Lab sheet – 8

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Exercise

1

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

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

2

```
#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)
```

```
> #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)
```