IT24103497

PS

Lab_09

Script

```r
setwd("D:\\SLIIT\\2nd year\\PS\\Lab_Submission\\IT24103497\\Lab_09")
getwd()

#1
set.seed(123)
sample_data <- rnorm(25, mean = 45, sd = 2)
print("Random Sample: ")
print(sample_data)

#2
t_result <- t.test(sample_data, mu = 46, alternative = "less")
print("T-Test Result:")
print(t_result)
```

Console

```
> getwd()
[1] "D:/SLIIT/2nd year/PS/Lab_Submission/IT24103497/Lab_09"
> #1
> set.seed(123)
> sample_data <- rnorm(25, mean = 45, sd = 2)
> print("Random Sample: ")
[1] "Random Sample: "
> 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
[12] 45.71963 45.80154 45.22137 43.88832 48.57383 45.99570 41.06677 46.40271 44.05442 42.86435 44.56405
[23] 42.94799 43.54222 43.74992
> #2
> t_result <- t.test(sample_data, mu = 46, alternative = "less")
> print("T-Test Result:")
[1] "T-Test Result:"
> print(t_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

>
```