prefix.string=Fig

Simple example of Sweave

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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

```r
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)
```

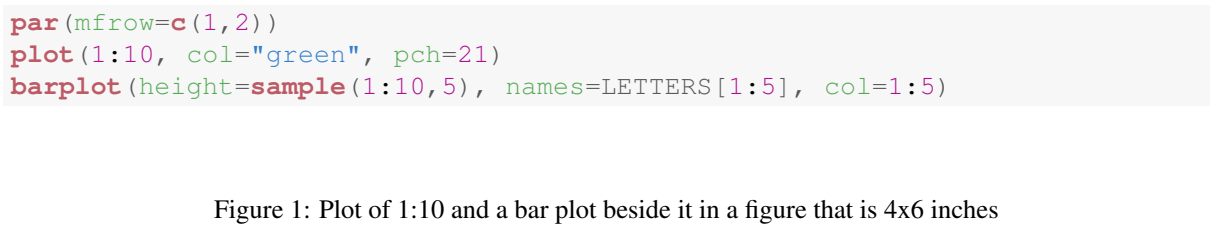

Figure 1: Plot of 1:10 and a bar plot beside it in a figure that is 4x6 inches

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.

```r
require(xtable)

## Loading required package:  xtable

myTable<-summary(women)
```

We can manually encode a table in latex

```
## $ 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   $\\
```

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

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

## % latex table generated in R 3.5.1 by xtable 1.8-3 package
## % Wed Oct 17 12:59:52 2018
## \begin{tabular}{rll}
##   \hline
##  &     height &     weight \\
##   \hline
## X & Min.   :58.0   & Min.   :115.0   \\
##   X.1 & 1st Qu.:61.5   & 1st Qu.:124.5   \\
##   X.2 & Median :65.0   & Median :135.0   \\
##   X.3 & Mean   :65.0   & Mean   :136.7   \\
##   X.4 & 3rd Qu.:68.5   & 3rd Qu.:148.0   \\
##   X.5 & Max.   :72.0   & Max.   :164.0   \\
##    \hline
## \end{tabular}
```

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 **??** in the text

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

## % latex table generated in R 3.5.1 by xtable 1.8-3 package
## % Wed Oct 17 12:59:52 2018
## \begin{table}[ht]
## \centering
## \begin{tabular}{ll}
##   \hline
##     height &     weight \\
##   \hline
## 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   \\
##    \hline
## \end{tabular}
## \caption{Summary of women data}
## \label{Table:women}
## \end{table}
```

3 SessionInfo

```
sessionInfo();

## R version 3.5.1 (2018-07-02)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 17134)
##
## Matrix products: default
##
## locale:
## [1] LC_COLLATE=German_Germany.1252  LC_CTYPE=German_Germany.1252
## [3] LC_MONETARY=German_Germany.1252 LC_NUMERIC=C
## [5] LC_TIME=German_Germany.1252
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
## [1] xtable_1.8-3 knitr_1.20
##
## loaded via a namespace (and not attached):
## [1] compiler_3.5.1 magrittr_1.5   tools_3.5.1    stringi_1.1.7
## [5] highr_0.7      stringr_1.3.1  evaluate_0.11
```