

Sri Lanka Institute of Information Technology



Lab Submission
Worksheet No 09

IT24103989

Gunarathna H.M.S.S

B.Sc. (Hons) in Information Technology

```

1 setwd("C:\\Users\\Sajan Gunarathna\\Downloads\\IT24103989")
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
15
16

```

```


> #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