```r
setwd("C:\\Users\\it24104016\\Desktop\\New folder")
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


```

```
> setwd("C:\\Users\\it24104016\\Desktop\\New folder")
> data<-read.table("Exercise - LaptopsWeights.txt",header=TRUE)
> fix(data)
> attach(data)
> popmn
Error: object 'popmn' not found
> #Q1
> popmn<-mean(Weight.kg.)
> popmn
[1] 2.468
> popsd<-sd(Weight.kg.)
> popsd
[1] 0.2561069
> 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))
+ }
> 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
2.596667 2.536667 2.490000 2.661667 2.495000 2.460000 2.538333 2.616667
      S 9      S 10      S 11      S 12      S 13      S 14      S 15      S 16
2.551667 2.513333 2.410000 2.646667 2.458333 2.605000 2.538333 2.386667
     S 17      S 18      S 19      S 20      S 21      S 22      S 23      S 24
2.475000 2.443333 2.458333 2.358333 2.576667 2.408333 2.536667 2.285000
     S 25
2.485000
>
> s.vars<-apply(samples,2,var)
> s.vars
         S 1          S 2          S 3          S 4          S 5          S 6
0.050226667 0.062746667 0.118800000 0.014096667 0.064830000 0.064000000
         S 7          S 8          S 9         S 10         S 11         S 12
0.068056667 0.018146667 0.039336667 0.043946667 0.021960000 0.026786667
        S 13         S 14         S 15         S 16         S 17         S 18
0.049296667 0.025510000 0.037856667 0.172866667 0.076030000 0.039346667
        S 19         S 20         S 21         S 22         S 23         S 24
0.160256667 0.070976667 0.007746667 0.032656667 0.168226667 0.207190000
        S 25
0.079070000
>
> s.sds<-apply(samples,2,sd)
> s.sds
```

```
           S 13          S 14          S 15          S 16          S 17          S 18
0.049296667 0.025510000 0.037856667 0.172866667 0.076030000 0.039346667
           S 19          S 20          S 21          S 22          S 23          S 24
0.160256667 0.070976667 0.007746667 0.032656667 0.168226667 0.207190000
           S 25
0.079070000
>
> s.sds<-apply(samples,2,sd)
> s.sds
          S 1          S 2          S 3          S 4          S 5          S 6
0.22411307 0.25049285 0.34467376 0.11872938 0.25461736 0.25298221
          S 7          S 8          S 9          S 10          S 11          S 12
0.26087673 0.13470956 0.19833473 0.20963460 0.14818907 0.16366633
          S 13          S 14          S 15          S 16          S 17          S 18
0.22202853 0.15971850 0.19456790 0.41577237 0.27573538 0.19835994
          S 19          S 20          S 21          S 22          S 23          S 24
0.40032070 0.26641446 0.08801515 0.18071156 0.41015444 0.45518128
          S 25
0.28119388
>
> samplemean<-mean(s.means)
> samplemean
[1] 2.501267
>
> samplesd<-sd(s.sds)
> samplesd
[1] 0.09726968
>
> popmn
[1] 2.468
> samplemean
[1] 2.501267
>
> truemean=popmn/6
> truemean
[1] 0.4113333
>
> samplemean
[1] 2.501267
>
> popsd
[1] 0.2561069
> samplesd
[1] 0.09726968
>
> truesd=popsd/6
> truesd
[1] 0.04268449
>
> samplesd
[1] 0.09726968
> |
```