Data

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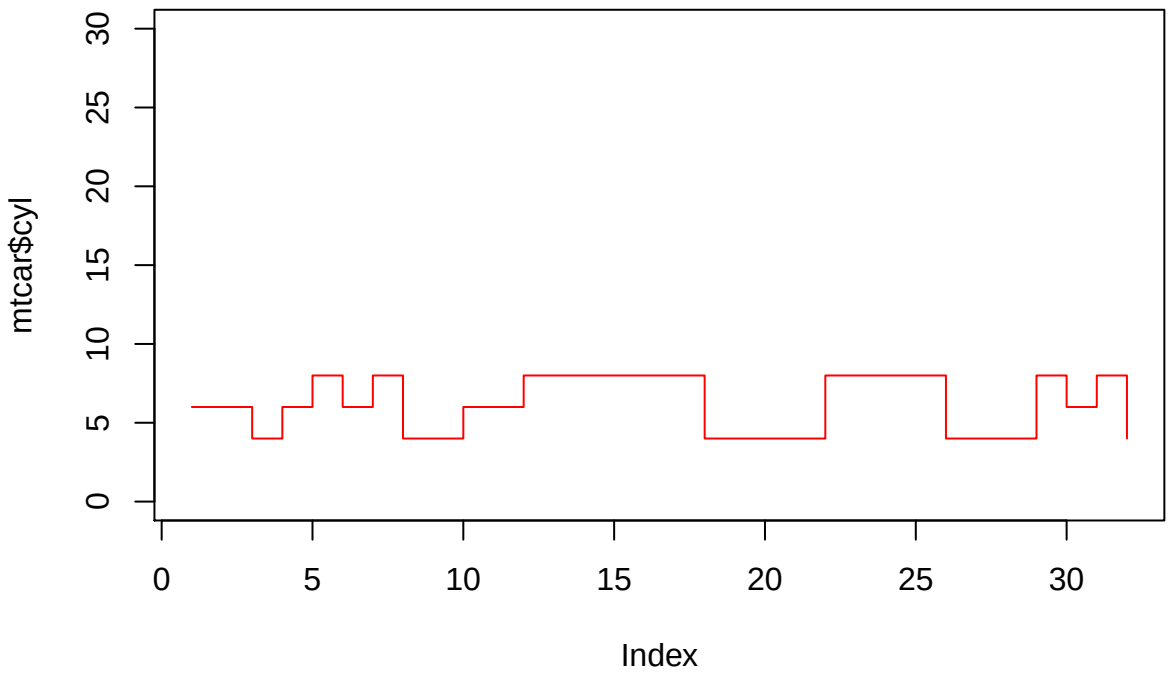
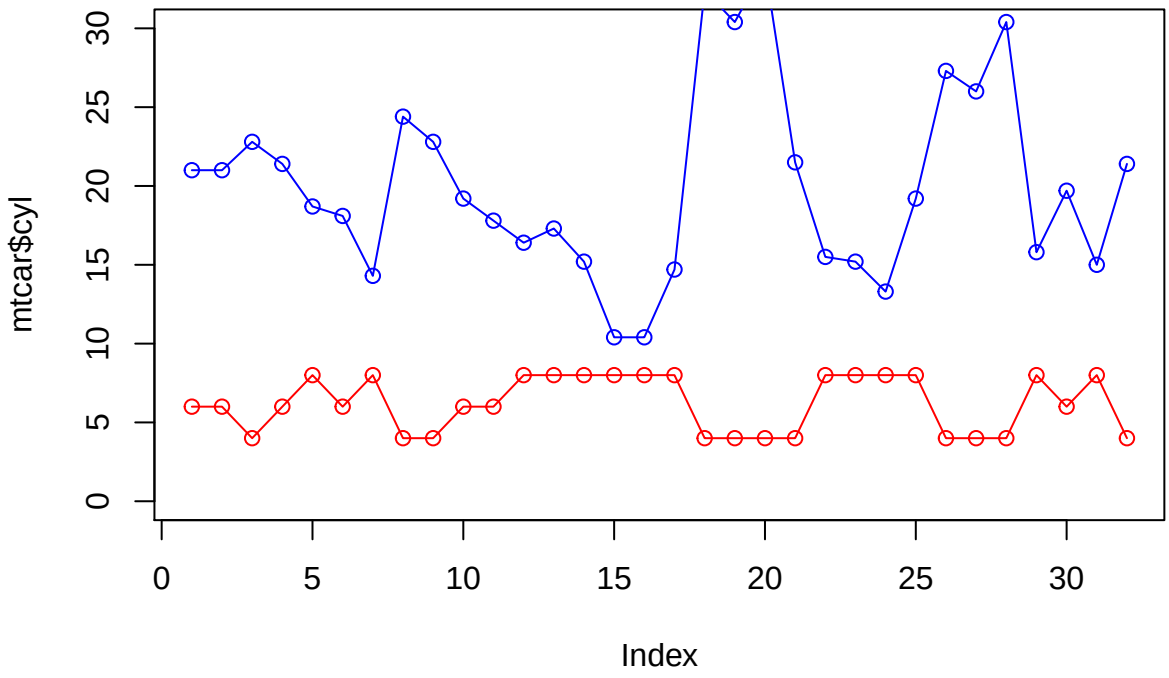
Data Visualization

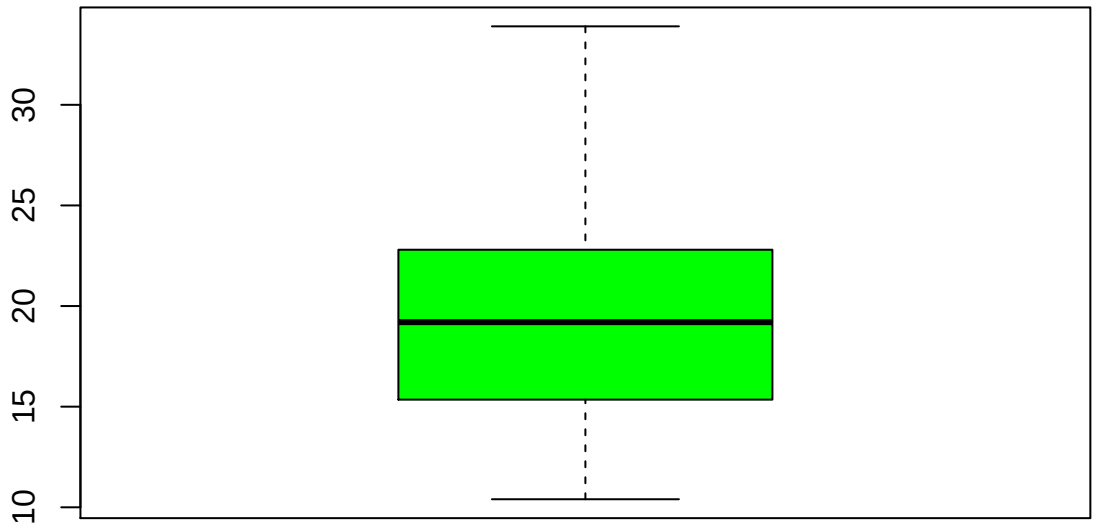
```
mtcar<-mtcars
plot(mtcar$cyl,type = "s",col="red",ylim = c(0,30))
```



