PS lab 9

```r
setwd("C:\\Users\\Venura Jayawardana\\Desktop\\IT24103508")
getwd()

# Part 1: Generate a random sample of size 25 from Normal(mean=45, sd=2)
baking_time <- rnorm(25, mean = 45, sd = 2)

# Part 2: One-sample t-test (left-tailed)
# H0: μ ≥ 46 vs H1: μ < 46
test_result <- t.test(baking_time, mu = 46, alternative = "less")

# Display results
print(test_result)
```

```
> setwd("C:\\Users\\Venura Jayawardana\\Desktop\\IT24103508")
> getwd()
[1] "C:/Users/Venura Jayawardana/Desktop/IT24103508"
>
> # Part 1: Generate a random sample of size 25 from Normal(mean=45, sd=2)
> baking_time <- rnorm(25, mean = 45, sd = 2)
>
> # Part 2: One-sample t-test (left-tailed)
> # H0: μ ≥ 46 vs H1: μ < 46
> test_result <- t.test(baking_time, mu = 46, alternative = "less")
>
> # Display results
> print(test_result)

        One Sample t-test

data:  baking_time
t = -1.7875, df = 24, p-value = 0.04324
alternative hypothesis: true mean is less than 46
95 percent confidence interval:
     -Inf 45.97421
sample estimates:
mean of x
 45.39845
```