IT: IT24102303

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```r
IT24102303lab8.R ×
    Source on Save    Q  ✱ ▾                                    → Run    ↻ ⇧ ⇩    → Source ▾
1  setwd("C:\\Users\\it24102303\\Desktop\\IT24102303\\Lab 08-20250926")
2
3
4
5
6  #importing the data set
7  data <- read.table("Exercise - Laptopsweights.txt",header=TRUE)
8  fix(data)
9  attach(data)
10
11 # Question 01
12 # Calculating population mean & standard deviation
13 pop_mean_laptop <-mean(weight.kg.)
14 pop_sd_laptop <-sd(weight.kg.)
15
16 # Question 02
17 # Creating null vectors to store sample data sets
18 samples_laptop <- c()
19 n_laptop <- c()
20
21 # Drawing 25 sample of size 6
22 for (i in 1:25){
23    s_laptop <- sample(weight.kg.,6,replace = TRUE)
24    samples_laptop <-cbind(samples_laptop,s_laptop)
25    n_laptop <-c(n_laptop,paste('S',i))
26 }
27
28 #Assigning column names
29 colnames(samples_laptop) =n_laptop
30
31 #calculating sample means and standard deviations
32 s.mean_laptop <- apply(samples_laptop,2,mean)
33 s.sd_laptop <- apply(samples_laptop,2,sd)
34
35 # Question 03
36 #calculating the mean and standard deviation of the sample means
37 mean_of_s_means <- mean(s.mean_laptop)

9:13   (Top Level) ◊                                                      R Scr
```

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Console   Terminal ×   Background Jobs ×
R R 4.2.2 · C:/Users/it24102303/Desktop/IT24102303/Lab 08-20250926/
+    samples<-cbind(samples,s)
+    n<-c(n,paste('S',i))
+ }
>
> colnames(samples)=n
>
> s.means<-apply(samples,2,mean)
> s.vars<-apply(samples,2,var)
> ##Q3
> amplemean<-mean(s.means)
> samplevars<-var(s.means)
> ##Q4
> popmn
[1] 1.77425
```