

Program (Ungrouped Data) :

```
import pandas as pd
from statistics import variance
from statistics import stdev

data = pd.read_csv('./Country Wise Gender.csv')[0:10]
# df = pd.DataFrame(data)

# mean median mode
print('\nComputation of Central Tendency')
print("\nMean of the Country Wise Gender Dataset")
print(data.mean())
print("\n*****")
print("\nMedian of the Country Wise Gender Dataset")
print(data.median())
print("\n*****")
print("\nMode of the Country Wise Gender Dataset")
print(data.mode())
print("\n*****")
print('\nComputation of Dispersion')
# range
print("\nRange: ")
range1 = data['2020 Male'].max() - data['2019 Male'].min()
range2 = data['2020 Female'].max() - data['2020 Male'].min()
print("Range of 2019: " + str(range1))
print("Range of 2020: " + str(range2))
print("\n*****")
# variance
print("\nVariance: ")
variance1 = variance(data['2019 Male'])
variance2 = variance(data['2020 Male'])
print("Variance of 2019: " + str(variance1))
print("Variance of 2020: " + str(variance2))
print("\n*****")
# standard deviation
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print("\nStandard Deviation: ")
std1 = stdev(data['2019 Male'])
std2 = stdev(data['2020 Male'])
print("Standard Deviation of 2019: " + str(std1))
print("Standard Deviation of 2020: " + str(std2))
print("\n*****")
print('\nSkewness of Dataset')
#skewness
skew1 = data['2020 Male'].skew()
skew2 = data['2020 Female'].skew()
print("Skewness of 2019: " + str(skew1))
print("Skewness of 2020: " + str(skew2))

```

Output (Ungrouped Data) :

Computation of Central Tendency

Mean of the Country Wise Gender Dataset

2014 Male	54.390
2014 Female	45.610
2015 Male	54.890
2015 Female	45.110
2016 Male	54.660
2016 Female	45.340
2017 Male	53.770
2017 Female	46.230
2018 Male	53.090
2018 Female	46.910
2019 Male	53.920
2019 Female	46.080
2020 Male	52.103
2020 Female	47.897

dtype: float64

Median of the Country Wise Gender Dataset

```

2014 Male      54.550
2014 Female    45.450
2015 Male      54.450
2015 Female    45.550
2016 Male      54.550
2016 Female    45.450
2017 Male      53.800
2017 Female    46.200
2018 Male      53.350
2018 Female    46.650
2019 Male      54.300
2019 Female    45.700
2020 Male      53.155
2020 Female    46.845

```

dtype: float64

Mode of the Country Wise Gender Dataset

	Country of Nationality	2014 Male	2014 Female	2015 Male	2015 Female \
0	Argentina	53.7	46.3	47.2	39.1
1	Austria	NaN	NaN	51.9	40.8
2	Belgium	NaN	NaN	53.8	42.8
3	Brazil	NaN	NaN	54.3	44.5
4	Canada	NaN	NaN	54.4	45.5
5	Denmark	NaN	NaN	54.5	45.6
6	Finland	NaN	NaN	55.5	45.7
7	France	NaN	NaN	57.2	46.2
8	Mexico	NaN	NaN	59.2	48.1
9	United States Of America	NaN	NaN	60.9	52.8

	2016 Male	2016 Female	2017 Male	2017 Female	2018 Male	2018 Female \
0	45.7	38.5	43.2	39.5	42.6	40.4
1	50.8	41.3	48.8	41.2	47.8	41.8
2	53.4	41.8	52.9	41.9	51.7	43.2
3	54.1	44.9	53.0	45.2	52.7	45.2
4	54.5	45.4	53.6	46.0	53.1	46.4
5	54.6	45.5	54.0	46.4	53.6	46.9
6	55.1	45.9	54.8	47.0	54.8	47.3
7	58.2	46.6	58.1	47.1	56.8	48.3
8	58.7	49.2	58.8	51.2	58.2	52.2
9	61.5	54.3	60.5	56.8	59.6	57.4

Computation of Dispersion

Range:

Range of 2019: 15.580000000000005

Range of 2020: 22.180000000000007

Variance:

Variance of 2019: 20.641777777777776

Variance of 2020: 34.958001111111112

Standard Deviation:

Standard Deviation of 2019: 4.543322328184274

Standard Deviation of 2020: 5.912529163658402

Skewness of Dataset

Skewness of 2019: -1.1064388117087678

Skewness of 2020: 1.1064388117087725