PROBLEM STATEMENT

8.Use per\_capita\_income.csv file to do the following instructions.

1. Sort it in the descending order of the income
2. Display the first five rows and last five rows.
3. Use the appropriate function to calculate the global mean of 'Income per Capita'.
4. Use the appropriate function to calculate the global median of 'Income per Capita'.
5. Using broadcasting, create a new column 'Income per Capita (,000)'equal to income['Income per Capita'] // 1000. Then use the appropriate function to calculate the mode for this new column.

***INPUT***

import pandas as pd

df=pd.read\_csv('D:\PES Notes\per\_capita\_income.csv')

print(df)

print()

df1=df.sort\_values("Income per Capita",ascending=False)

print(df1)

print()

df2=df.head()

print(df2)

print()

df3=df.tail()

print(df3)

print()

df4=df.median(axis=0,skipna=True)

print("The median of",df4)

print()

df5=df.mean(axis=0,skipna=True)

print("The mean of",df5)

print()

df['Income per Capita (,000)']=df['Income per Capita'].apply(lambda row:row//1000)

print(df)

print()

df5=df['Income per Capita (,000)'].mode()

print("The mode of the column Income per Capita (,000) is",df5)

***OUTPUT:-***

Country Income per Capita

0 Afghanistan 1925.165228

1 Albania 11479.087460

2 Algeria 14688.203300

3 Angola 7386.700843

4 Antigua and Barbuda 23062.278270

.. ... ...

179 Vietnam 6034.259949

180 West Bank and Gaza 5020.119619

181 Yemen, Rep. 2820.801870

182 Zambia 3835.503778

183 Zimbabwe 1786.583862

[184 rows x 2 columns]

Country Income per Capita

133 Qatar 141542.662800

97 Macao SAR, China 111496.629400

96 Luxembourg 102051.680300

144 Singapore 85382.302270

23 Brunei Darussalam 78369.291020

.. ... ...

121 Niger 955.483324

94 Liberia 835.366935

37 Congo, Dem. Rep. 784.365232

26 Burundi 727.150789

31 Central African Republic 618.752859

[184 rows x 2 columns]

Country Income per Capita

0 Afghanistan 1925.165228

1 Albania 11479.087460

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Country Income per Capita

179 Vietnam 6034.259949

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The median of Income per Capita 11620.93252

dtype: float64

The mean of Income per Capita 19469.419566

dtype: float64

Country Income per Capita Income per Capita (,000)

0 Afghanistan 1925.165228 1.0

1 Albania 11479.087460 11.0

2 Algeria 14688.203300 14.0

3 Angola 7386.700843 7.0

4 Antigua and Barbuda 23062.278270 23.0

.. ... ... ...

179 Vietnam 6034.259949 6.0

180 West Bank and Gaza 5020.119619 5.0

181 Yemen, Rep. 2820.801870 2.0

182 Zambia 3835.503778 3.0

183 Zimbabwe 1786.583862 1.0

[184 rows x 3 columns]

The mode of the column Income per Capita (,000) is 0 1.0

dtype: float64

>>>