

## **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.

```
> getwd()
[1] "C:/Users/fathi/OneDrive/Desktop/IT24103987"
> #random sample of size 25 for the baking time
> sample <- rnorm(25, mean =45, sd =2)
> # Test whether the average baking time is less than 46 minutes at a 5%
level of significance.
> t.test (sample, mu=46, alternative = "less")

      One Sample t-test

data:  sample
t = -2.4419, df = 24, p-value = 0.01118
alternative hypothesis: true mean is less than 46
95 percent confidence interval:
 -Inf 45.69418
sample estimates:
mean of x
 44.97842
```