

IT24101601

PS – Lab _ 9

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Exercise

```
> getwd()
[1] "C:/Users/user/Desktop/IT24101601_Lab9_PS"
> set.seed(123)
> sample_data <- rnorm(25, mean = 45, sd = 2)
> print(sample_data)
[1] 43.87905 44.53965 48.11742 45.14102 45.25858 48.43013 45.92183 42.46988 43.62629 44.10868 47.44816 45.71963 45.80154 4
5.22137
[15] 43.88832 48.57383 45.99570 41.06677 46.40271 44.05442 42.86435 44.56405 42.94799 43.54222 43.74992
```

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```

```
> t_test_result <- t.test(sample_data, mu = 46, alternative = "less")
> print(t_test_result)
```

One Sample t-test

```
data: sample_data
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
 44.93334
```