IT24104102

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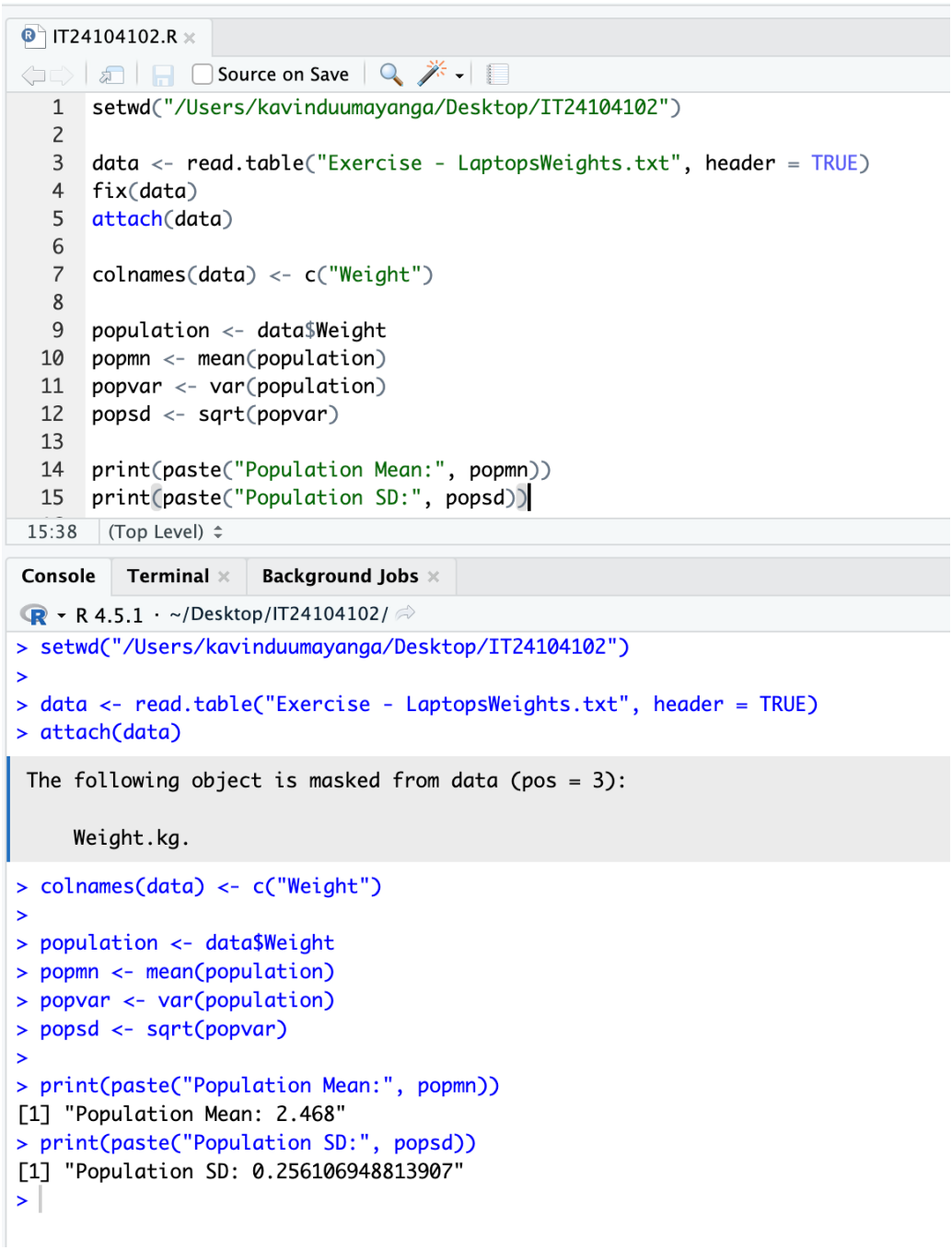
PSLabsheet 08

Q1)



Q2)

