FAO STAT

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

In [ ]:
```
df = pd.read_csv("FAOSTAT_data_2-2-2022.csv")
df.head(5)
```

Out[ ]:

	Domain Code	Domain	Area Code	Area	Element Code	Element	Item Code	Item	Year Code	Year	Unit	Value	Flag	Flag Description	Note
0	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2001	2001	1000 I$	1.8	F	FAO estimate	NaN
1	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2002	2002	1000 I$	4.9	F	FAO estimate	NaN
2	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2003	2003	1000 I$	6.5	F	FAO estimate	NaN
3	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2004	2004	1000 I$	5.7	F	FAO estimate	NaN
4	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2005	2005	1000 I$	4.1	F	FAO estimate	NaN

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

Out[ ]:

	Area Code	Element Code	Item Code	Year Code	Year	Value	Note
count	17.0	17.0	17.0	17.000000	17.000000	17.000000	0.0
mean	165.0	6127.0	21030.0	2009.000000	2009.000000	3.841176	NaN
std	0.0	0.0	0.0	5.049752	5.049752	1.104569	NaN
min	165.0	6127.0	21030.0	2001.000000	2001.000000	1.800000	NaN
25%	165.0	6127.0	21030.0	2005.000000	2005.000000	3.300000	NaN
50%	165.0	6127.0	21030.0	2009.000000	2009.000000	3.700000	NaN
75%	165.0	6127.0	21030.0	2013.000000	2013.000000	4.100000	NaN
max	165.0	6127.0	21030.0	2017.000000	2017.000000	6.500000	NaN

In [ ]:
```
new_df=df.drop(["Flag","Flag Description","Note"],axis=1)
new_df.head(5)
```

Out[ ]:

	Domain Code	Domain	Area Code	Area	Element Code	Element	Item Code	Item	Year Code	Year	Unit	Value
0	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2001	2001	1000 I$	1.8
1	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2002	2002	1000 I$	4.9
2	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2003	2003	1000 I$	6.5
3	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2004	2004	1000 I$	5.7
4	FS	Suite of Food Security Indicators	165	Pakistan	6127	Value	21030	Per capita food production variability (consta...	2005	2005	1000 I$	4.1

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

```
C:\Users\M6205~1.TAN\AppData\Local\Temp/ipykernel_3440/3764789720.py:1: FutureWarning: Dropping of nuisance columns in DataFrame reductions (with 'numeric_only=None') is deprecated; in a future version this will raise TypeError.  Select only valid columns before calling the reduction.
  new_df.mean()
```

Out[ ]:
```
Area Code         165.000000
Element Code     6127.000000
Item Code       21030.000000
Year Code        2009.000000
Year             2009.000000
Value               3.841176
dtype: float64
```

In [ ]:
```
new_df.groupby(["Year","Value"]).mean()
```

Out[ ]:

		Area Code	Element Code	Item Code	Year Code
Year	**Value**				
2001	**1.8**	165.0	6127.0	21030.0	2001.0
2002	**4.9**	165.0	6127.0	21030.0	2002.0
2003	**6.5**	165.0	6127.0	21030.0	2003.0
2004	**5.7**	165.0	6127.0	21030.0	2004.0
2005	**4.1**	165.0	6127.0	21030.0	2005.0
2006	**3.1**	165.0	6127.0	21030.0	2006.0
2007	**3.6**	165.0	6127.0	21030.0	2007.0
2008	**4.0**	165.0	6127.0	21030.0	2008.0
2009	**4.1**	165.0	6127.0	21030.0	2009.0
2010	**3.3**	165.0	6127.0	21030.0	2010.0
2011	**3.7**	165.0	6127.0	21030.0	2011.0
2012	**3.3**	165.0	6127.0	21030.0	2012.0
2013	**3.8**	165.0	6127.0	21030.0	2013.0
2014	**3.6**	165.0	6127.0	21030.0	2014.0
2015	**3.2**	165.0	6127.0	21030.0	2015.0
2016	**2.5**	165.0	6127.0	21030.0	2016.0
2017	**4.1**	165.0	6127.0	21030.0	2017.0

In [ ]:
```
new_df.value_counts('Year Code')
```

Out[ ]:
```
Year Code
2001    1
2010    1
2016    1
2015    1
2014    1
2013    1
2012    1
2011    1
2009    1
2002    1
2008    1
2007    1
2006    1
2005    1
2004    1
2003    1
2017    1
dtype: int64
```

In [ ]:
```
new_df[new_df["Year"]>2008].groupby(["Value","Item Code"]).mean()
```

Out[ ]:

		Area Code	Element Code	Year Code	Year
Value	**Item Code**				
2.5	**21030**	165.0	6127.0	2016.0	2016.0
3.2	**21030**	165.0	6127.0	2015.0	2015.0
3.3	**21030**	165.0	6127.0	2011.0	2011.0
3.6	**21030**	165.0	6127.0	2014.0	2014.0
3.7	**21030**	165.0	6127.0	2011.0	2011.0
3.8	**21030**	165.0	6127.0	2013.0	2013.0
4.1	**21030**	165.0	6127.0	2013.0	2013.0

In [ ]:
```
```