Start coding or generate with AI.

Generate print hello world using rot13 Close

```
import numpy as np
import scipy.stats as stats
# Set a random seed for reproducibility
np.random.seed(42)
# Generate hypothetical sample data (IQ scores)
sample_size = 25
sample_data = np.random.normal(loc=102, scale=15,
size=sample_size) # Mean IQ of 102, SD of 15
# Population mean under the null hypothesis
population_mean = 100
# Calculate sample statistics
sample_mean = np.mean(sample_data)
sample_std = np.std(sample_data, ddof=1) # Using sample standard deviation
# Number of observations
n = len(sample_data)
# Calculate the T-statistic and p-value
t_statistic, p_value = stats.ttest_1samp(sample_data,
population_mean)
# Print results
print(f"Sample Mean: {sample_mean:.2f}")
print(f"T-Statistic: {t_statistic:.4f}")
print(f"P-Value: {p_value:.4f}")
# Decision based on the significance level
alpha = 0.05
if p_value < alpha:
  print("Reject the null hypothesis: The average IQ score is significantly different from 100.")
else:
  print("Fail to reject the null hypothesis: There is no significant difference in average IQ score from 100.")
```

```
Sample Mean: 99.55
T-Statistic: -0.1577
P-Value: 0.8760
Fail to reject the null hypothesis: There is no significant difference in average IQ score from 100.
```