

IT24100405

PS LAB – 09

Q1)

```
setwd("C:\\Users\\Victus\\OneDrive\\Desktop\\IT24100405")

#Exercise

#Q1
#i
# Generate 25 random baking times
set.seed(123) # for reproducibility
x <- rnorm(25, mean = 45, sd = 2)
x

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> # Generate 25 random baking times
> set.seed(123) # for reproducibility
> x <- rnorm(25, mean = 45, sd = 2)
> x
[1] 43.87905 44.53965 48.11742 45.14102 45.25858 48.43013 45.92183 42.46988
[9] 43.62629 44.10868 47.44816 45.71963 45.80154 45.22137 43.88832 48.57383
[17] 45.99570 41.06677 46.40271 44.05442 42.86435 44.56405 42.94799 43.54222
[25] 43.74992
```

Q2)

```
#ii
# Hypothesis test: H0: mu = 46 vs H1: mu < 46
t.test(x, mu = 46, alternative = "less")

data: x
t = -2.8167, df = 24, p-value = 0.004776
alternative hypothesis: true mean is less than 46
95 percent confidence interval:
 -Inf 45.58124
sample estimates:
mean of x
 44.03334
```

