IT24102544

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PS Labsheet 08

```
  2
  3  data<-read.table("Exercise - LaptopsWeights.txt", header=TRUE)
  4  fix(data)
  5  attach(data)
  6
  7  popmn<-mean(Weight.kg.)
  8  popvar<-var(Weight.kg.)
  9  pop_dev <- sd(Weight.kg.)
```

Environment	History	Connections	Tutorial	
Import Dataset ▾	154 MiB ▾			
R ▾ Global Environment ▾				

Data	
data	40 obs. of 1 variable
samples	num [1:6, 1] 2.23 2.43 2.47 2.46 2.17 2.47
Values	
i	25
n	"s 25"
pop_dev	0.256106948813907
popmn	2.468
popvar	0.0655907692307692
s	num [1:6] 2.23 2.43 2.47 2.46 2.17 2.47
s.dev	Named num 0.135
s.means	Named num 2.37
s.vars	Named num 0.0183
sampledev	NA_real_
samplemean	2.37166666666667

Data Editor — □ ×

File Edit Help

	Weight.kg.	var2	var3	var4	var5	var6
1	2.46					
2	2.45					
3	2.47					
4	2.71					
5	2.46					
6	2.05					
7	2.6					
8	2.42					
9	2.43					
10	2.53					
11	2.57					
12	2.85					
13	2.7					
14	2.53					
15	2.28					
16	2.2					
17	2.57					
18	2.89					
19	2.51					

```
11
12   #Q2
13   samples<-c()
14   n<-c()
15
16 -  for(i in 25){
17      s<-sample(Weight.kg.,6,replace=TRUE)
18      samples<-cbind(samples,s)
19      n<-c(n,paste('s',i))
20 - }
21   colnames(samples)=n
22
23   s.means<-apply(samples,2,mean)
24   s.vars<-apply(samples,2,var)
25   s.dev<-apply(samples,2,sd)
```

Environment	History	Connections	Tutorial

Import Dataset ▾ | 154 MiB ▾ |

R ▾ | Global Environment ▾ | 🔍

Data

data	40 obs. of 1 variable
samples	num [1:6, 1] 2.06 2.57 2.46 2.65 2.28 2.73

Values

i	25
n	"s 25"
pop_dev	0.256106948813907
popmn	2.468
popvar	0.0655907692307692
s	num [1:6] 2.06 2.57 2.46 2.65 2.28 2.73
s.dev	Named num 0.25
s.means	Named num 2.46
s.vars	Named num 0.0627
sampledev	NA_real_
samplemean	2.37166666666667

```
27  #Q3
28  samplemean<-mean(s.means)
29  sampledev<-sd(s.means)
30
31  popmn
32  samplemean
33
34  pop_dev
35  sampledev
```

Environment	History	Connections	Tutorial		—

Import Dataset ▾   ● 154 MiB ▾   ≡ List ▾ ⊙

R ▾   ● Global Environment ▾   🔍

Data

● data	40 obs. of 1 variable
samples	num [1:6, 1] 2.06 2.57 2.46 2.65 2.28 2.73

Values

i	25
n	"s 25"
pop_dev	0.256106948813907
popmn	2.468
popvar	0.0655907692307692
s	num [1:6] 2.06 2.57 2.46 2.65 2.28 2.73
s.dev	Named num 0.25
s.means	Named num 2.46
s.vars	Named num 0.0627
sampledev	NA_real_
samplemean	2.45833333333333

```
> s.means<-apply(samples,2,mean)
> s.vars<-apply(samples,2,var)
> s.dev<-apply(samples,2,sd)
> #Q3
> samplemean<-mean(s.means)
> sampledev<-sd(s.means)
>
> popmn
[1] 2.468
> samplemean
[1] 2.458333
>
> pop_dev
[1] 0.2561069
> sampledev
[1] NA
>
```