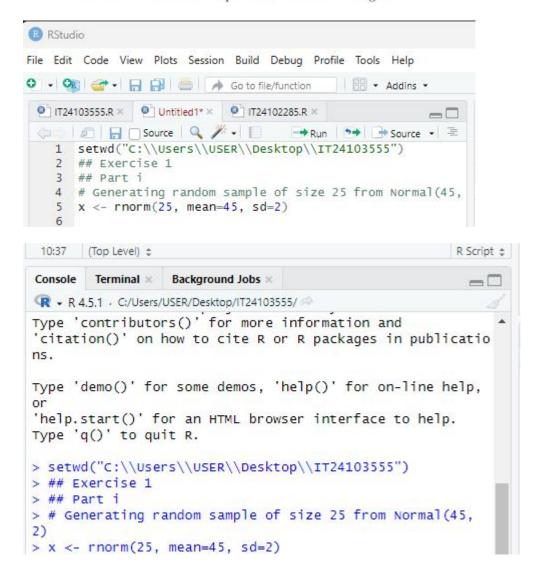
## IT2120 - Probability and Statistics Lab Sheet 09

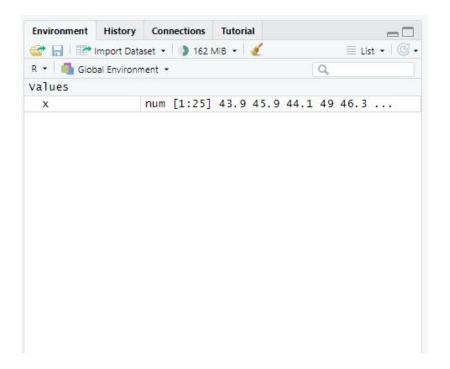
IT24103555 Senan R.A.D.T

## Exercise

Instructions: Create a folder in your desktop with your registration number (Eg: "IT......"). You need to save the R script file and take screenshots of the command prompt with answers and save it in a word document inside the folder. Save both R script file and word document with your registration number (Eg: "IT......."). After you finish the exercise, zip the folder and upload the zip file to the submission link.

- 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.





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

```
## Part ii
      # Hypothesis testing: HO: mu >= 46 vs H1: mu < 46
   9 # Using t-test at 5% level of significance
  10 t.test(x, mu=46, alternative="less")
 10:37 (Top Level) $
                                                                  R Script $
> ## Part ii
> # Hypothesis testing: HO: mu >= 46 vs H1: mu < 46
> # Using t-test at 5% level of significance
> t.test(x, mu=46, alternative="less")
        One Sample t-test
data: x
t = -1.829, df = 24, p-value = 0.03993
alternative hypothesis: true mean is less than 46
95 percent confidence interval:
    -Inf 45.95242
sample estimates:
mean of x
45.26319
```