IT24104102.R

```
samples <- c()
n <- c()

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

colnames(samples) = n

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

print(paste("Sample Mean:", s.means))
print(paste("Sample SD:", s.sd))
```

15:38 (Top Level)

Console Terminal Background Jobs

R 4.5.1 · ~/Desktop/IT24104102/

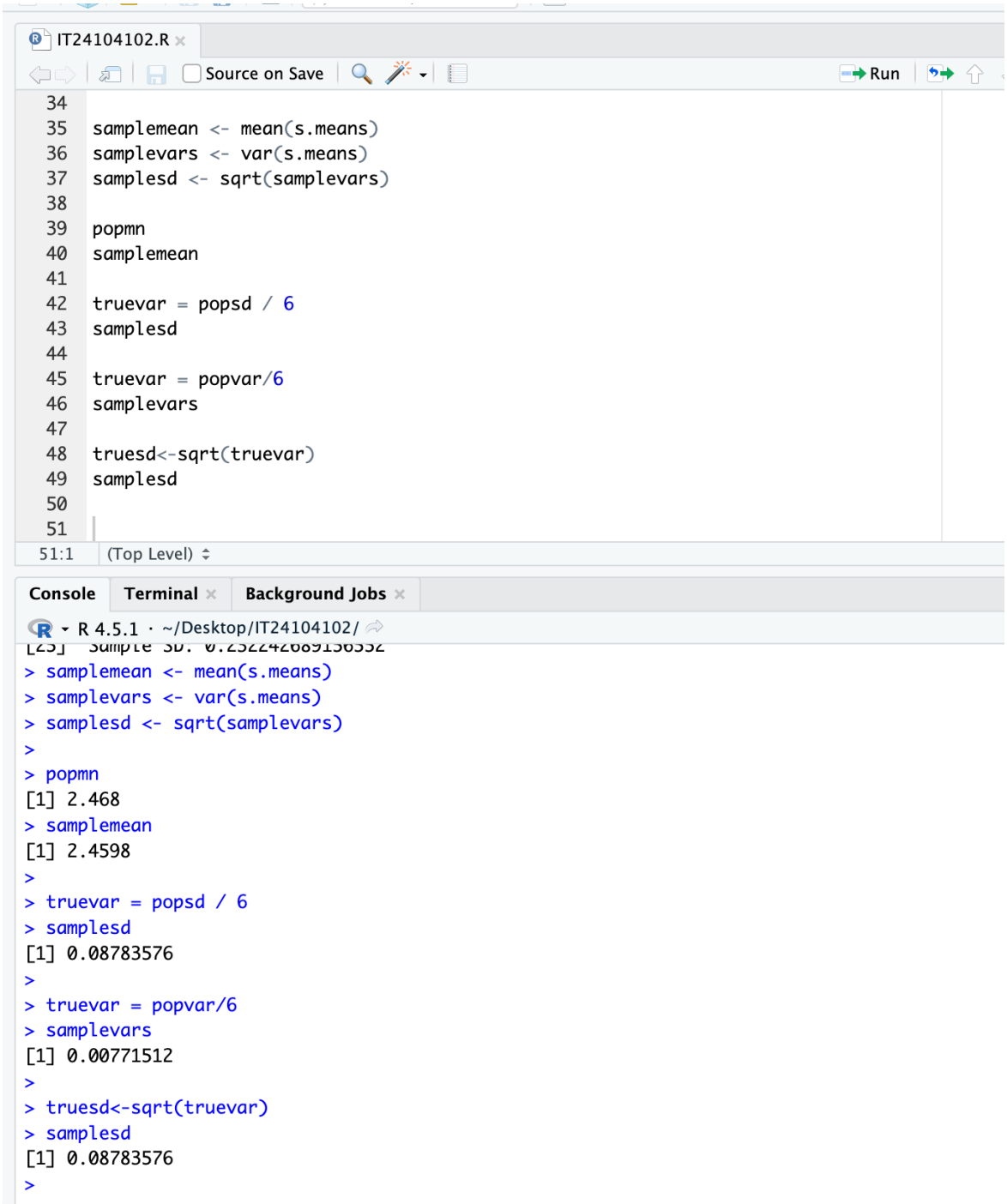
```
> samples <- c()
> n <- c()
>
> for (i in 1:25){
+   s <- sample(population, 6, replace = TRUE)
+   samples <- cbind(samples, s)
+   n <- c(n, paste('s',i))
+ }
>
> colnames(samples) = n
>
> s.means <- apply(samples, 2, mean)
> s.vars <- apply(samples, 2, var)
> s.sd <- sqrt(s.vars)
```

