Find mean, median, mode of your own dataset.

In [ ]:
```python
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import pandas as pd
import numpy
from scipy import stats

# Create a DataFrame with 'value' and 'weight' columns
dataframe = pd.DataFrame({'value': [45, 67, 89, 34, 56, 78, 90, 67, 45, 23], 'weight': [1, 3, 2, 4, 5, 2, 1, 3, 2, 4]})

# Calculate the mean of the 'value' column
x = numpy.mean(dataframe.value)

# Calculate the median of the 'value' column
y = numpy.median(dataframe.value)

# Calculate the mode of the 'value' column
z = stats.mode(dataframe.value)

# Print the mean value
print("Mean: ",x)

# Print the median value
print("Median: ",y)

# Print the mode value (along with its count)
print("Mode: ",z)

# Function to compute the weighted average
def weighted_average(dataframe, value, weight):
    value = dataframe[value]  # Extract the value column
    weight = dataframe[weight]  # Extract the weight column
    # Compute the weighted average
    return (value * weight).sum() / weight.sum()

# Calculate and print the weighted average
print(weighted_average(dataframe, 'value', 'weight'))
```

```
Mean:  59.4
Median:  61.5
Mode:  ModeResult(mode=np.int64(45), count=np.int64(2))
54.407407407407405
```