Assignment Pakistan's import export based on agriculture

In [ ]:
```
import pandas as pd
import seaborn as sns
import numpy as np
import matplotlib.pyplot as plt
```

In [ ]:
```
food=pd.read_csv(r'C:\Users\Haris Bin Tariq\Desktop\python_for_firsttime\pandas\foa.imp
food.head()
```

Out[ ]:

	Domain Code	Domain	Area Code (FAO)	Area	Element Code	Element	Item Code (FAO)	Item	Year Code	Year	Unit	Value	Fla
0	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2015	2015	tonnes	267.0	Na
1	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2016	2016	tonnes	76.0	Na
2	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2017	2017	tonnes	153.0	Na
3	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2018	2018	tonnes	74.0	Na
4	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2019	2019	tonnes	11.0	Na

In [ ]:
```
food.describe()
```

Out[ ]:

	Area Code (FAO)	Element Code	Item Code (FAO)	Year Code	Year	Value
count	3015.0	3015.000000	3015.000000	3015.000000	3015.000000	3.001000e+03
mean	165.0	5747.469320	544.021891	2017.456716	2017.456716	4.575915e+04
std	0.0	149.508776	345.229237	1.700941	1.700941	2.917279e+05
min	165.0	5607.000000	15.000000	2015.000000	2015.000000	0.000000e+00
25%	165.0	5610.000000	245.500000	2016.000000	2016.000000	1.900000e+01
50%	165.0	5610.000000	514.000000	2017.000000	2017.000000	3.190000e+02
75%	165.0	5910.000000	831.000000	2019.000000	2019.000000	4.291000e+03

	Area Code (FAO)	Element Code	Item Code (FAO)	Year Code	Year	Value
max	165.0	5910.000000	1296.000000	2020.000000	2020.000000	4.556024e+06

In [ ]:
```
#dropping few columns and make a new data set
new_food=food.drop(["Flag","Flag Description"],axis=1)
new_food
```

Out[ ]:

	Domain Code	Domain	Area Code (FAO)	Area	Element Code	Element	Item Code (FAO)	Item	Year Code	Year	Unit
0	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2015	2015	tonnes
1	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2016	2016	tonnes
2	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2017	2017	tonnes
3	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2018	2018	tonnes
4	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	862	Alfalfa meal and pellets	2019	2019	tonnes
...	...	...	...	...	...	...	...	...	...	...	...
3010	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	892	Yoghurt, concentrated or not	2019	2019	tonnes
3011	TCL	Crops and livestock products	165	Pakistan	5610	Import Quantity	892	Yoghurt, concentrated or not	2020	2020	tonnes
3012	TCL	Crops and livestock products	165	Pakistan	5910	Export Quantity	892	Yoghurt, concentrated or not	2015	2015	tonnes
3013	TCL	Crops and livestock products	165	Pakistan	5910	Export Quantity	892	Yoghurt, concentrated or not	2016	2016	tonnes

	Domain Code	Domain	Area Code (FAO)	Area	Element Code	Element	Item Code (FAO)	Item	Year Code	Year	Unit
3014	TCL	Crops and livestock products	165	Pakistan	5910	Export Quantity	892	Yoghurt, concentrated or not	2019	2019	tonnes

3015 rows × 12 columns

In [ ]:
```
new_food.mean()
```

Out[ ]:
```
C:\Users\HARISB~1\AppData\Local\Temp/ipykernel_15136/3497113411.py:1: FutureWarning: Dro
pping of nuisance columns in DataFrame reductions (with 'numeric_only=None') is deprecat
ed; in a future version this will raise TypeError.  Select only valid columns before cal
ling the reduction.
  new_food.mean()
Area Code (FAO)      165.000000
Element Code        5747.469320
Item Code (FAO)      544.021891
Year Code           2017.456716
Year                2017.456716
Value              45759.147951
dtype: float64
```

In [ ]:
```
new_food.groupby(["Year"]).mean()
```

Out[ ]:

Year	Area Code (FAO)	Element Code	Item Code (FAO)	Year Code	Value
2015	165.0	5746.650888	535.138067	2015.0	39509.884462
2016	165.0	5743.360687	539.841603	2016.0	38358.743243
2017	165.0	5745.588123	548.047893	2017.0	40651.179191
2018	165.0	5747.573441	556.386318	2018.0	51075.462777
2019	165.0	5750.203354	550.595388	2019.0	53957.278826
2020	165.0	5751.965164	534.415984	2020.0	52047.793033

In [ ]:
```
new_food.groupby(["Year","Element"]).mean()
```

Out[ ]:

Year	Element	Area Code (FAO)	Element Code	Item Code (FAO)	Year Code	Value
2015	**Export Quantity**	165.0	5909.969697	530.640693	2015.0	53522.206140
	Import Quantity	165.0	5609.960145	538.902174	2015.0	27849.996350
2016	**Export Quantity**	165.0	5909.965665	535.317597	2016.0	52616.061135

Year	Element	Area Code (FAO)	Element Code	Item Code (FAO)	Year Code	Value
	Import Quantity	165.0	5609.962199	543.463918	2016.0	27061.422145
2017	**Export Quantity**	165.0	5909.953390	553.512712	2017.0	48636.707627
	Import Quantity	165.0	5609.958042	543.538462	2017.0	33991.869258
2018	**Export Quantity**	165.0	5909.942982	561.912281	2018.0	66160.644737
	Import Quantity	165.0	5609.951673	551.702602	2018.0	38289.509294
2019	**Export Quantity**	165.0	5909.959641	541.098655	2019.0	67470.206278
	Import Quantity	165.0	5609.944882	558.933071	2019.0	42093.566929
2020	**Export Quantity**	165.0	5909.978355	517.930736	2020.0	51121.891775
	Import Quantity	165.0	5609.937743	549.233463	2020.0	52880.023346

In [ ]:
```
#Crops and livestock products that remain below 30000 in year 2015~2020
new_food[new_food["Value"]<30000].groupby(["Year","Element"]).mean()
```

Out[ ]:

Year	Element	Area Code (FAO)	Element Code	Item Code (FAO)	Year Code	Value
2015	**Export Quantity**	165.0	5909.980198	546.915842	2015.0	1825.514851
	Import Quantity	165.0	5609.955285	548.792683	2015.0	2667.300813
2016	**Export Quantity**	165.0	5909.975845	550.198068	2016.0	2001.869565
	Import Quantity	165.0	5609.957692	557.496154	2016.0	2622.573077
2017	**Export Quantity**	165.0	5909.962264	570.528302	2017.0	1744.188679
	Import Quantity	165.0	5609.964706	549.756863	2017.0	2827.925490
2018	**Export Quantity**	165.0	5909.950000	597.615000	2018.0	1878.305000
	Import Quantity	165.0	5609.967078	555.967078	2018.0	2785.465021
2019	**Export Quantity**	165.0	5909.969543	572.385787	2019.0	2307.487310
	Import Quantity	165.0	5609.951965	563.174672	2019.0	2764.000000
2020	**Export Quantity**	165.0	5909.990291	536.936893	2020.0	2377.941748
	Import Quantity	165.0	5609.943478	559.000000	2020.0	2722.604348

In [ ]:
```

```