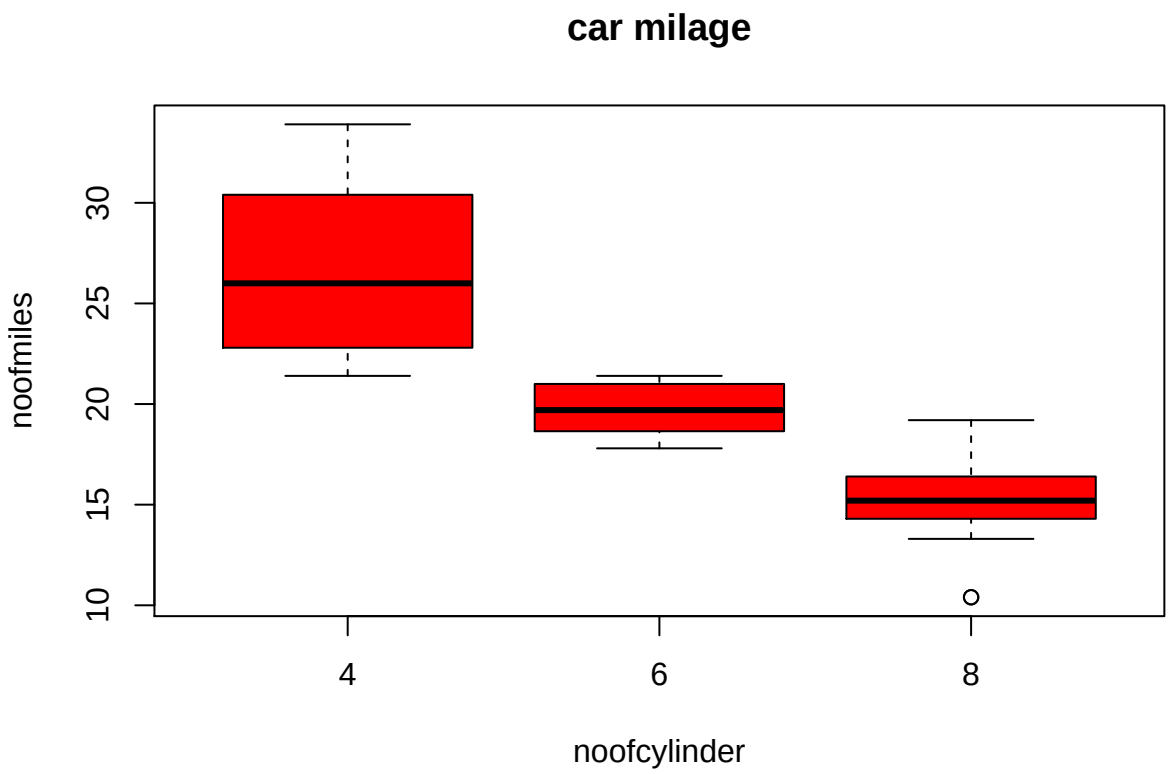

```
plot(mtcar$cyl,type = "o",col="red",ylim = c(0,30))
lines(mtcar$mpg,type = "o",col="blue")
```




```
#box plot
boxplot(mtcar$mpg,col="green")
```



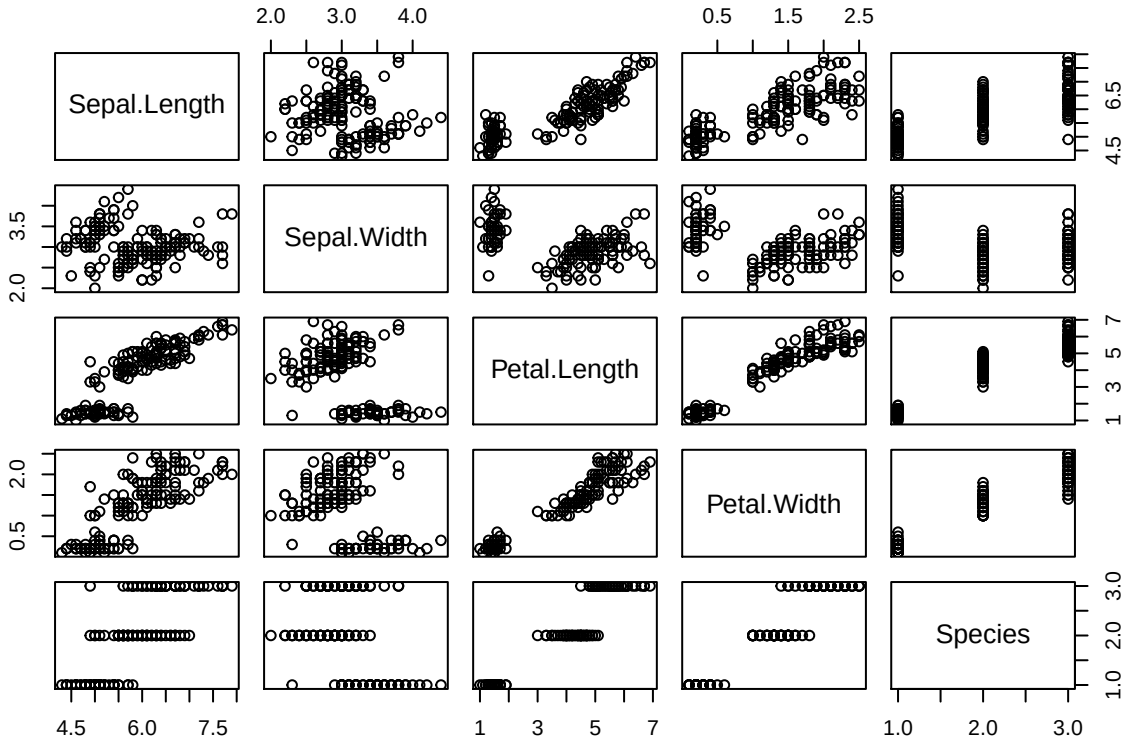

```
boxplot(mtcars$mpg~mtcars$cyl,col="red",xlab="noofcylinder",ylab="noofmiles",main="car milage")
```



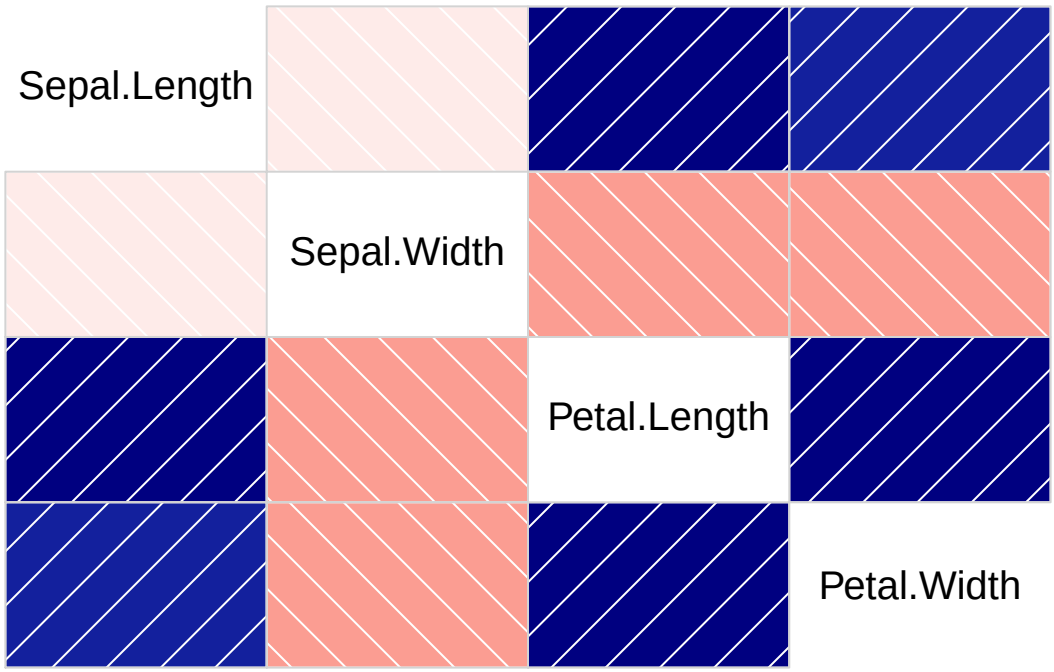

```
# playing with iris data set
library(corrgram)
```

```
## Warning: package 'corrgram' was built under R version 3.3.3
```

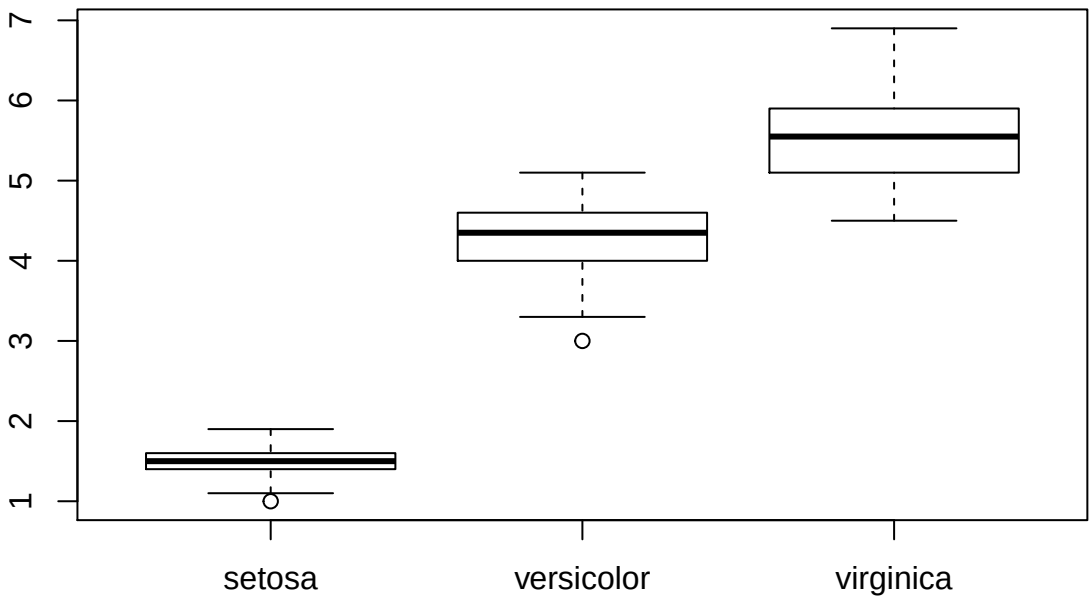
```
plot(iris)
```



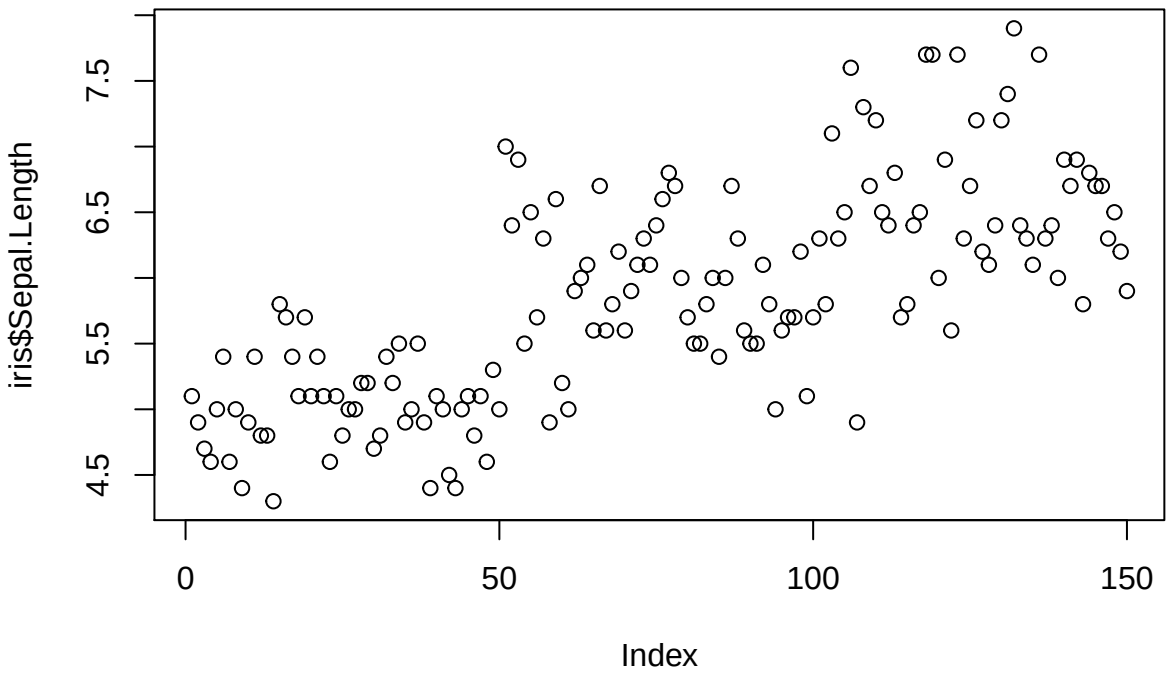

```
corrgram(iris)
```



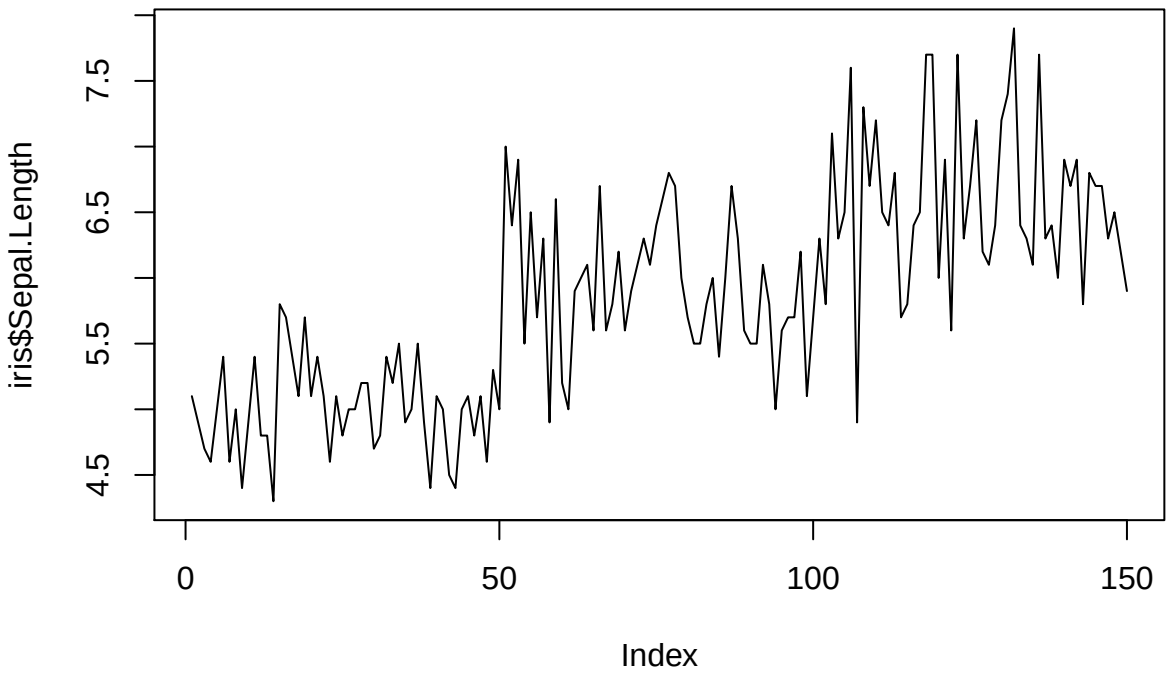

```
plot(iris$Species,iris$Petal.Length)
```



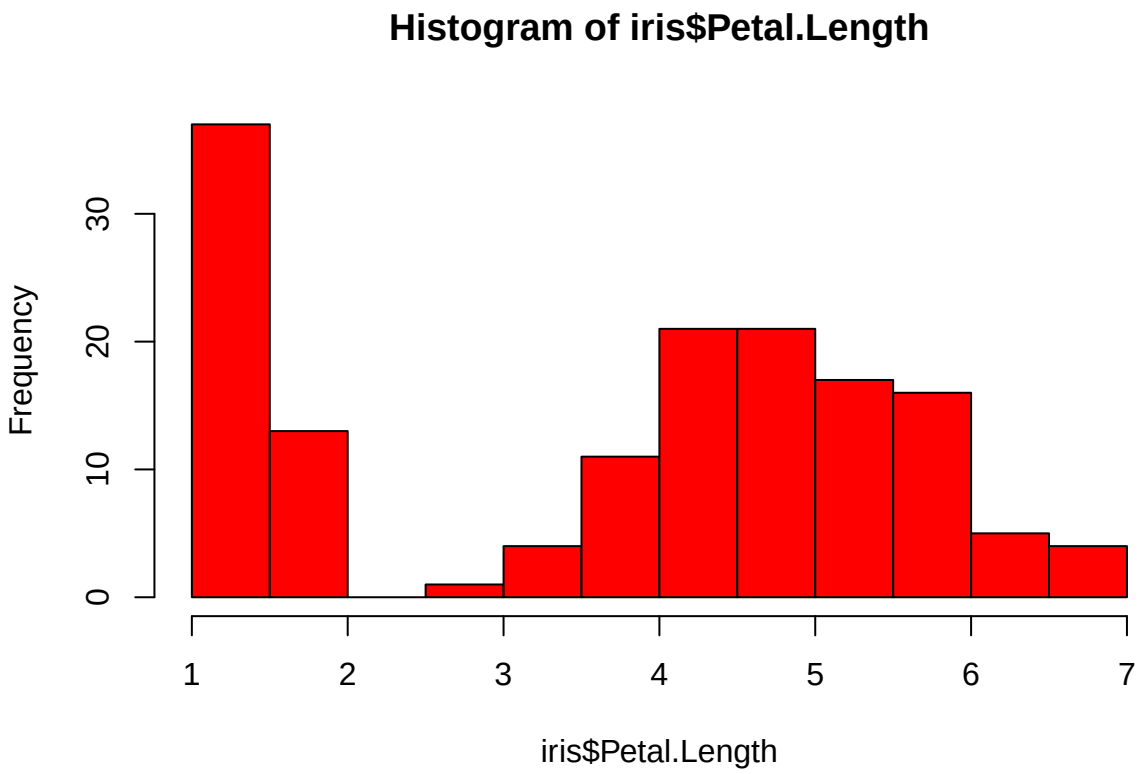

```
plot(iris$Sepal.Length)
```



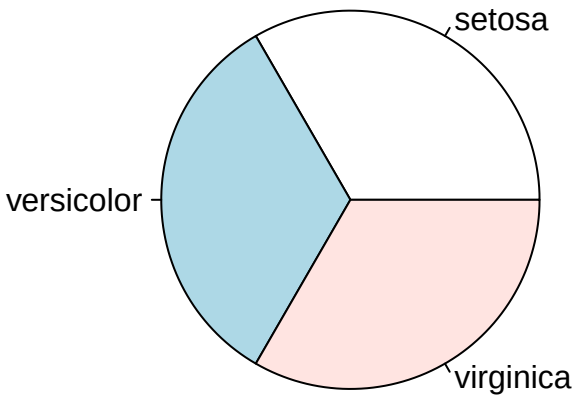

```
plot(iris$Sepal.Length,type="l")
```



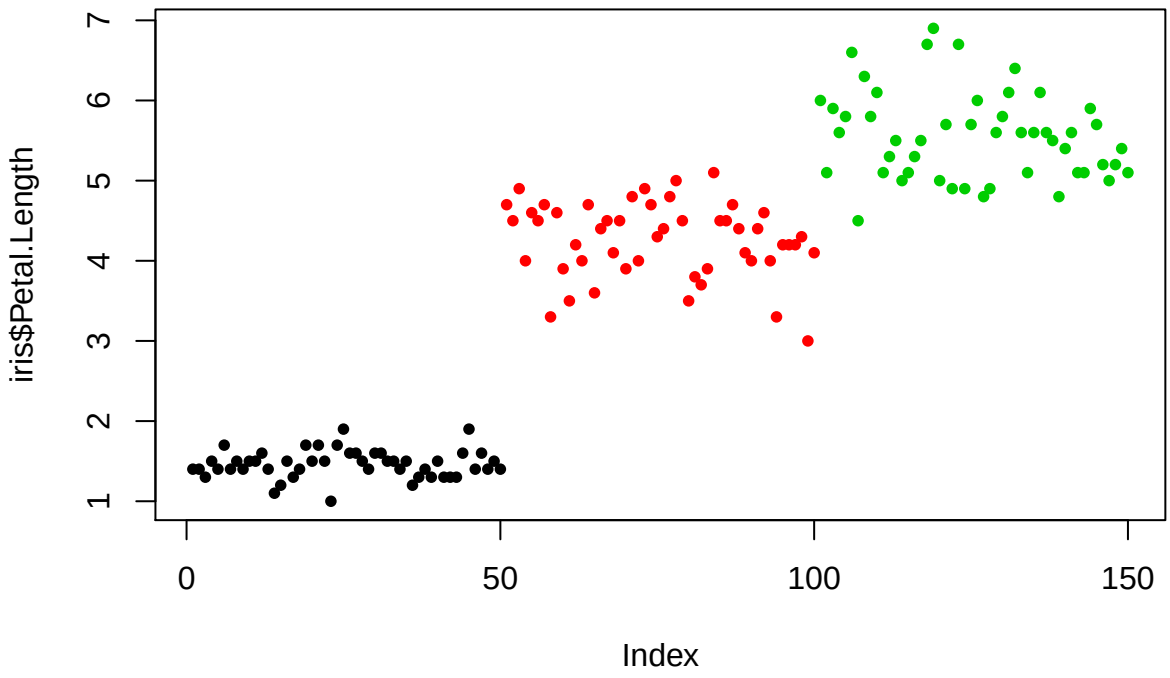

```
hist(iris$Petal.Length,col="red")
```



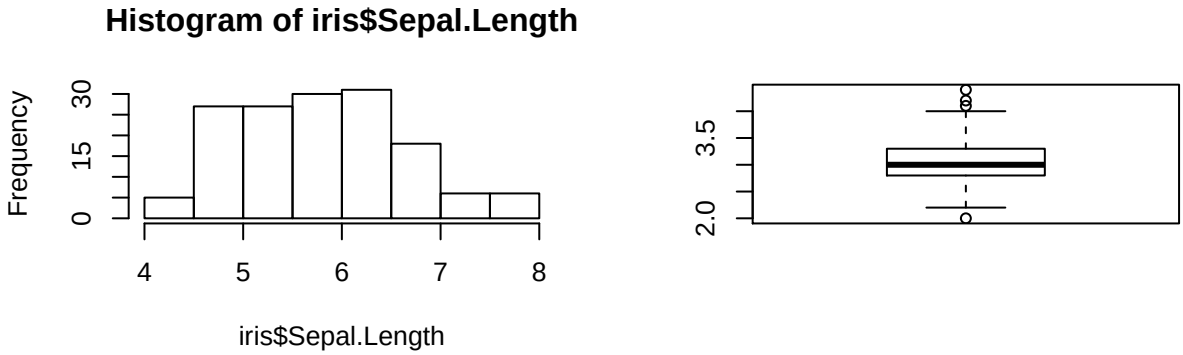

```
pie(table(iris$Species))
```




```
sunflowerplot(iris$Petal.Length,col=iris$Species)
```




```
par(mfrow=c(2,2))
hist(iris$Sepal.Length)
boxplot(iris$Sepal.Width)
```

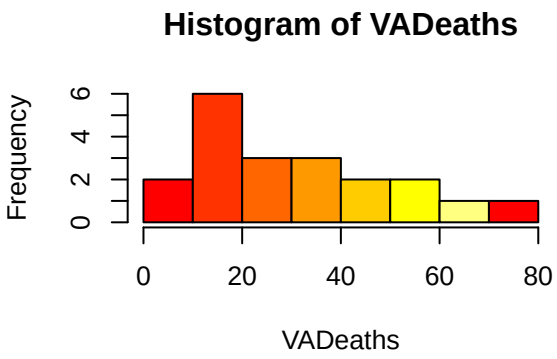


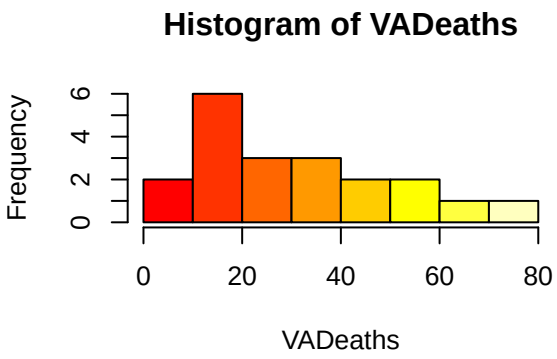
explore the VADeaths data set

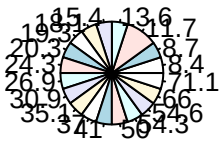
```
data("VADeaths")
head(VADeaths)
```

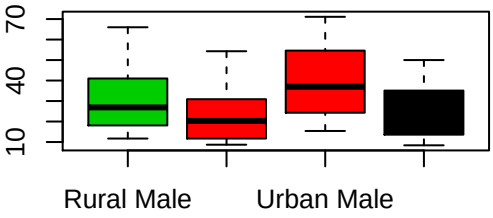
```
##       Rural Male Rural Female Urban Male Urban Female
## 50-54       11.7          8.7       15.4          8.4
## 55-59       18.1         11.7       24.3         13.6
## 60-64       26.9         20.3       37.0         19.3
## 65-69       41.0         30.9       54.6         35.1
## 70-74       66.0         54.3       71.1         50.0
```

```
par(mfrow=c(2,2))
hist(VADeaths,col=heat.colors(7))
hist(VADeaths,col=heat.colors(8))
pie(table(VADeaths))
boxplot(VADeaths,col=VADeaths)
```







