In [1]:
```
import pandas as pd
```

In [2]:
```
walmart = pd.read_csv(r'D:\DS\Py\Datasets\Projects\Walmart_Store_sales.csv')
walmart
```

Out[2]:

	Store	Date	Weekly_Sales	Holiday_Flag	Temperature	Fuel_Price	CPI	Unemployment
0	1	05-02-2010	1643690.90	0	42.31	2.572	211.096358	8.106
1	1	12-02-2010	1641957.44	1	38.51	2.548	211.242170	8.106
2	1	19-02-2010	1611968.17	0	39.93	2.514	211.289143	8.106
3	1	26-02-2010	1409727.59	0	46.63	2.561	211.319643	8.106
4	1	05-03-2010	1554806.68	0	46.50	2.625	211.350143	8.106
...	...	...	...	...	...	...	...	...
6430	45	28-09-2012	713173.95	0	64.88	3.997	192.013558	8.684
6431	45	05-10-2012	733455.07	0	64.89	3.985	192.170412	8.667
6432	45	12-10-2012	734464.36	0	54.47	4.000	192.327265	8.667
6433	45	19-10-2012	718125.53	0	56.47	3.969	192.330854	8.667
6434	45	26-10-2012	760281.43	0	58.85	3.882	192.308899	8.667

6435 rows × 8 columns

In [3]:
```
walmart.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 6435 entries, 0 to 6434
Data columns (total 8 columns):
 #   Column        Non-Null Count  Dtype  
---  ------        --------------  -----  
 0   Store         6435 non-null   int64  
 1   Date          6435 non-null   object 
 2   Weekly_Sales  6435 non-null   float64
 3   Holiday_Flag  6435 non-null   int64  
 4   Temperature   6435 non-null   float64
 5   Fuel_Price    6435 non-null   float64
 6   CPI           6435 non-null   float64
 7   Unemployment  6435 non-null   float64
dtypes: float64(5), int64(2), object(1)
memory usage: 402.3+ KB
```

In [4]:
```
walmart['Date'] = pd.to_datetime(walmart['Date'])
walmart.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 6435 entries, 0 to 6434
Data columns (total 8 columns):
 #   Column        Non-Null Count  Dtype         
---  ------        --------------  -----         
 0   Store         6435 non-null   int64         
 1   Date          6435 non-null   datetime64[ns]
 2   Weekly_Sales  6435 non-null   float64       
 3   Holiday_Flag  6435 non-null   int64         
 4   Temperature   6435 non-null   float64       
 5   Fuel_Price    6435 non-null   float64       
 6   CPI           6435 non-null   float64       
 7   Unemployment  6435 non-null   float64       
dtypes: datetime64[ns](1), float64(5), int64(2)
memory usage: 402.3 KB
```

In [5]:
```
walmart.isna().sum()/len(walmart)
```

Out[5]:
```
Store           0.0
Date            0.0
Weekly_Sales    0.0
Holiday_Flag    0.0
Temperature     0.0
Fuel_Price      0.0
CPI             0.0
Unemployment    0.0
dtype: float64
```

In [6]:
```
sales = walmart.groupby(by='Store')['Weekly_Sales'].sum()
print('Store {} has maximum sales with total sales of {}'.format(sales.idxmax(),sales.max()))
```

```
Store 20 has maximum sales with total sales of 301397792.46000004
```

In [7]:
```
stdev = walmart.groupby(by='Store')['Weekly_Sales'].std()
print('Store {} has maximum standard deviation of {}'.format(stdev.idxmax(),stdev.max()))
```

```
Store 14 has maximum standard deviation of 317569.9494755081
```

In [8]:
```
stdev = stdev.to_frame()
```

In [9]:
```
mean = walmart.groupby(by='Store')['Weekly_Sales'].mean()
mean = mean.to_frame()
```

In [12]:
```
coeff_of_var = stdev/mean*100
coeff_of_var
```

Out[12]:

	Weekly_Sales
Store	
1	10.029212
2	12.342388
3	11.502141
4	12.708254
5	11.866844
6	13.582286
7	19.730469
8	11.695283
9	12.689547
10	15.913349
11	12.226183
12	13.792532
13	13.251363
14	15.713674
15	19.338399
16	16.518065
17	12.552067
18	16.284550
19	13.268012
20	13.090269
21	17.029239
22	15.678288
23	17.972115
24	12.363738
25	15.986040
26	11.011066
27	13.515544
28	13.732974
29	18.374247
30	5.200804
31	9.016105
32	11.831049
33	9.286835
34	10.822524
35	22.968111
36	16.257891
37	4.208412
38	11.087545
39	14.990779
40	12.342978
41	14.817711
42	9.033533
43	6.410363
44	8.179331
45	16.561273

In [13]:
```
good = coeff_of_var[coeff_of_var['Weekly_Sales']<=10]
good
```

Out[13]:

	Weekly_Sales
Store	
30	5.200804
31	9.016105
33	9.286835
37	4.208412
42	9.033533
43	6.410363
44	8.179331

In [117]:
```
walmart
```

Out[117]:

	Store	Date	Weekly_Sales	Holiday_Flag	Temperature	Fuel_Price	CPI	Unemployment
0	1	2010-05-02	1643690.90	0	42.31	2.572	211.096358	8.106
1	1	2010-12-02	1641957.44	1	38.51	2.548	211.242170	8.106
2	1	2010-02-19	1611968.17	0	39.93	2.514	211.289143	8.106
3	1	2010-02-26	1409727.59	0	46.63	2.561	211.319643	8.106
4	1	2010-05-03	1554806.68	0	46.50	2.625	211.350143	8.106
...	...	...	...	...	...	...	...	...
6430	45	2012-09-28	713173.95	0	64.88	3.997	192.013558	8.684
6431	45	2012-05-10	733455.07	0	64.89	3.985	192.170412	8.667
6432	45	2012-12-10	734464.36	0	54.47	4.000	192.327265	8.667
6433	45	2012-10-19	718125.53	0	56.47	3.969	192.330854	8.667
6434	45	2012-10-26	760281.43	0	58.85	3.882	192.308899	8.667

6435 rows × 8 columns

In [25]:
```
walmart_Q3_2012 = walmart[(walmart['Date']>'2012-07-01') & (walmart['Date']<'2012-09-30')]
walmart_Q3_2012
walmart_data_growth = walmart_Q3_2012.groupby(['Store'])['Weekly_Sales'].sum()
walmart_data_growth
```

Out[25]:
```
Store
1     18633209.98
2     22396867.61
3      4966495.93
4     25652119.35
5      3880621.88
6     18341221.11
7      7322393.92
8     10873860.34
9      6528239.56
10    21169356.45
11    16094363.07
12    11777508.50
13    24319994.35
14    20140430.40
15     6909374.37
16     6441311.11
17    11533998.38
18    12507521.72
19    16644341.31
20    24665938.11
21     8403507.99
22    11818544.33
23    17103654.36
24    16125999.86
25     8309440.44
26    12417575.35
27    20191238.11
28    15055659.67
29     6127862.07
30     5181974.44
31    16454328.46
32    14142164.84
33     3177072.43
34    11476258.98
35    10252122.68
36     3578123.58
37     6250524.08
38     5129297.64
39    18899955.17
40    11647661.37
41    16373584.84
42     6830839.86
43     7376726.03
44     4022486.01
45     8851242.32
Name: Weekly_Sales, dtype: float64
```