

Scenario

Average purchase amount by the customers in the previous fiscal year was **USD 68**. We want to see whether the customers' average purchasing power increases compared to last year.

Hypothesis

H₀: There is no significant difference between the average purchase amount and 68.

H_a: There is a significant difference between the average purchase amount and 68.

Sig. Level

0.05 or 5%

Appropriate Test

One sample t-test

(If normality assumed)

Performing Test

```
from scipy import stats
```

```
hypothesis_mean = 68
```



```
t_statistic, p_value = stats.ttest_1samp(data['num_variable'], hypothesis_mean)
```

```
print("P-value:", p_value)
```

Decision & Conclusion

$\alpha = 0.05$

if $p_value < \alpha$:

print("Reject the null hypothesis. There is a significant difference between the average purchase amount and 68.")

else:

print("Fail to reject the null hypothesis. There is no significant difference between the average purchase amount and 68.")