Sri Lanka Institute of Information Technology

Lab Submission
Lab sheet No 09

IT24102615

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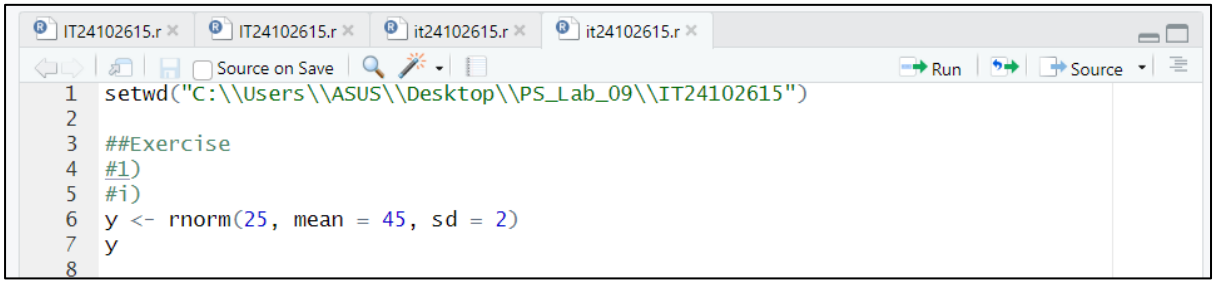
Probability and Statistics | IT2120

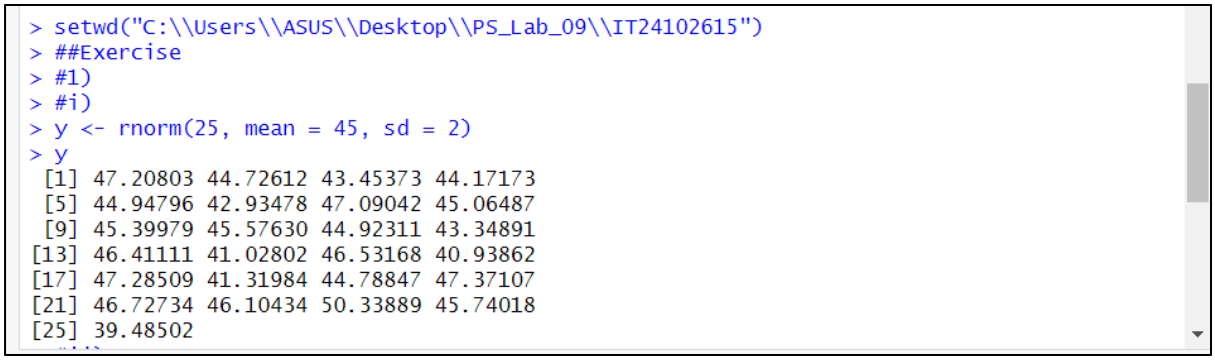
B.Sc. (Hons) in Information Technology

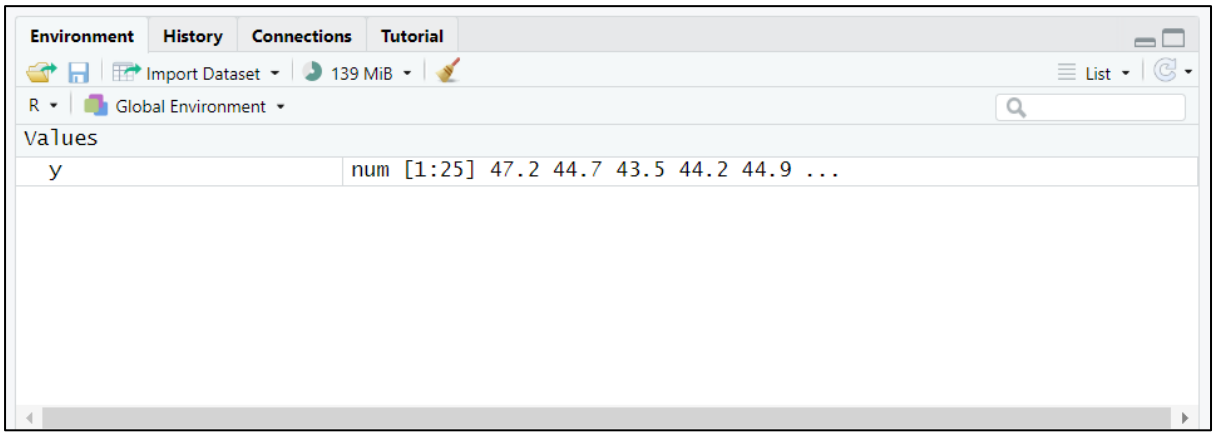
Exercise

1. Assume that the time taken to bake a batch of cookies is normally distributed with mean 45 minutes and standard deviation 2 minutes.

i. Generate a random sample of size 25 for the baking time.







ii. Test whether the average baking time is less than 46 minutes at a 5% level of significance.

```
 9  #ii)
10  t.test(y, mu=46, alternative="less")
11
```

```
> #ii)
> t.test(y, mu=46, alternative="less")

        One Sample t-test

data:  y
t = -2.2082, df = 24, p-value =
0.01852
alternative hypothesis: true mean is less than 46
95 percent confidence interval:
     -Inf 45.75602
sample estimates:
mean of x
 44.91662
```