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In [1]: import pandas as pd
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In [3]: pd.read_csv("C:\\Users\\Chibuzor Emmanson\\Downloads\\FoodBalanceSheets_E_Africa_NOFLAG.csv", encoding= "latin-1")
```

```
Out[3]:
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	Area Code	Area	Item Code	Item	Element Code	Element	Unit	Y2014	Y2015	Y2016	Y2017	Y2018
0	4	Algeria	2501	Population	511	Total Population - Both sexes	1000 persons	38924.00	39728.00	40551.00	41389.00	42228.00
1	4	Algeria	2501	Population	5301	Domestic supply quantity	1000 tonnes	0.00	0.00	0.00	0.00	0.00
2	4	Algeria	2901	Grand Total	664	Food supply (kcal/capita/day)	kcal/capita/day	3377.00	3379.00	3372.00	3341.00	3322.00
3	4	Algeria	2901	Grand Total	674	Protein supply quantity (g/capita/day)	g/capita/day	94.90	94.35	94.72	92.82	91.83
4	4	Algeria	2901	Grand Total	684	Fat supply quantity (g/capita/day)	g/capita/day	80.06	79.36	77.40	80.19	77.28
...
60938	181	Zimbabwe	2899	Miscellaneous	5142	Food	1000 tonnes	42.00	46.00	33.00	19.00	16.00
60939	181	Zimbabwe	2899	Miscellaneous	645	Food supply quantity (kg/capita/yr)	kg	3.06	3.33	2.35	1.33	1.08
60940	181	Zimbabwe	2899	Miscellaneous	664	Food supply (kcal/capita/day)	kcal/capita/day	3.00	4.00	3.00	1.00	1.00
60941	181	Zimbabwe	2899	Miscellaneous	674	Protein supply quantity (g/capita/day)	g/capita/day	0.10	0.11	0.08	0.04	0.04
60942	181	Zimbabwe	2899	Miscellaneous	684	Fat supply quantity (g/capita/day)	g/capita/day	0.04	0.05	0.03	0.02	0.01

60943 rows × 12 columns

```
In [4]: df=pd.read_csv("C:\\Users\\Chibuzor Emmanson\\Downloads\\FoodBalanceSheets_E_Africa_NOFLAG.csv", encoding= "latin-1")
```

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In [8]: df.groupby(['Item']).agg({'Y2015':'sum', 'Y2018':'sum'})
```

Out[8]:

	Y2015	Y2018
Item		
Alcohol, Non-Food	2180.00	2293.00
Alcoholic Beverages	98783.72	97847.27
Animal Products	11811.73	11578.61
Animal fats	200675.72	269648.27
Apples and products	10559.15	9640.51
...
Vegetables, Other	158104.08	163987.21
Vegetal Products	107064.17	107775.39
Wheat and products	234710.51	242645.19
Wine	4251.81	4039.32
Yams	203151.78	221272.09

119 rows × 2 columns

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In [9]: Distinctvalues= df.nunique()  
print(Distinctvalues)
```

Area Code	49
Area	49
Item Code	122
Item	119
Element Code	18
Element	18
Unit	5
Y2014	4493
Y2015	4520
Y2016	4520
Y2017	4537
Y2018	4591

dtype: int64

```
In [10]: df.groupby(['Element']).sum()
```

Out[10]:

	Area Code	Item Code	Element Code	Y2014	Y2015	Y2016	Y2017	Y2018
Element								
Domestic supply quantity	708993	14197445	28068795	1996716.35	2021493.55	2044842.70	2088198.10	2161192.10
Export Quantity	599910	11840553	26026133	150020.64	157614.47	151920.46	182338.80	181594.80
Fat supply quantity (g/capita/day)	675050	13535000	3435732	10225.56	10235.74	10102.77	10253.84	10258.69
Feed	176272	3538507	7282199	216927.89	225050.22	228958.65	223705.68	233489.68
Food	663295	13285035	25406622	1212332.49	1232361.10	1247022.17	1258888.28	1303841.28
Food supply (kcal/capita/day)	674057	13511060	3329296	454257.00	453383.00	451810.00	454681.00	455261.00
Food supply quantity (kg/capita/yr)	658446	13185401	3163725	49650.63	49345.13	48985.28	48690.04	49056.85
Import Quantity	688174	13795966	28834929	274144.48	267018.46	286582.78	294559.09	287997.09
Losses	274353	5424803	10292107	153223.00	155439.00	157787.00	160614.00	163902.00
Other uses (non-food)	235554	4729749	8926728	78718.13	66254.41	69563.68	91645.97	91300.97
Processing	271940	5350416	10313310	282923.00	287929.00	280631.00	292836.00	308429.00
Production	526751	10450053	21388191	1931287.75	1947019.39	1943537.15	2030056.89	2075072.89
Protein supply quantity (g/capita/day)	675050	13535000	3385502	11836.46	11833.95	11779.69	11842.45	11833.56
Residuals	623271	12421089	24066350	30149.00	30045.00	37224.00	35500.00	34864.00
Seed	103537	2035933	4211574	21922.92	23976.82	23389.20	24870.14	25263.14
Stock Variation	571566	11329527	21464704	58749.83	34910.99	33140.12	54316.91	20577.91
Total Population - Both sexes	6020	112545	22995	1031585.00	1058081.00	1085107.00	1112641.00	1140605.00
Tourist consumption	50308	1486528	2869905	416.00	349.00	89.00	91.00	90.00

In [11]: df.corr()

Out[11]:

	Area Code	Item Code	Element Code	Y2014	Y2015	Y2016	Y2017	Y2018
Area Code	1.000000	-0.005159	-0.000209	0.006164	0.005472	0.005247	0.005006	0.005665
Item Code	-0.005159	1.000000	-0.024683	0.021722	0.020857	0.020109	0.021494	0.021314
Element Code	-0.000209	-0.024683	1.000000	0.024457	0.023889	0.023444	0.024254	0.024279
Y2014	0.006164	0.021722	0.024457	1.000000	0.994647	0.996081	0.995230	0.994872
Y2015	0.005472	0.020857	0.023889	0.994647	1.000000	0.995739	0.988048	0.988208
Y2016	0.005247	0.020109	0.023444	0.996081	0.995739	1.000000	0.992785	0.992757
Y2017	0.005006	0.021494	0.024254	0.995230	0.988048	0.992785	1.000000	0.998103
Y2018	0.005665	0.021314	0.024279	0.994872	0.988208	0.992757	0.998103	1.000000

In []: