TP.R

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```r
# Seance Analyse de donnée
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Id = c(1:15)
Age = c(17,19,17,19,18,21,35,21,23,18,17,20,21,19,22)
poids = c(55,70,50,45,51,62,61,53,45,78,100,70,53,61,55)
Sexe = c("F","F","M","F","M","M","M","F","M","M","F","M","F","F","F")
Taille =
c("small","medium","small","small","medium","high","small","high","small","me
dium","high","small","small","high","medium")
# creation d'une base de donnée (DB)
base = data.frame(Id,Age,poids,Sexe,Taille)
View(base)
#voir la structure de la base
str(base) #les observation
```

```
## 'data.frame':    15 obs. of  5 variables:
##  $ Id    : int  1 2 3 4 5 6 7 8 9 10 ...
##  $ Age   : num  17 19 17 19 18 21 35 21 23 18 ...
##  $ poids : num  55 70 50 45 51 62 61 53 45 78 ...
##  $ Sexe  : chr  "F" "F" "M" "F" ...
##  $ Taille: chr  "small" "medium" "small" "small" ...
```

```r
head(base)#les prémiers obs
```

```
##   Id Age poids Sexe Taille
## 1  1  17    55    F  small
## 2  2  19    70    F medium
## 3  3  17    50    M  small
## 4  4  19    45    F  small
## 5  5  18    51    M medium
## 6  6  21    62    M   high
```

```r
tail(base)#les dernieres obs
```

```
##    Id Age poids Sexe Taille
## 10 10  18    78    M medium
## 11 11  17   100    F   high
## 12 12  20    70    M  small
## 13 13  21    53    F  small
## 14 14  19    61    F   high
## 15 15  22    55    F medium
```

```
levels(base $Taille) #niveaux

## NULL

# voir la statistique
summary(base)

##        Id            Age            poids            Sexe
##  Min.   : 1.0   Min.   :17.00   Min.   : 45.0   Length:15
##  1st Qu.: 4.5   1st Qu.:18.00   1st Qu.: 52.0   Class :character
##  Median : 8.0   Median :19.00   Median : 55.0   Mode  :character
##  Mean   : 8.0   Mean   :20.47   Mean   : 60.6
##  3rd Qu.:11.5   3rd Qu.:21.00   3rd Qu.: 66.0
##  Max.   :15.0   Max.   :35.00   Max.   :100.0
##     Taille
##  Length:15
##  Class :character
##  Mode  :character
##
##
##

table(base $Taille)

##
##    high medium  small
##       4      4      7

table(base $Taille, base $Sexe) #tableau croisé

##
##           F M
##    high   3 1
##    medium 2 2
##    small  3 4

var(base $Age)#variance

## [1] 19.69524

sd(base $Age)# ecart-type

## [1] 4.437932

cor(base $Age, base $poids)#correlation

## [1] -0.1622757

cov(base $Age, base $poids)#covariance

## [1] -10.37143

#Elements graphique
boxplot(Age) #boite a moustaches
```
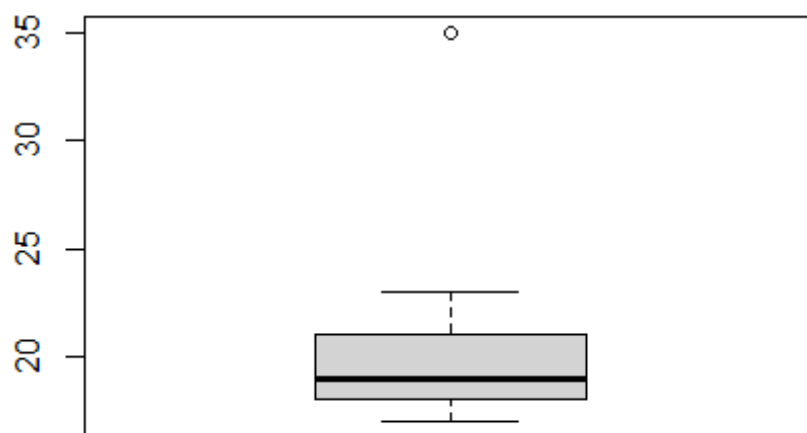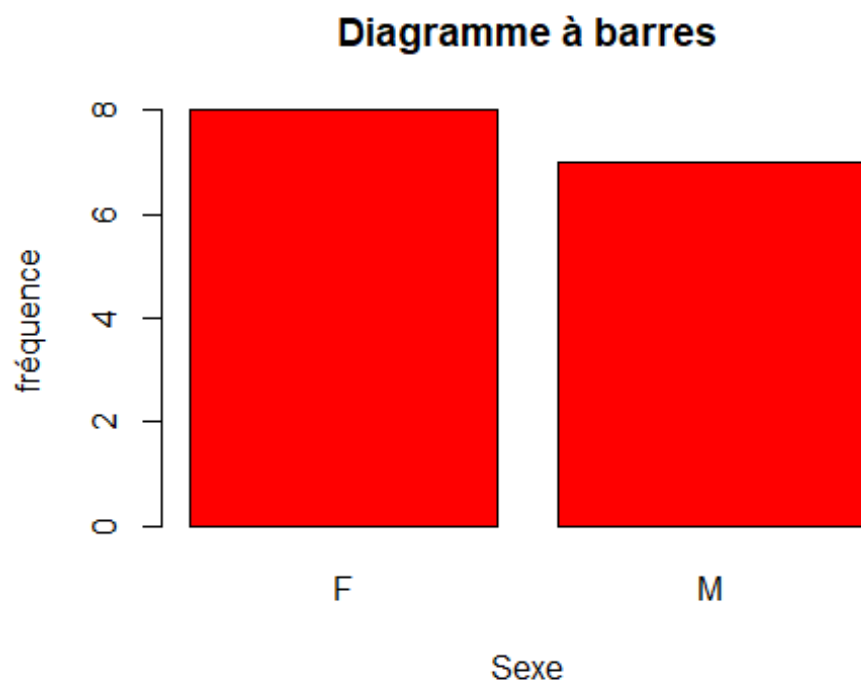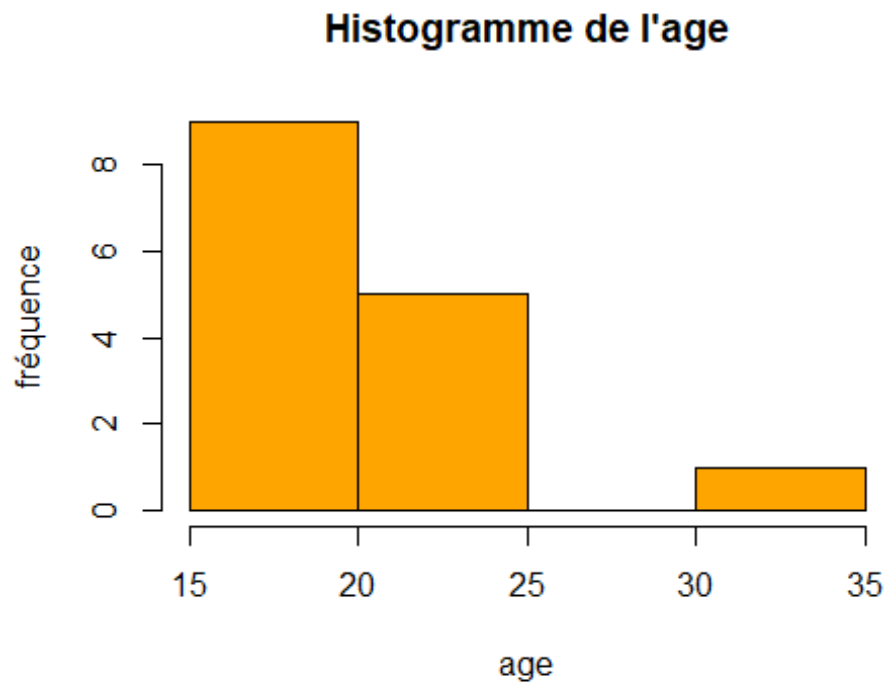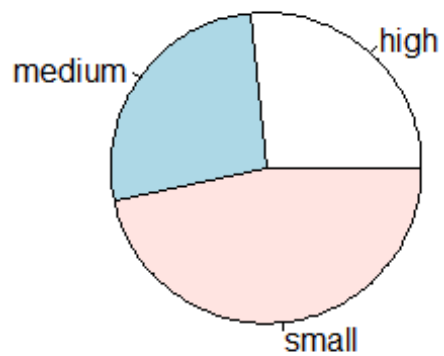
```
barplot(table(base $Sexe), main = "Diagramme à barres", xlab = "Sexe", ylab =
"fréquence", args.legend = c("M","F"), col = "red") #diagramme en bande
```

Diagramme à barres

```r
hist(base $Age, main = "Histogramme de l'age", xlab = "age", ylab =
"fréquence", col = "orange")#histogramme
```

Histogramme de l'age


```r
pie(table(base $Taille)) #Diagramme circulaire
```

```
#example(pie)
barplot(table(base $Sexe, base $Taille), main = "Taille de vetements", xlab =
"Taille tee-shrit", ylab = "Fréquence", names.arg =
c("high","medium","small"), beside = TRUE, col = c("darkblue","red"), legend
= row.names(table(base $Sexe, base $Taille)))
```

Taille de vetements

Taille tee-shrit