Untitled1* | PS_Lab_8.R | Untitled2* | Exercise...LaptopsWeights | Data...Lab.8

Source on Save | Run | Source

```
setwd("C:\\Users\\it24101738\\Desktop\\IT24101738")
data<-read.table("Exercise - LaptopsWeights.txt",header=TRUE)
fix(data)
attach(data)

#Q1
popmn<-mean(weight.kg.)
popmn

popsd<-sd(weight.kg.)
popsd

#Q2
samples<-c ()
n<-c()
for(i in 1:25){
  s<-sample(weight.kg.,6,replace=TRUE)
  samples<-cbind(samples,s)
  n<-c(n,paste('S',i))
}

colnames(samples)=n
s.means<-apply(samples,2,mean)
s.means

s.vars<-apply(samples,2,var)
s.vars

s.sds<-apply(samples,2,sd)
s.sds

samplemean<-mean(s.means)
samplemean

samplesd<-sd(s.sds)
samplesd

popmn
samplemean

truemean=popmn/6
truemean

samplemean

popsd
samplesd

truesd=popsd/6
truesd

samplesd
```

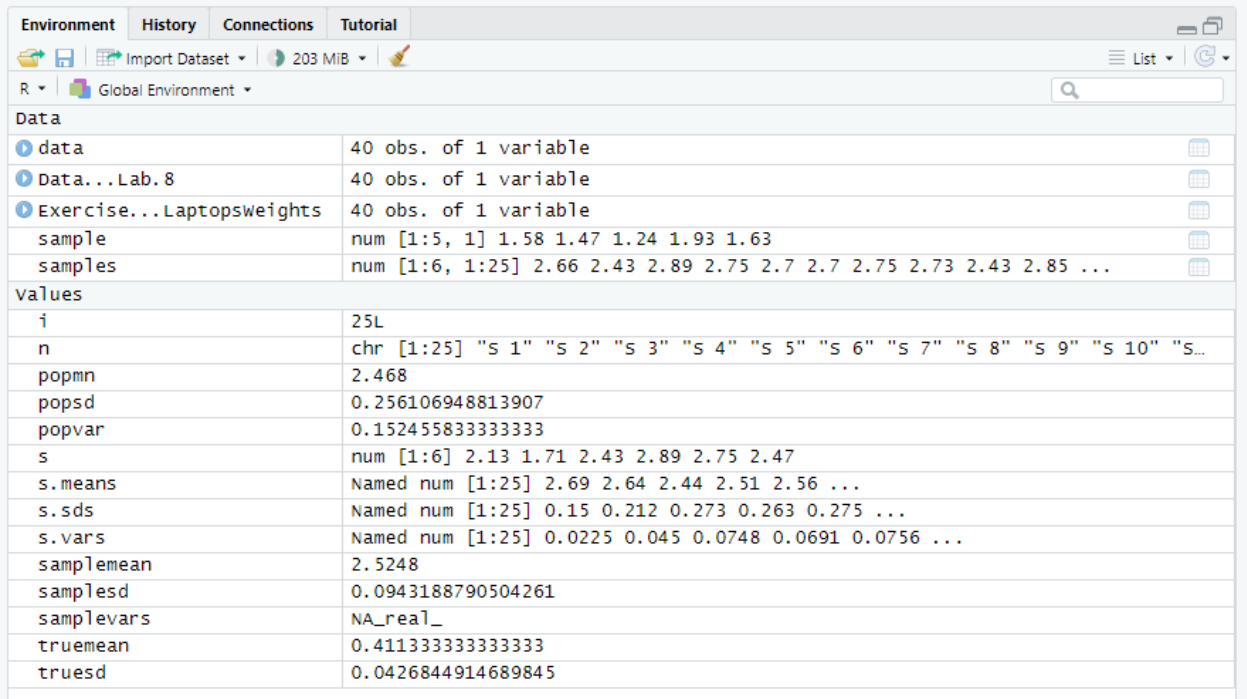
Source

Console | Terminal | Background Jobs

R 4.2.2 · C:/Users/it24101738/Desktop/IT24101738/

```
> setwd("C:\\Users\\it24101738\\Desktop\\IT24101738")
> data<-read.table("Exercise - LaptopsWeights.txt",header=TRUE)
> fix(data)
> attach(data)
> #Q1
> popmn<-mean(weight.kg.)
> popmn
[1] 2.468
>
> popsd<-sd(weight.kg.)
> popsd
[1] 0.2561069
> #Q2
> samples<-c ()
> n<-c()
> for(i in 1:25){
+   s<-sample(weight.kg.,6,replace=TRUE)
+   samples<-cbind(samples,s)
+   n<-c(n,paste('S',i))
+ }
>
> colnames(samples)=n
> s.means<-apply(samples,2,mean)
> s.means
     S 1      S 2      S 3      S 4      S 5      S 6      S 7      S 8      S 9     S 10     S 11     S 12     S 13
2.688333 2.640000 2.438333 2.513333 2.565000 2.531667 2.681667 2.531667 2.583333 2.361667 2.558333 2.440000 2.460000
    S 14     S 15     S 16     S 17     S 18     S 19     S 20     S 21     S 22     S 23     S 24     S 25
2.543333 2.448333 2.375000 2.645000 2.543333 2.606667 2.426667 2.516667 2.481667 2.610000 2.533333 2.396667
>
> s.vars<-apply(samples,2,var)
> s.vars
        S 1         S 2         S 3         S 4         S 5         S 6         S 7         S 8         S 9        S 10        S 11
0.02245667 0.04504000 0.07477667 0.06914667 0.07559000 0.01377667 0.04641667 0.06209667 0.08950667 0.15833667 0.03829667