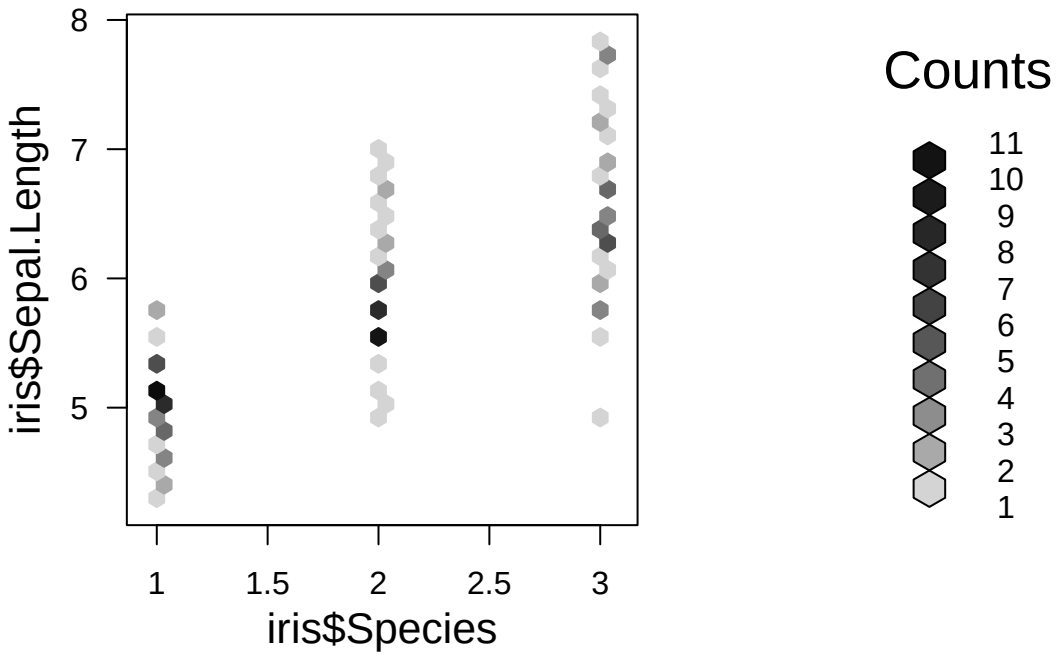


play with more color we need a package called hexbin

```
#install.packages("hexbin")
library(hexbin)
```

```
## Warning: package 'hexbin' was built under R version 3.3.3
```

```
plot(hexbin(iris$Species,iris$Sepal.Length))
```

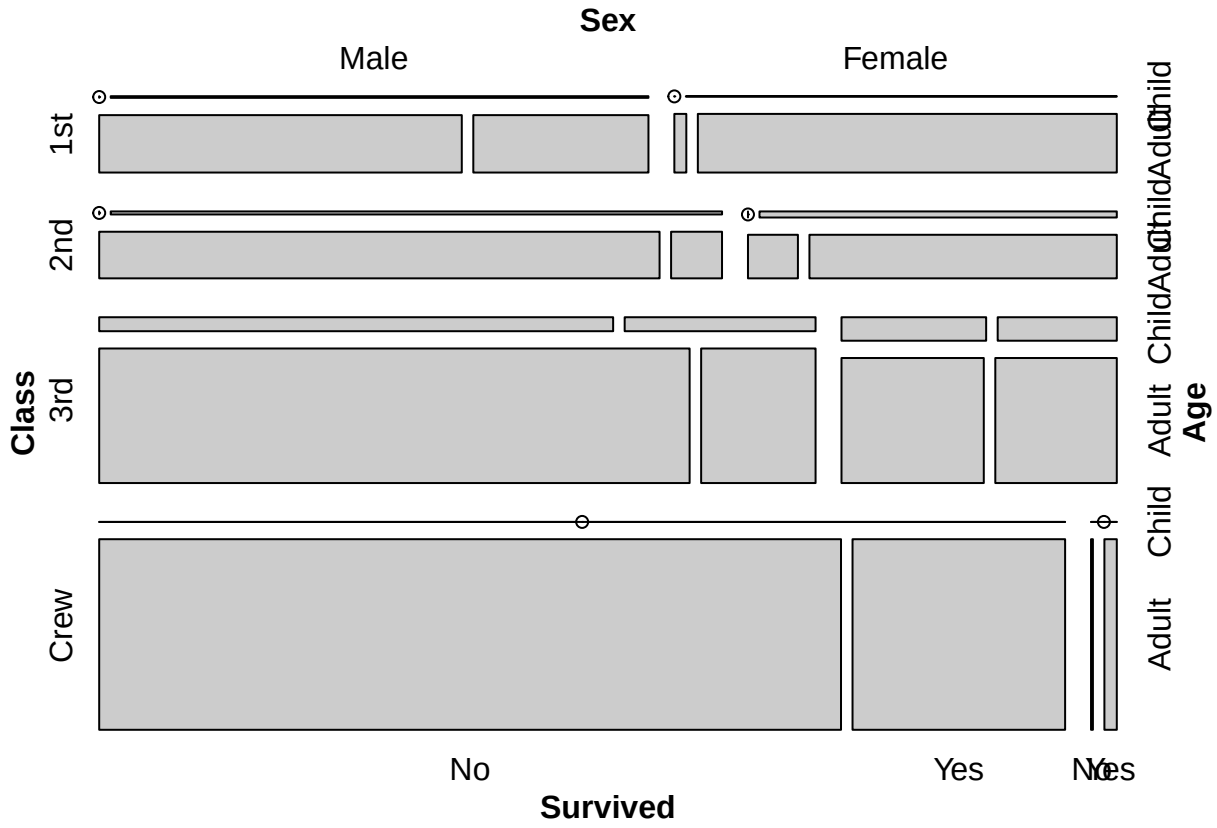



```
library(vcd)
```

```
## Warning: package 'vcd' was built under R version 3.3.3
```

```
## Loading required package: grid
```

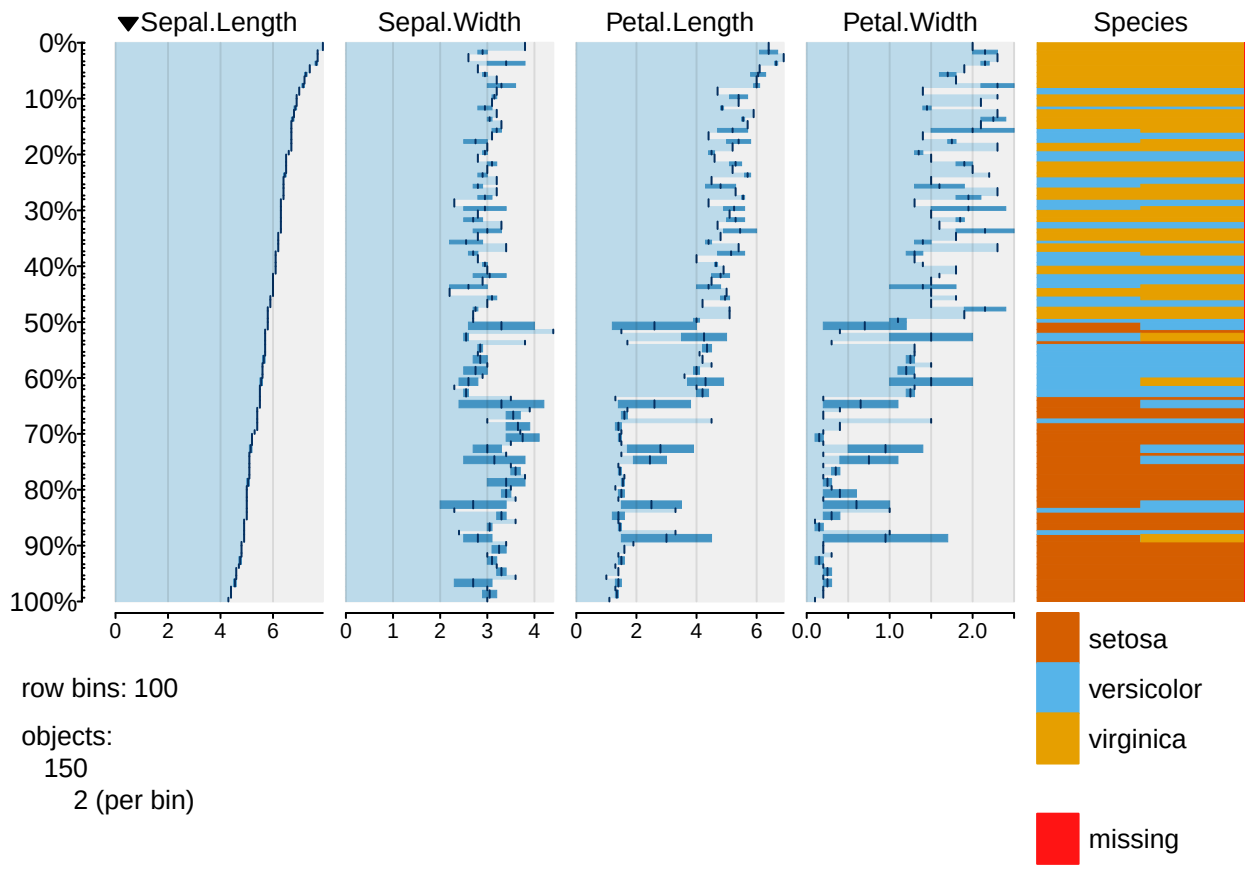
```
mosaic(Titanic)
```



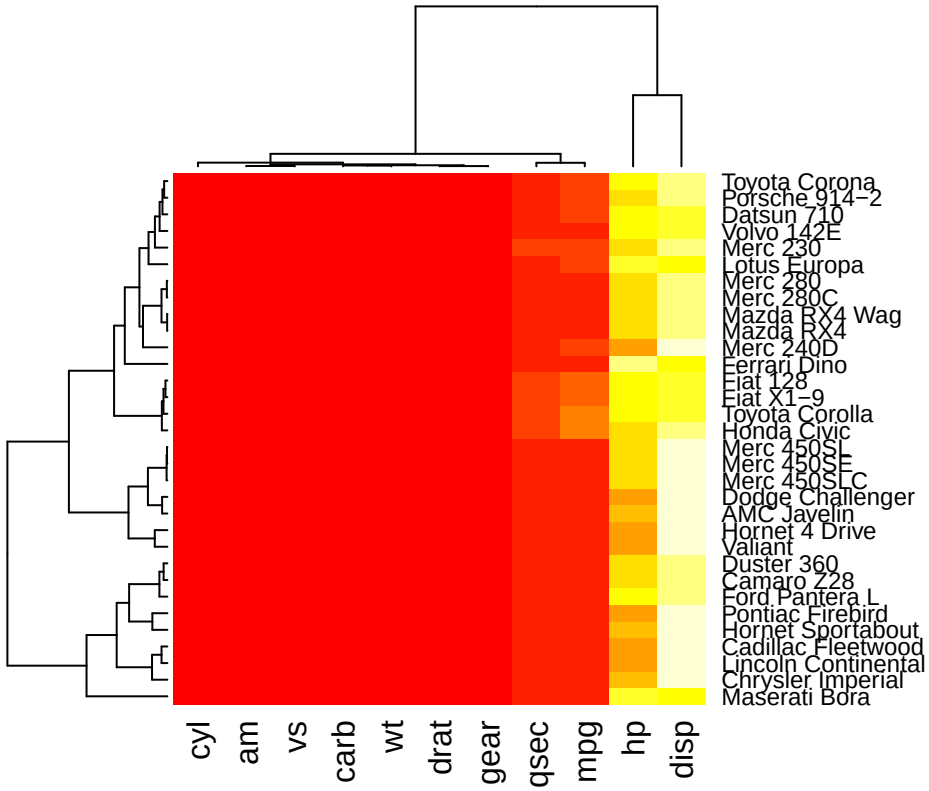

```
#install.packages("tabplot")
library(tabplot)
```

```
## Warning: package 'tabplot' was built under R version 3.3.3
## Loading required package: bit
## Attaching package bit
## package:bit (c) 2008-2012 Jens Oehlschlaegel (GPL-2)
## creators: bit bitwhich
## coercion: as.logical as.integer as.bit as.bitwhich which
## operator: ! & | xor != ==
## querying: print length any all min max range sum summary
## bit access: length<- [ [<- [[ [[<-
## for more help type ?bit
##
## Attaching package: 'bit'
## The following object is masked from 'package:base':
##
##     xor
## Loading required package: ff
## Warning: package 'ff' was built under R version 3.3.3
```

```
## Attaching package ff
## - getOption("fftempdir")=="C:/Users/admin/AppData/Local/Temp/RtmpYlM7JH"
## - getOption("ffextension")=="ff"
## - getOption("ffdrop")==TRUE
## - getOption("fffinonexit")==TRUE
## - getOption("ffpagesize")==65536
## - getOption("ffcaching")=="mmnoflush"  -- consider "ffeachflush" if your system stalls on large writ
## - getOption("ffbatchbytes")==84641054.72 -- consider a different value for tuning your system
## - getOption("ffmaxbytes")==4232052736 -- consider a different value for tuning your system
##
## Attaching package: 'ff'
## The following objects are masked from 'package:bit':
##
##     clone, clone.default, clone.list
## The following objects are masked from 'package:utils':
##
##     write.csv, write.csv2
## The following objects are masked from 'package:base':
##
##     is.factor, is.ordered
## Loading required package: ffbase
## Warning: package 'ffbase' was built under R version 3.3.3
##
## Attaching package: 'ffbase'
## The following objects are masked from 'package:ff':
##
##     [.ff, [.ffdf, [<-.ff, [<-.ffdf
## The following objects are masked from 'package:base':
##
##     %in%, table
tableplot(iris)
```




```
heatmap(as.matrix(mtcar))
```



create a plot using map of country

```
#install.packages("raster")
library(raster)
```

```
## Warning: package 'raster' was built under R version 3.3.3
```

```
## Loading required package: sp
```

