Indexing & Slicing Dataframes in Pandas

head() --> is used to get first 5 rows

head(no:of rows) --> first required no:of rows will be displayed.

tail() --> is used to get last 5 rows

tail(no:of rows) --> last required no:of rows will be displayed.

describe() --> count, min, max, std, avg, 75%, 25%

shape --> no:of rows or no:of columns

[start:stop:step] --> slicing

0 max length 1 --> default

data_frame['column_name'] - single column can get

data_frame[[col1,col2]] - multiple columns canget

data_frame[[col1,col2]][start:stop:step]

for index,row in df.iterrows(): print(index,row)

df.loc[1] --> row --> single row

df.loc[df[col_name]=='val'] --> to get a particular row value

In [3]:
```
import pandas as pd
d = pd.read_csv(r"C:\\Users\\mouni\\Desktop\\whole folder\\Sales_Data.csv")
df = pd.DataFrame(d)
df
```

Out[3]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	...
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [2]:
```
df.columns
```

Out[2]:
```
Index(['Region', 'Country', 'Item_Type', 'Sales_Channel', 'Order_Priority',
       'Order_Date', 'Order_ID', 'Ship_Date', 'Units_Sold',
       'Unit_SellingPrice', 'Unit_MakingCost', 'Total_Revenue', 'Total_Cost',
       'Total_Profit'],
      dtype='object')
```

In [3]:
```
df.shape
```

Out[3]:
```
(5000, 14)
```

In [4]:
```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 5000 entries, 0 to 4999
Data columns (total 14 columns):
 #   Column             Non-Null Count  Dtype  
---  ------             --------------  -----  
 0   Region             5000 non-null   object 
 1   Country            5000 non-null   object 
 2   Item_Type          4989 non-null   object 
 3   Sales_Channel      5000 non-null   object 
 4   Order_Priority     5000 non-null   object 
 5   Order_Date         5000 non-null   object 
 6   Order_ID           4997 non-null   float64
 7   Ship_Date          5000 non-null   object 
 8   Units_Sold         5000 non-null   int64  
 9   Unit_SellingPrice  5000 non-null   float64
 10  Unit_MakingCost    5000 non-null   float64
 11  Total_Revenue      5000 non-null   float64
 12  Total_Cost         5000 non-null   float64
 13  Total_Profit       5000 non-null   float64
dtypes: float64(6), int64(1), object(7)
memory usage: 547.0+ KB
```

In [5]:
```
df.head()
```

Out[5]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_Sellin
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	

In [6]:
```
df.head(10)
```

Out[6]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_Se
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
5	Middle East and North Africa	Morocco	Personal Care	Offline	L	11-08-2010	412882792.0	11-22-2010	0	
6	Australia and Oceania	Federated States of Micronesia	Clothes	Offline	H	3-28-2011	932776868.0	05-10-2011	0	
7	Europe	Bosnia and Herzegovina	Clothes	Online	M	10-14-2013	919133651.0	11-04-2013	0	
8	Middle East and North Africa	Afghanistan	Clothes	Offline	M	8-27-2016	579814469.0	10-05-2016	0	
9	Sub-Saharan Africa	Ethiopia	Baby Food	Online	M	4-13-2015	192993152.0	05-07-2015	0	

In [7]:
```
df.tail()
```

Out[7]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

In [8]:
```
df.tail(10)
```

Out[8]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
4990	Europe	Ukraine	NaN	Offline	L	4-14-2014	559183347.0	5-21-2014	0	
4991	Europe	Armenia	Meat	Offline	M	11-09-2015	781416594.0	12-23-2015	0	
4992	Middle East and North Africa	Iran	Clothes	Offline	L	07-11-2014	927583253.0	8-30-2014	0	
4993	Europe	Denmark	Clothes	Offline	H	05-09-2012	713357150.0	06-03-2012	0	
4994	Sub-Saharan Africa	Liberia	Cosmetics	Offline	M	6-17-2012	374724614.0	6-23-2012	0	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

In [9]:
```
df.describe()
```

Out[9]:

