Lab 08

IT2120

Probability And Statistics

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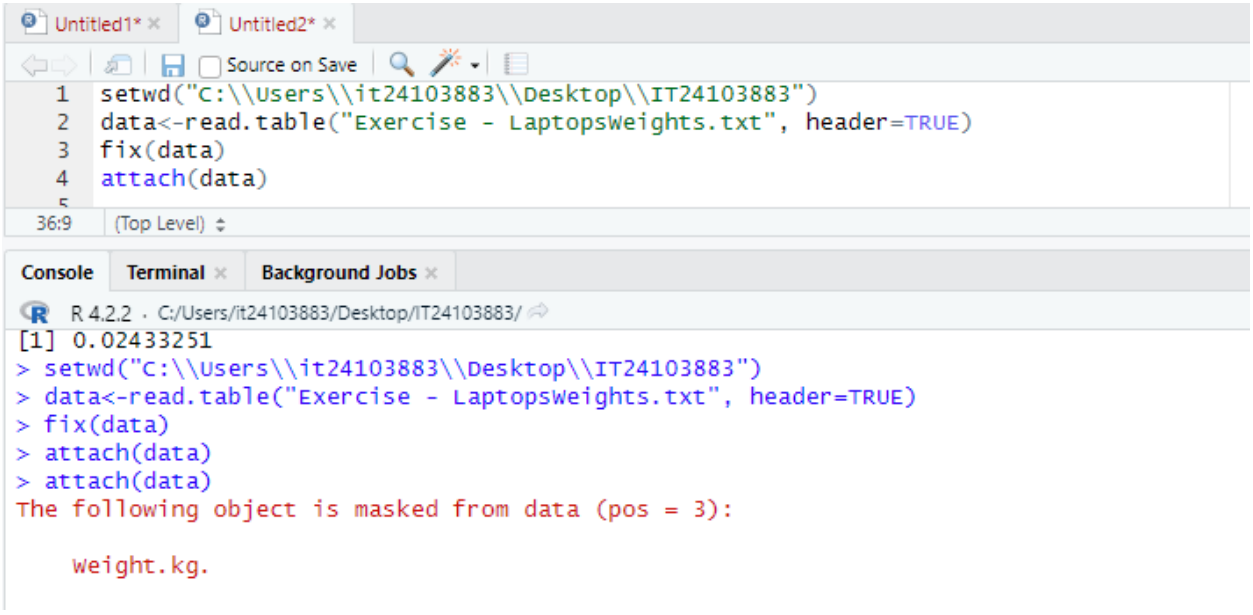

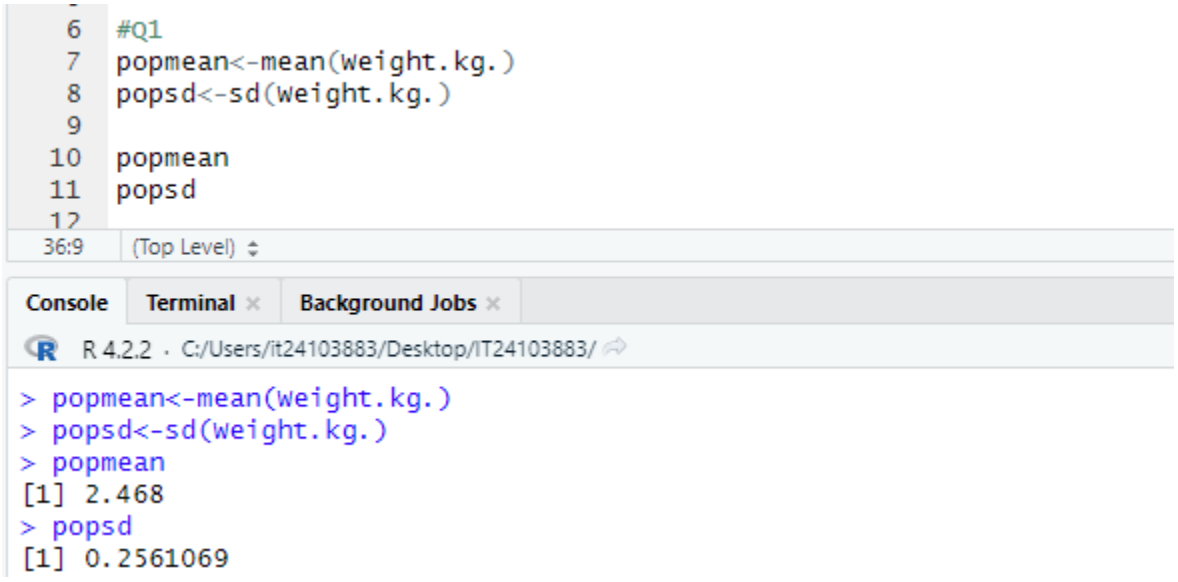

```r
#Q2
samples<-c()
n<-c()

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

colnames(samples)=n

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

s.means
s.sd
```

21:2 (Top Level)

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```
> samples<-c()
> n<-c()
> for(i in 1:25){
+   s<-sample(weight.kg.,6,replace=TRUE)
+   samples<-cbind(samples,s)
+   n<-c(n,paste('s',i,sep=''))
+ }
>
> colnames(samples)=n
>
> s.means<-apply(samples,2,mean)
> s.sd<-apply(samples,2,sd)
>
> s.means
```

```
> s.means
      s1       s2       s3       s4       s5       s6       s7       s8       s9      s10      s11      s12      s13      s14
2.550000 2.420000 2.425000 2.373333 2.378333 2.446667 2.540000 2.633333 2.418333 2.513333 2.478333 2.590000 2.433333 2.628333
     s15      s16      s17      s18      s19      s20      s21      s22      s23      s24      s25
2.288333 2.411667 2.638333 2.583333 2.566667 2.468333 2.320000 2.413333 2.560000 2.263333 2.591667
> s.sd
       s1        s2        s3        s4        s5        s6        s7        s8        s9       s10       s11       s12       s13
0.3361547 0.2841830 0.2943297 0.1585770 0.4078439 0.1630542 0.1523155 0.1812917 0.2331023 0.1036661 0.1092551 0.1581139 0.2086784
      s14       s15       s16       s17       s18       s19       s20       s21       s22       s23       s24       s25
0.1318206 0.3505662 0.2833667 0.2057588 0.1157008 0.2688246 0.4463369 0.2521904 0.2115341 0.2573713 0.3336865 0.2230172
```

```
31  #Q3
32  samplemean<-mean(s.means)
33  samplesd<-sd(s.means)
34
35  samplemean
36  samplesd
37  popmean
38  samplemean
39  popsd
40  samplesd
```

21:2 (Top Level)

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```
> #Q3
> samplemean<-mean(s.means)
> samplesd<-sd(s.means)
>
> samplemean
[1] 2.477333
> samplesd
[1] 0.1086161
>
> #State relationships (as asked in exercise)
> popmean
[1] 2.468
> samplemean
[1] 2.477333
> popsd
[1] 0.2561069
> samplesd
[1] 0.1086161
>
```