A Test File

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September 17, 2005

A simple example that will run in any S engine: The integers from 1 to 10 are

```
[1]  1  2  3  4  5  6  7  8  9 10
```

We can also emulate a simple calculator:

```
> 1 + 1

[1] 2

> 1 + pi

[1] 4.141593

> sin(pi/2)

[1] 1
```

Now we look at Gaussian data:

```
 [1] -0.39658933  0.97984991 -0.48227328  0.02366086 -1.20264425  0.90590844
 [7]  1.09473606  0.64457102 -0.87791805 -0.67595809  0.45706530  0.14519694
[13]  1.01439743  1.06458523  0.27494175 -0.55222331 -0.05722188 -0.92387674
[19] -1.29543431  1.79094102

        One Sample t-test

data:  x
t = 0.4896, df = 19, p-value = 0.63
alternative hypothesis: true mean is not equal to 0
95 percent confidence interval:
 -0.3163053  0.5094767
sample estimates:
 mean of x
0.09658574
```

Note that we can easily integrate some numbers into standard text: The third element of vector x is -0.482273282274676, the p-value of the test is 0.63001.

Now we look at a summary of the famous iris data set, and we want to see the commands in the code chunks. Note that the summary needs to be `print()`ed explicitly, because eval would discard it otherwise. I consider this a feature, because it allows for much finer control on what gets into the final report.

```
> data(iris)
> print(summary(iris))
```

```
      Sepal.Length     Sepal.Width      Petal.Length     Petal.Width
 Min.    :4.300    Min.    :2.000   Min.    :1.000   Min.    :0.100
 1st Qu.:5.100    1st Qu.:2.800   1st Qu.:1.600   1st Qu.:0.300
 Median :5.800    Median :3.000   Median :4.350   Median :1.300
 Mean    :5.843    Mean    :3.057   Mean    :3.758   Mean    :1.199
 3rd Qu.:6.400    3rd Qu.:3.300   3rd Qu.:5.100   3rd Qu.:1.800
 Max.    :7.900    Max.    :4.400   Max.    :6.900   Max.    :2.500
       Species
 setosa     :50
 versicolor:50
 virginica :50


> library(graphics)
> pairs(iris)
```
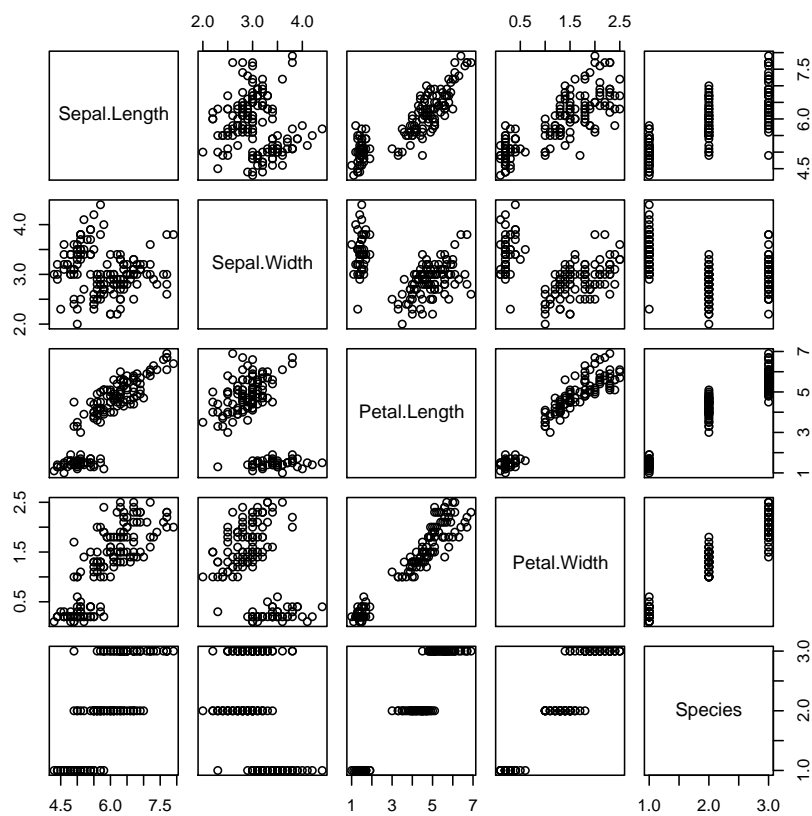

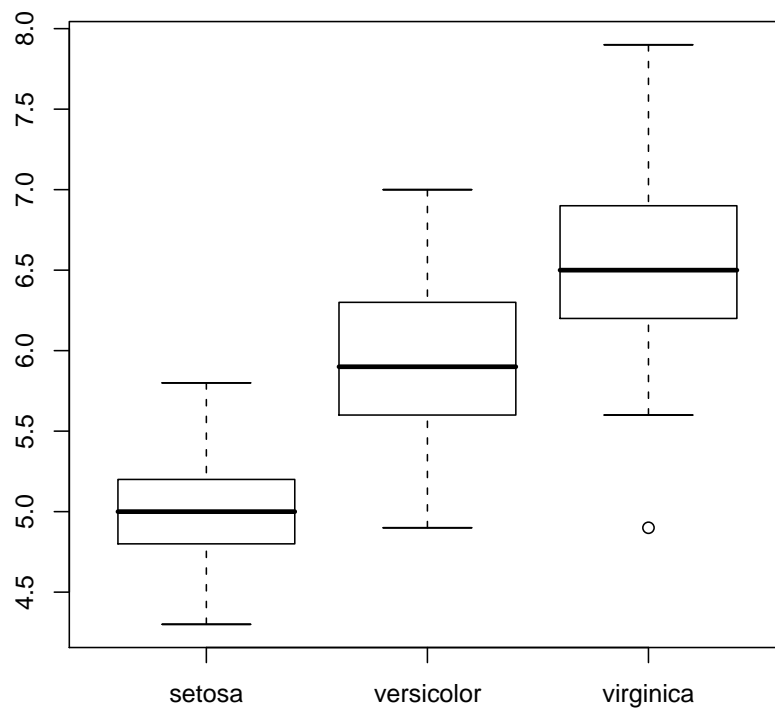Figure 1: Pairs plot of the iris data.

```
> boxplot(Sepal.Length ~ Species, data = iris)
```


Figure 2: Boxplot of sepal length grouped by species.