Console Terminal Background Jobs

R 4.5.1 · ~/Desktop/IT24104102/

```
>
> print(paste("Sample Mean:", s.means))
 [1] "Sample Mean: 2.40333333333333" "Sample Mean: 2.345"            "Sample Mean: 2.41166666666667"
 [4] "Sample Mean: 2.59333333333333" "Sample Mean: 2.47"             "Sample Mean: 2.445"
 [7] "Sample Mean: 2.445"            "Sample Mean: 2.455"            "Sample Mean: 2.53333333333333"
[10] "Sample Mean: 2.52666666666667" "Sample Mean: 2.51333333333333" "Sample Mean: 2.28833333333333"
[13] "Sample Mean: 2.615"            "Sample Mean: 2.45666666666667" "Sample Mean: 2.375"
[16] "Sample Mean: 2.485"            "Sample Mean: 2.395"            "Sample Mean: 2.44166666666667"
[19] "Sample Mean: 2.555"            "Sample Mean: 2.495"            "Sample Mean: 2.27166666666667"
[22] "Sample Mean: 2.52666666666667" "Sample Mean: 2.58333333333333" "Sample Mean: 2.39666666666667"
[25] "Sample Mean: 2.46833333333333"
> print(paste("Sample SD:", s.sd))
 [1] "Sample SD: 0.226598028823436"  "Sample SD: 0.317977986659454"  "Sample SD: 0.265888447787163"
 [4] "Sample SD: 0.0904802004123923" "Sample SD: 0.336035712387835"  "Sample SD: 0.12723993083934"
 [7] "Sample SD: 0.242960902204449"  "Sample SD: 0.205109726731815"  "Sample SD: 0.193769622662239"
[10] "Sample SD: 0.261814183471153"  "Sample SD: 0.205783057287685"  "Sample SD: 0.270437916473757"
[13] "Sample SD: 0.217692443598762"  "Sample SD: 0.156418242755334"  "Sample SD: 0.17603976823434"
[16] "Sample SD: 0.251376212080618"  "Sample SD: 0.341745519356143"  "Sample SD: 0.200241520835881"
[19] "Sample SD: 0.211163443805977"  "Sample SD: 0.277470719175916"  "Sample SD: 0.383323188271551"
[22] "Sample SD: 0.155263217365436"  "Sample SD: 0.152796160510226"  "Sample SD: 0.164641023644372"
[25] "Sample SD: 0.232242689156552"
>
```

Q3)


IT24104102.R
Source on Save
Run
34
35 samplemean <- mean(s.means)
36 samplevars <- var(s.means)
37 samplesd <- sqrt(samplevars)
38
39 popmn
40 samplemean
41
42 truevar = popsd / 6
43 samplesd
44
45 truevar = popvar/6
46 samplevars
47
48 truesd<-sqrt(truevar)
49 samplesd
50
51
51:1 (Top Level)
Console
Terminal
Background Jobs
R 4.5.1 · ~/Desktop/IT24104102/
> samplemean <- mean(s.means)
> samplevars <- var(s.means)
> samplesd <- sqrt(samplevars)
>
> popmn
[1] 2.468
> samplemean
[1] 2.4598
>
> truevar = popsd / 6
> samplesd
[1] 0.08783576
>
> truevar = popvar/6
> samplevars
[1] 0.00771512
>
> truesd<-sqrt(truevar)
> samplesd
[1] 0.08783576
>