>style</code>	columns styles. Equal to "d" (default), "e" (emphasis), "m" (monospaced), "s" (strong), "a" (cells cans contain any of the <i>AsciiDoc</i> elements that are allowed inside document), "l" (literal), "v" (verse; all line breaks are retained).

## 3. Gallery

### 3.1. Vector

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

1.00	2.00	3.00	4.00
------	------	------	------

### 3.2. Matrix

```
> ascii(VADeaths, include.rownames = T, include.colnames = T, caption = "VADeaths",
+       header = T, width = 50, valign = "middle", align = "lrrrr",
+       frame = "topbot", grid = "none")
.VADeaths
[frame="topbot",grid="none",valign="middle",options="header",cols="<,>,>,>,>",width="50%"]
|=====
|      |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**

	<b>Rural Male</b>	<b>Rural Female</b>	<b>Urban Male</b>	<b>Urban Female</b>
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

### 3.3. Data Frame

```
> ascii(iris[1:10, ], include.rownames = F, caption = "iris", width = 50,
+       align = "c", valign = "bottom")
.iris
[valign="bottom",options="header",cols="^,^,^,^,^",width="50%"]
```

```

=====
|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

### 3.4. 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

### 3.5. 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 4. glm.D93**

	<b>Estimate</b>	<b>Std. Error</b>	<b>z value</b>	<b>Pr(&gt; z )</b>
(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. summary glm.D93**

	<b>Estimate</b>	<b>Std. Error</b>	<b>z value</b>	<b>Pr(&gt; z )</b>
(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 6. anova glm.D93**

	<b>Df</b>	<b>Deviance</b>	<b>Resid. Df</b>	<b>Resid. Dev</b>
NULL			8.00	10.58
outcome	2.00	5.45	6.00	5.13
treatment	2.00	0.00	4.00	5.13

### 3.6. 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 7. survdiff.aml**

	<b>N</b>	<b>Observed</b>	<b>Expected</b>	<b>(O-E)^2/E</b>	<b>(O-E)^2/V</b>	<b>df</b>	<b>p</b>
--	----------	-----------------	-----------------	------------------	------------------	-----------	----------

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