```
################################################################################
# 8. DESCRIPTIVE STATISTICS
################################################################################

## clear memory
rm(list = ls())

## load data
Mice=read.table("http://edu.sablab.net/data/txt/mice.txt",
                header=T,sep="\t")
str(Mice)

##------------------------------------------------------------------------------
## 8.1. Measures of center
##------------------------------------------------------------------------------
summary(Mice)

## mean and median
mean(Mice$Ending.weight)
median(Mice$Ending.weight)

## mean and median if NA values present
mean(Mice$Bleeding.time, na.rm=T)
median(Mice$Bleeding.time, na.rm=T)

## let us plot them
x11()
plot(density(Mice$Bleeding.time, na.rm=T), xlim=c(0,200))
abline(v = mean(Mice$Bleeding.time, na.rm=T),col=2)
abline(v = median(Mice$Bleeding.time, na.rm=T),col=4)

##------------------------------------------------------------------------------
## 8.2. Measures of variation
##------------------------------------------------------------------------------

## mean and median if NA values present
sd(Mice$Bleeding.time, na.rm=T)
var(Mice$Bleeding.time, na.rm=T)

## stable measure of variation - MAD
mad(Mice$Bleeding.time, na.rm=T)

##------------------------------------------------------------------------------
## 8.3. Measures of dependency
##------------------------------------------------------------------------------

## covariation
cov(Mice$Starting.weight,Mice$Ending.weight)

## correlation
cor(Mice$Starting.weight,Mice$Ending.weight)

## coefficient of determination, R2
cor(Mice$Starting.weight,Mice$Ending.weight)^2


#>>>>>>>>>>>>>>>>>>>>>>>>>>>
#> please, do Tasks 8ab
#>>>>>>>>>>>>>>>>>>>>>>>>>>>
```