Lab sheet – 8

HERATH H.M.N.D

IT24101825

Exercise

1

```r
setwd("C:/Users/NAWEEN/OneDrive/Desktop/PS LABS")
getwd()

data<-read.table("Data - Lab 8.txt", header =TRUE)
fix(data)
attach(data)
```

2

```r
9   #2
10  num_samples<-25
11  sample_size<-6
12
13  sample_means<-numeric(num_samples)
14  sample_sds<-numeric(num_samples)
15
16  set.seed(123)
17
18 - for( i in 1:num_samples){
19     samp<-sample(weights, size = sample_size, replace =TRUE)
20     sample_means[i]<-mean(samp)
21     sample_sds[i]<-sd(samp)
22 - }
```

```
results<-data.frame(
   Sample=1:num_samples,
   Mean = round(sample_means,3),
   SD = round(sample_sds,3)

)
print(results)
```

```
> #2
> num_samples<-25
> sample_size<-6
> sample_means<-numeric(num_samples)
> sample_sds<-numeric(num_samples)
> set.seed(123)
> for( i in 1:num_samples){
+    samp<-sample(weights, size = sample_size, replace =TRUE)
+    sample_means[i]<-mean(samp)
+    sample_sds[i]<-sd(samp)
+ }
> results<-data.frame(
+    Sample=1:num_samples,
+    Mean = round(sample_means,3),
+    SD = round(sample_sds,3)
+
+ )
> print(results)

   Sample  Mean    SD
1        1 2.530 0.151
2        2 2.573 0.119
3        3 2.473 0.172
4        4 2.592 0.135
5        5 2.457 0.275
6        6 2.402 0.254
7        7 2.590 0.217
8        8 2.467 0.453
9        9 2.402 0.223
10      10 2.335 0.324
11      11 2.587 0.171
12      12 2.378 0.324
13      13 2.382 0.299
```

```
14        14 2.465 0.231
15        15 2.485 0.175
16        16 2.452 0.276
17        17 2.385 0.204
18        18 2.338 0.244
19        19 2.428 0.248
20        20 2.552 0.265
21        21 2.538 0.171
22        22 2.467 0.245
23        23 2.470 0.241
24        24 2.448 0.279
25        25 2.475 0.236
```

#3

```
32   #3
33   mean_of_means <- mean(sample_means)
34   sd_of_means<-sd(sample_means)
35
```

```
> #3
> mean_of_means <- mean(sample_means)
> sd_of_means<-sd(sample_means)
```