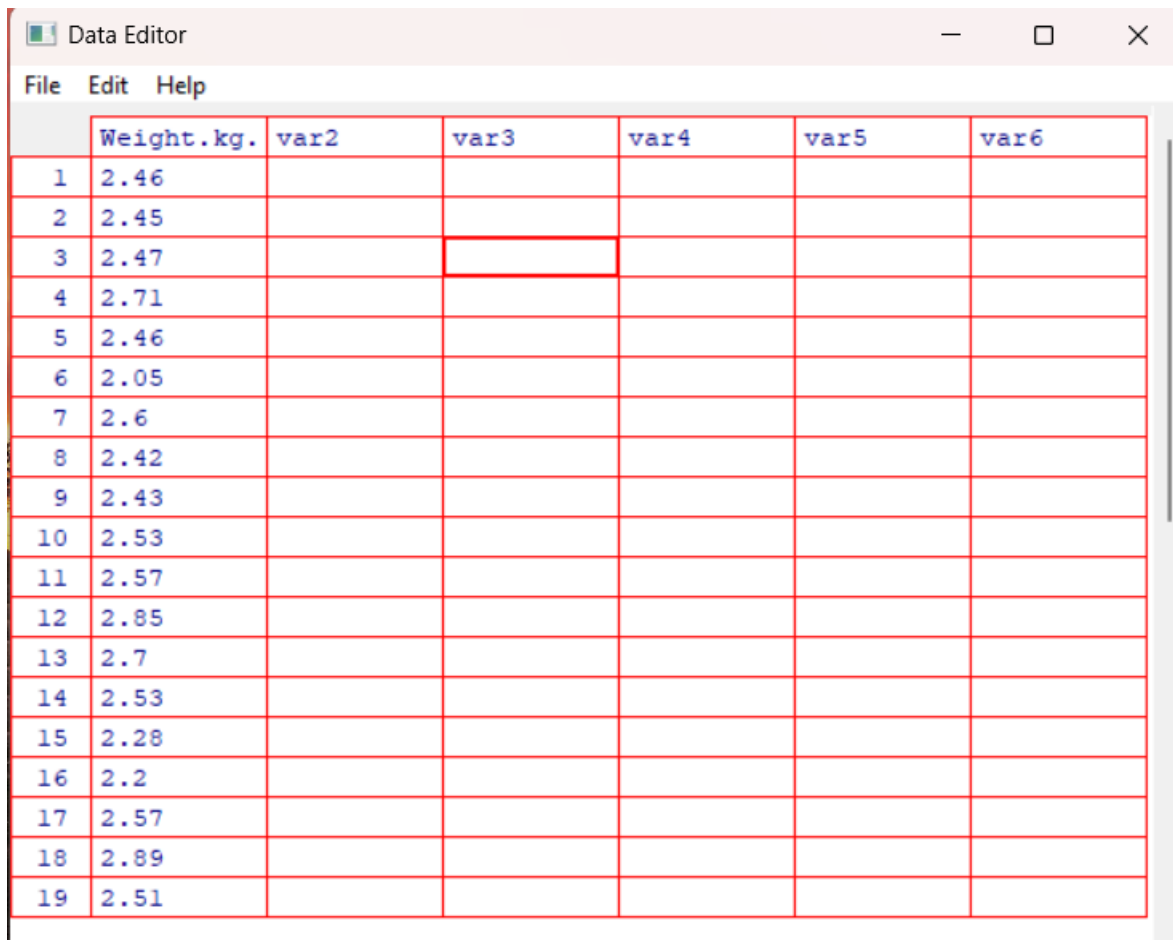


## IT24101759 - Lab 8

```
data <- read.table("Exercise - LaptopsWeights.txt",header = TRUE)
fix(data)
```

```
> data <- read.table("Exercise - LaptopsWeights.txt",header = TRUE)
> fix(data)
```



	Weight.kg.	var2	var3	var4	var5	var6
1	2.46					
2	2.45					
3	2.47					
4	2.71					
5	2.46					
6	2.05					
7	2.6					
8	2.42					
9	2.43					
10	2.53					
11	2.57					
12	2.85					
13	2.7					
14	2.53					
15	2.28					
16	2.2					
17	2.57					
18	2.89					
19	2.51					

```
getwd()
weights_data <- data<-read.table("Exercise - LaptopsWeights.txt", header=TRUE)
weights <- weights_data$Weight
```

```
> getwd()
[1] "C:/Users/VICTUS/Desktop/it24101617"
> weights_data <- data<-read.table("Exercise - LaptopsWeights.txt", header=TRUE)
> weights <- weights_data$Weight
```

```

#Q1
# Population Mean
pop_mean
# Population Standard Deviation
pop_sd

> # Population Mean
> pop_mean
[1] 2.468
> # Population Standard Deviation
> pop_sd
[1] 0.2561069

```

```

#Q2
#First create null vectors to store sample data sets.
samples<-c()
n<-c()

for(i in 1:25){
  s <- sample(weights, 6, replace = TRUE)
  samples <- cbind(samples,s)
  n <- c(n,paste('S',i))
}

#Assign column names for each sample created.Names have stored earlier under "n" variable
colnames(samples)=n
s.means<-apply(samples,2,mean)
s.sd<- apply(samples,2,sd)

> #Q2
> #First create null vectors to store sample data sets.
> samples<-c()
> n<-c()
> for(i in 1:25){
+   s <- sample(weights, 6, replace = TRUE)
+   samples <- cbind(samples,s)
+   n <- c(n,paste('S',i))
+ }
> s <- sample(weights, 6, replace = TRUE)
> samples <- cbind(samples,s)
> n <- c(n,paste('S',i))
> #Assign column names for each sample created.Names have stored earlier under "n" variable
> colnames(samples)=n
> s.means<-apply(samples,2,mean)
> s.sd<- apply(samples,2,sd)

```

i	25L
n	chr [1:26] "s 1" "s 2" "s 3" "s 4" "s 5" "s 6" "s 7" "..."
n_samples	25
n_size	6
pop_mean	2.468
pop_sd	0.256106948813907
s	num [1:6] 2.67 2.17 2.06 2.17 2.53 2.2
s.means	Named num [1:26] 2.3 2.62 2.42 2.59 2.46 ...
s.sd	Named num [1:26] 0.36 0.154 0.372 0.153 0.23 ...
sample	NULL
sample_means	num [1:25] 0 0 0 0 0 0 0 0 0 0 ...
sample_sds	num [1:25] 0 0 0 0 0 0 0 0 0 0 ...
weights	num [1:40] 2.46 2.45 2.47 2.71 2.46 2.05 2.6 2.42 2.43...

#Q3

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

```
trueemn = pop_mean/6
truesd = pop_sd/6
```

```
> #Q3
> samplemean <- mean(s.means)
> samplesd <- sd(s.means)
```

```
> trueemn = pop_mean/6
> truesd = pop_sd/6
```

samplemean	2.47217948717949
samplesd	0.10517051681359
trueemn	0.411333333333333
truesd	0.0426844914689845