Simple example of Sweave

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November 3, 2011

Contents

1 Introduction

Just a simple introduction to Sweave.
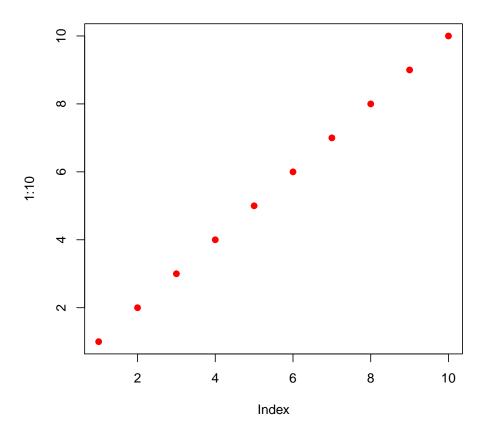
```
> a = 1
> b = 4
> a + b

[1] 5

> print("hello")

[1] "hello"
```

We can call R commands from the text. For example a+b= 5

2 Including a Plot

Now for a plot. Note we include fig=TRUE, which prints the plot within the document

```
> plot(1:10, col = "red", pch = 19)
```

Thats it.... simple hey!

2.1 More on Plots

To make the plot a little nicer, we can add a caption. Also lets change the size of the plot to be 4" in height and 6" in width

```
> par(mfrow = c(1, 2))
> plot(1:10, col = "green", pch = 21)
> barplot(height = sample(1:10, 5), names = LETTERS[1:5], col = 1:5)
```
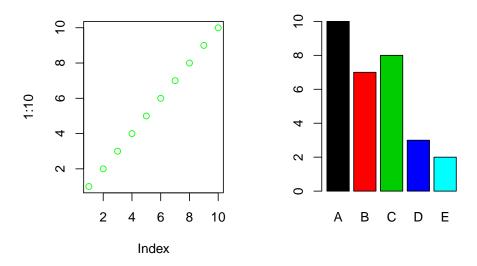

Figure 1: Plot of 1:10 and a bar plot beside it in a figure that is 4x6 inches

2.2 Creating a table

Lets include a table using the dataset, which is included in the default core installation of R. It contains the height and weight of 15 women.

```
> require(xtable)
> myTable <- summary(women)
```

We can manually encode a table in latex

$$
\begin{array}{ll}
Min. : 58.0 & Min. : 115.0 \\
1stQu. : 61.5 & 1stQu. : 124.5 \\
Median : 65.0 & Median : 135.0 \\
Mean : 65.0 & Mean : 136.7 \\
3rdQu. : 68.5 & 3rdQu. : 148.0 \\
Max. : 72.0 & Max. : 164.0
\end{array}
$$

But it is much easier to use the package *xtable*. We use the function `require` to load the package.

```
> xtab <- xtable(myTable)
> print(xtab, floating = FALSE)
```

	height	weight
1	Min. :58.0	Min. :115.0
2	1st Qu.:61.5	1st Qu.:124.5
3	Median :65.0	Median :135.0
4	Mean :65.0	Mean :136.7
5	3rd Qu.:68.5	3rd Qu.:148.0
6	Max. :72.0	Max. :164.0

2.3 More on tables

Let make the table nice. Lets exclude the row numbers and include a caption on the table. We can also tag the table so we reference Table 1 in the text

```
> xtab2 <- xtable(myTable, caption = "Summary of women data", label = "Table:women")
> print(xtab2, include.rownames = FALSE)
```

height	weight
Min. :58.0	Min. :115.0
1st Qu.:61.5	1st Qu.:124.5
Median :65.0	Median :135.0
Mean :65.0	Mean :136.7
3rd Qu.:68.5	3rd Qu.:148.0
Max. :72.0	Max. :164.0

Table 1: Summary of women data

3 SessionInfo

```
> sessionInfo()

R version 2.12.2 (2011-02-25)
Platform: i386-pc-mingw32/i386 (32-bit)

locale:
[1] LC_COLLATE=English_United States.1252
[2] LC_CTYPE=English_United States.1252
[3] LC_MONETARY=English_United States.1252
[4] LC_NUMERIC=C
[5] LC_TIME=English_United States.1252

attached base packages:
[1] stats     graphics  grDevices utils     datasets  methods   base

other attached packages:
[1] xtable_1.5-6
```