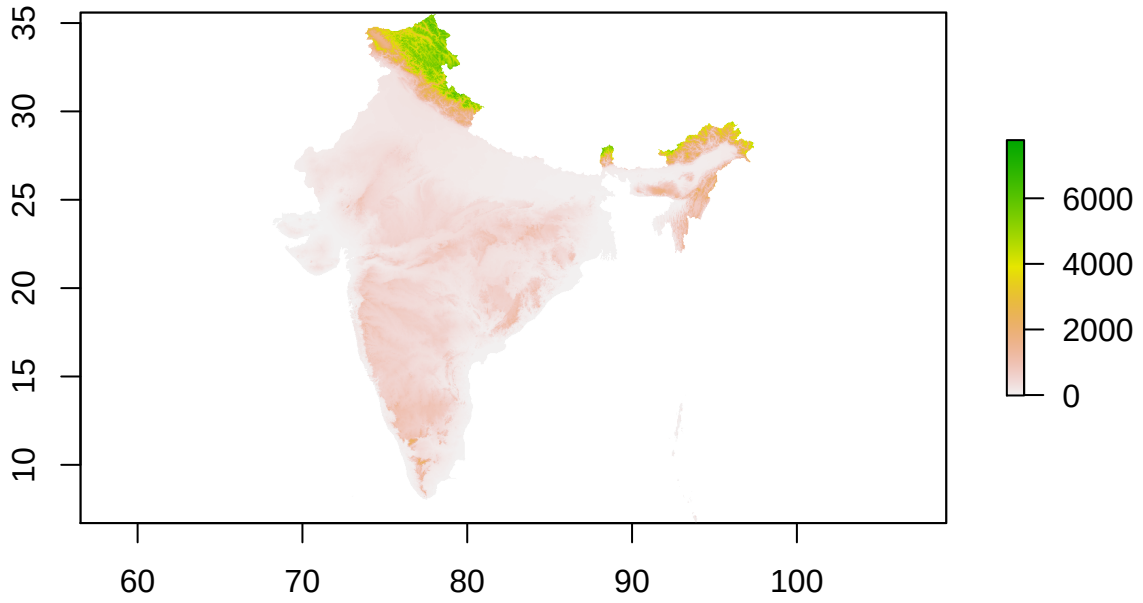
```
## Warning: package 'sp' was built under R version 3.3.3
```

```
##
## Attaching package: 'raster'
```

```
## The following objects are masked from 'package:ff':
##
##     filename, ncol<-, nrow<-
```

```
## The following object is masked from 'package:vcd':
##
##     mosaic
```

```
alt<-getData('alt',country="IND")
plot(alt)
```



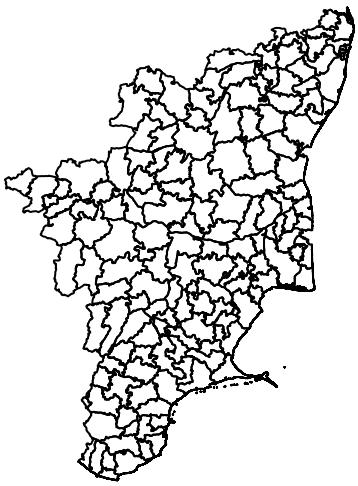

```
gadm<-getData('GADM',country="IND",level=3)
head(gadm)
```

```
##   OBJECTID ID_0 ISO NAME_0 ID_1             NAME_1 ID_2
## 1        1  105 IND  India    1 Andaman and Nicobar    1
## 2        2  105 IND  India    1 Andaman and Nicobar    2
## 3        3  105 IND  India    1 Andaman and Nicobar    3
## 4        4  105 IND  India    2      Andhra Pradesh    4
## 5        5  105 IND  India    2      Andhra Pradesh    4
## 6        6  105 IND  India    2      Andhra Pradesh    4
##                    NAME_2 ID_3       NAME_3 CCN_3 CCA_3 TYPE_3 ENGTYPE_3
## 1          Nicobar Islands    1 n.a. ( 2304)    NA        Taluk     Taluk
## 2 North and Middle Andaman    2 n.a. ( 2178)    NA        Taluk     Taluk
## 3            South Andaman    3 n.a. ( 2178)    NA        Taluk     Taluk
## 4                Anantapur    4    Anantapur    NA        Taluk     Taluk
## 5                Anantapur    5  Dharmavaram    NA        Taluk     Taluk
## 6                Anantapur    6        Gooty    NA        Taluk     Taluk
##   NL_NAME_3 VARNAME_3
## 1
## 2
## 3
## 4
## 5
## 6
```

```r
table(gadm$NAME_1)
```

```
##
##    Andaman and Nicobar         Andhra Pradesh      Arunachal Pradesh
##                      3                    131                     18
##                  Assam                  Bihar             Chandigarh
##                     31                     53                      1
##           Chhattisgarh Dadra and Nagar Haveli          Daman and Diu
##                     62                      1                      2
##                    Goa                Gujarat                Haryana
##                     12                    215                     45
##       Himachal Pradesh      Jammu and Kashmir              Jharkhand
##                     66                     24                     28
##              Karnataka                 Kerala            Lakshadweep
##                    176                     62                      5
##         Madhya Pradesh            Maharashtra                Manipur
##                    166                    307                     28
##              Meghalaya                Mizoram               Nagaland
##                     11                     10                     11
##           NCT of Delhi                 Odisha             Puducherry
##                      1                     58                      4
##                 Punjab              Rajasthan                 Sikkim
##                     47                    215                      4
##             Tamil Nadu              Telangana                Tripura
##                    161                     72                     11
##          Uttar Pradesh            Uttarakhand            West Bengal
##                    214                     32                     53
```

```r
gadm_tamil_nadu=subset(gadm,gadm$NAME_1=="Tamil Nadu")
plot(gadm_tamil_nadu)
```



other