PS Lab08

IT24100017

```r
setwd("C:\\Users\\isank\\OneDrive\\Desktop\\IT24100017_PS_Lab08")
data <- read.table("Exercise - LaptopsWeights.txt", header = TRUE)
fix(data)
attach(data)
popmn <- mean(Weight.kg.)
popvar <- var(Weight.kg.)
popmn
popvar

samples <- c()
n <- c()
for(i in 1:25) {
  s <- sample(Weight.kg., 5, replace = TRUE)
  samples <- cbind(samples, s)
  n <- c(n, paste('s', i))
}

colnames(samples) = n

s.means <- apply(samples, 2, mean)
s.sd <- apply(samples, 2, sd)
print(s.means)
print(s.sd)

samplemean<-mean(s.means)
samplesd<-sd(s.means)
samplemean
samplesd

popsd<-sd(Weight.kg.)
popsd

se<-popsd/sqrt(5)
se
popsd
samplesd

popmn
samplemean
```

```
> setwd("C:\\Users\\isank\\OneDrive\\Desktop\\IT24100017_PS_Lab08")
> data <- read.table("Exercise - Laptopsweights.txt", header = TRUE)
> fix(data)
> attach(data)
> popmn <- mean(weight.kg.)
> popvar <- var(weight.kg.)
> popmn
[1] 2.468
> popvar
[1] 0.06559077
> samples <- c()
> n <- c()
> for(i in 1:25) {
+   s <- sample(weight.kg., 5, replace = TRUE)
+   samples <- cbind(samples, s)
+   n <- c(n, paste('s', i))
+ }
> colnames(samples) = n
> s.means <- apply(samples, 2, mean)
> s.sd <- apply(samples, 2, sd)
> print(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  s 14  s 15  s 16  s 17  s 18  s 19  s 20
2.624 2.366 2.496 2.540 2.360 2.592 2.484 2.632 2.462 2.690 2.462 2.450 2.480 2.382 2.528 2.206 2.562 2.576 2.420 2.414
 s 21  s 22  s 23  s 24  s 25
2.528 2.492 2.490 2.466 2.414
> print(s.sd)
       s 1        s 2        s 3        s 4        s 5        s 6        s 7        s 8        s 9       s 10       s 11
0.08961027 0.16772000 0.26491508 0.28319605 0.37363083 0.16649324 0.22187835 0.14042792 0.29752311 0.20149442 0.30979025
      s 12       s 13       s 14       s 15       s 16       s 17       s 18       s 19       s 20       s 21       s 22
0.31906112 0.13076697 0.39226267 0.08318654 0.17285832 0.13989282 0.17868968 0.41006097 0.41416180 0.19201562 0.22576536
      s 23       s 24       s 25
0.11467345 0.29703535 0.28927496
> samplemean<-mean(s.means)
> samplesd<-sd(s.means)
> samplemean
[1] 2.48464
> samplesd
[1] 0.1022134
> popsd<-sd(weight.kg.)
> popsd
[1] 0.2561069
> se<-popsd/sqrt(5)
> se
[1] 0.1145345
> popsd
[1] 0.2561069
> samplesd
[1] 0.1022134
> popmn
[1] 2.468
> samplemean
[1] 2.48464
```