# r2asciidoc

| COLLABORATORS | | | |
|---|---|---|---|
| | *TITLE* :<br><br>r2asciidoc | | |
| *ACTION* | *NAME* | *DATE* | *SIGNATURE* |
| WRITTEN BY | David Hajage | February 10, 2009 | |

| REVISION HISTORY | | | |
|---|---|---|---|
| NUMBER | DATE | DESCRIPTION | NAME |
| | | | |

# Contents

# List of Tables

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 :

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

Table 1: A simple matrix

# 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.

| | |
|---|---|
| `x` | R object |
| `include.rownames` | include rownames ? (logical) |
| `include.colnames` | include colnames ? (logical) |
| `format` | equal to `"d"` (for integers), `"f"`, `"e"`, `"E"`, `"g"`, `"G"`, `"fg"` (for reals). Default is `"f"`. `"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 the minimum number of *significant* digits. |
| `digits` | the desired number of digits after the decimal point. |

| | |
|---|---|
| `decimal.mark` | the character to be used to indicate the numeric decimal point. |
| `na.print` | the character to be used for NA |
| `caption` | the title (character) |
| `width` | the desired width of the table |
| `frame` | 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"`. |
| `grid` | defines which ruller lines are drawn between table rows and columns. Can take `"none"`, `"cols"`, `"rows"` and `"all"`. Default is `"all"`. |
| `valign` | vertically align all cells in a table. Can take `"top"`, `"bottom"` and `"middle"`. |
| `header` | emphase the first line of a table (logical). |
| `footer` | emphase the last line of a table (logical). |
| `align` | column alignment. Can be `"r"` (right), `"l"` (left) or `"c"` (center). |
| `col.width` | columns width (integer proportional value). |
| `style` | columns styles. Equal to `"d"` (default), `"e"` (emphasis), `"m"` (monospaced), `"s"` (strong), `"a"` (cells cans contain any of the *AsciiDoc* 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, col.width = c(1, 5, 5, 5, 5, 5), valign = "middle",
+     align = "lrrrr", frame = "topbot", grid = "none")
.VADeaths
[frame="topbot",grid="none",valign="middle",options="header",cols="<1,>5,>5,>5,>5"]
|=================================================
|     |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
|=================================================
```

| | 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

### 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
|==================================================
```

| 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

### 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
|=========================================
```

| | 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 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: summary 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 |

Table 6: anova glm.D93

### 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     |  |
|=========================================================================
```

## 4 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:

| | 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

```
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.