       S 12        S 13        S 14        S 15        S 16        S 17        S 18        S 19        S 20        S 21        S 22
0.08448000 0.10304000 0.01294667 0.15813667 0.01623000 0.02335000 0.04418667 0.01446667 0.09410667 0.03250667 0.10093667
       S 23        S 24        S 25
0.02468000 0.01454667 0.18346667
>
> s.sds<-apply(samples,2,sd)
> s.sds
       S 1        S 2        S 3        S 4        S 5        S 6        S 7        S 8        S 9       S 10       S 11       S 12
0.1498555 0.2122263 0.2734532 0.2629575 0.2749364 0.1173740 0.2154453 0.2491920 0.2991766 0.3979154 0.1956953 0.2906544
      S 13       S 14       S 15       S 16       S 17       S 18       S 19       S 20       S 21       S 22       S 23       S 24
0.3209984 0.1137834 0.3976640 0.1273970 0.1528071 0.2102062 0.1202775 0.3067681 0.1802961 0.3177053 0.1570987 0.1206096
       S 25
0.4283301
>
> samplemean<-mean(s.means)
> samplemean
[1] 2.5248
>
> samplesd<-sd(s.sds)
> samplesd
[1] 0.09431888
```

```
> popmn
[1] 2.468
> samplemean
[1] 2.5248
>
> truemean=popmn/6
> truemean
[1] 0.4113333
>
> samplemean
[1] 2.5248
>
> popsd
[1] 0.2561069
> samplesd
[1] 0.09431888
>
> truesd=popsd/6
> truesd
[1] 0.04268449
>
> samplesd
[1] 0.09431888
```


Environment
History
Connections
Tutorial
Import Dataset
203 MiB
List
R
Global Environment
Data
data
40 obs. of 1 variable
Data...Lab.8
40 obs. of 1 variable
Exercise...LaptopsWeights
40 obs. of 1 variable
sample
num [1:5, 1] 1.58 1.47 1.24 1.93 1.63
samples
num [1:6, 1:25] 2.66 2.43 2.89 2.75 2.7 2.7 2.75 2.73 2.43 2.85 ...
Values
i
25L
n
chr [1:25] "S 1" "S 2" "S 3" "S 4" "S 5" "S 6" "S 7" "S 8" "S 9" "S 10" "S...
popmn
2.468
popsd
0.256106948813907
popvar
0.152455833333333
s
num [1:6] 2.13 1.71 2.43 2.89 2.75 2.47
s.means
Named num [1:25] 2.69 2.64 2.44 2.51 2.56 ...
s.sds
Named num [1:25] 0.15 0.212 0.273 0.263 0.275 ...
s.vars
Named num [1:25] 0.0225 0.045 0.0748 0.0691 0.0756 ...
samplemean
2.5248
samplesd
0.0943188790504261
samplevars
NA_real_
truemean
0.411333333333333
truesd
0.0426844914689845