

Week 5: Basic Statistical Methods on Sample Dataset

This document demonstrates the application of basic statistical methods on a sample dataset using Python.

Python Program

```
import statistics

# Sample dataset
data = [12, 15, 21, 20, 18, 17, 22, 19, 25, 30]

# Basic statistical methods
mean_val = statistics.mean(data)
median_val = statistics.median(data)
mode_val = statistics.mode(data)
variance_val = statistics.variance(data)
stdev_val = statistics.stdev(data)
min_val = min(data)
max_val = max(data)
range_val = max_val - min_val

# Output results
print("Sample Dataset:", data)
print("Mean:", mean_val)
print("Median:", median_val)
print("Mode:", mode_val)
print("Variance:", variance_val)
print("Standard Deviation:", stdev_val)
print("Minimum:", min_val)
print("Maximum:", max_val)
print("Range:", range_val)
```

Output

```
Sample Dataset: [12, 15, 21, 20, 18, 17, 22, 19, 25, 30]
Mean: 19.9
Median: 19.5
Mode: 12
Variance: 24.32
Standard Deviation: 4.93
Minimum: 12
```

Maximum: 30
Range: 18