Sri Lanka Institute of Information Technology

Lab Submission
Worksheet No 09

IT24103858

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B.Sc. (Hons) in Information Technology

```
 1  setwd("C:\\Users\\Piyumi Samaraweera\\Downloads\\IT24103858")
 2  getwd()
 3
 4  #01
 5  sample_data <- rnorm(25, mean = 45, sd = 2)
 6  sample_data
 7
 8  #02
 9  t_test_result <- t.test(sample_data, mu = 46, alternative = "less", conf.level = 0.95)
10  t_test_result
11
12  t_test_result$statistic
13  t_test_result$p.value
14  t_test_result$conf.int
```

```
[Workspace loaded from ~/.RData]

> setwd("C:\\Users\\Piyumi Samaraweera\\Downloads\\IT24103858")
> getwd()
[1] "C:/Users/Piyumi Samaraweera/Downloads/IT24103858"
> #01
> sample_data <- rnorm(25, mean = 45, sd = 2)
> sample_data
 [1] 45.84047 45.10722 45.99055 45.07610 46.91239 45.00580 46.41656 46.88358 45.38775 43.78367 45.47805
[12] 43.75080 42.49433 43.33316 44.17513 46.40955 47.28685 42.84375 45.90676 44.58085 45.09302 46.20653
[23] 42.77709 45.05329 44.34115
> t_test_result <- t.test(sample_data, mu = 46, alternative = "less", conf.level = 0.95)
> t_test_result

        One Sample t-test

data:  sample_data
t = -3.5361, df = 24, p-value = 0.0008423
alternative hypothesis: true mean is less than 46
95 percent confidence interval:
    -Inf 45.50725
sample estimates:
mean of x
 45.04538

> t_test_result$statistic
        t
-3.536144
> t_test_result$p.value
[1] 0.0008423172
> t_test_result$conf.int
[1]      -Inf 45.50725
attr(,"conf.level")
[1] 0.95
>
```

Data	
⊙ t_test_result	List of 10
Values	
i	5L
max_ind	4L
max_index	4L
sample_data	num [1:25] 45.8 45.1 46 45.1 46.9 ...
vec	num [1:5] 10 45 23 99 56
x	num [1:3] 1 2 3