Lab sheet – 8

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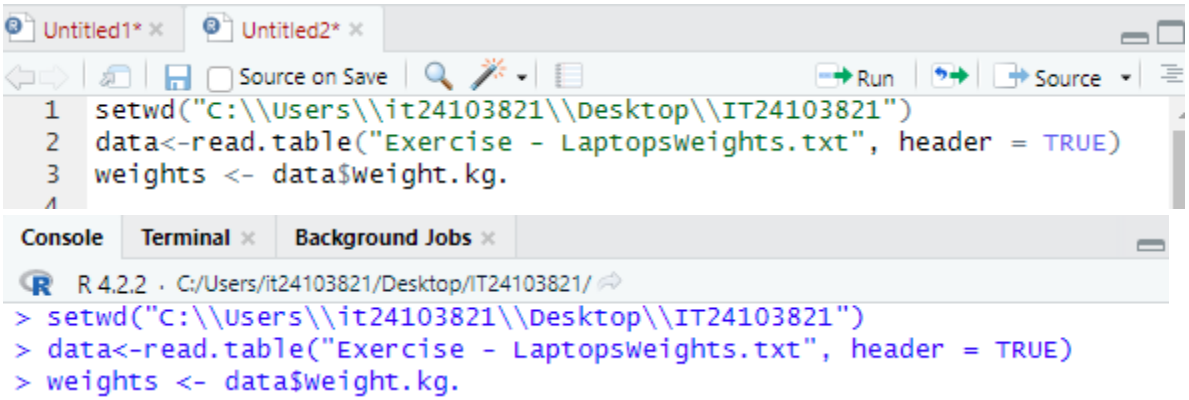
Exercise

1



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)
```

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