	Order_ID	Units_Sold	Unit_SellingPrice	Unit_MakingCost	Total_Revenue	Total_Cost	Total_Profit
count	4.997000e+03	5000.0	5000.000000	5000.000000	5.000000e+03	5.000000e+03	5.000000e+03
mean	5.485477e+08	0.0	265.745564	187.494144	1.325738e+06	9.330932e+05	3.926446e+05
std	2.593781e+08	0.0	218.716695	176.416280	1.475375e+06	1.150873e+06	3.829351e+05
min	1.000909e+08	0.0	9.330000	6.920000	6.531000e+01	4.844000e+01	1.687000e+01
25%	3.201058e+08	0.0	81.730000	35.840000	2.574168e+05	1.547480e+05	8.533925e+04
50%	5.522766e+08	0.0	154.060000	97.440000	7.794095e+05	4.681807e+05	2.790952e+05
75%	7.686763e+08	0.0	437.200000	263.330000	1.839975e+06	1.189578e+06	5.651064e+05
max	9.998797e+08	0.0	668.270000	524.960000	6.672676e+06	5.248025e+06	1.726007e+06

In [10]:
```
df.Order_ID
```

Out[10]:
```
0       957081544.0
1       301644504.0
2       478051030.0
3       892599952.0
4       571902596.0
           ...
4995    217984473.0
4996    169748055.0
4997            NaN
4998            NaN
4999            NaN
Name: Order_ID, Length: 5000, dtype: float64
```

In [11]:
```
df['Order_ID']
```

Out[11]:
```
0       957081544.0
1       301644504.0
2       478051030.0
3       892599952.0
4       571902596.0
           ...
4995    217984473.0
4996    169748055.0
4997            NaN
4998            NaN
4999            NaN
Name: Order_ID, Length: 5000, dtype: float64
```

In [12]:
```
df['Order_ID'].head()
```

Out[12]:
```
0    957081544.0
1    301644504.0
2    478051030.0
3    892599952.0
4    571902596.0
Name: Order_ID, dtype: float64
```

In [13]:
```
df[['Item_Type','Total_Profit']]
```

Out[13]:

	Item_Type	Total_Profit
0	Baby Food	52914.72
1	Snacks	119488.38
2	Beverages	74823.48
3	Cereal	798727.44
4	Snacks	415865.88
...	...	...
4995	Household	879197.65
4996	Clothes	79094.88
4997	Baby Food	498855.44
4998	Clothes	691070.40
4999	Vegetables	154668.50

5000 rows × 2 columns

In [14]:
```
df[['Item_Type','Total_Profit']].head()
```

Out[14]:

	Item_Type	Total_Profit
0	Baby Food	52914.72
1	Snacks	119488.38
2	Beverages	74823.48
3	Cereal	798727.44
4	Snacks	415865.88

In [15]:
```
df[['Item_Type','Total_Profit']].head(5)
```

Out[15]:

	Item_Type	Total_Profit
0	Baby Food	52914.72
1	Snacks	119488.38
2	Beverages	74823.48
3	Cereal	798727.44
4	Snacks	415865.88

In [16]:
```
df[['Item_Type','Total_Profit']].head(10)
```

Out[16]:

	Item_Type	Total_Profit
0	Baby Food	52914.72
1	Snacks	119488.38
2	Beverages	74823.48
3	Cereal	798727.44
4	Snacks	415865.88
5	Personal Care	1202.88
6	Clothes	606467.52
7	Clothes	68078.88
8	Clothes	649283.04
9	Baby Food	941057.62

In [17]:
```
df[['Item_Type','Total_Profit']].tail()
```

Out[17]:

	Item_Type	Total_Profit
4995	Household	879197.65
4996	Clothes	79094.88
4997	Baby Food	498855.44
4998	Clothes	691070.40
4999	Vegetables	154668.50

In [18]:
```
df[['Item_Type','Total_Profit']].tail(10)
```

Out[18]:

	Item_Type	Total_Profit
4990	NaN	321847.47
4991	Meat	422708.00
4992	Clothes	99290.88
4993	Clothes	520542.72
4994	Cosmetics	1424864.65
4995	Household	879197.65
4996	Clothes	79094.88
4997	Baby Food	498855.44
4998	Clothes	691070.40
4999	Vegetables	154668.50

In [19]:
```
df[1:10]
```

Out[19]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_Se
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
5	Middle East and North Africa	Morocco	Personal Care	Offline	L	11-08-2010	412882792.0	11-22-2010	0	
6	Australia and Oceania	Federated States of Micronesia	Clothes	Offline	H	3-28-2011	932776868.0	05-10-2011	0	
7	Europe	Bosnia and Herzegovina	Clothes	Online	M	10-14-2013	919133651.0	11-04-2013	0	
8	Middle East and North Africa	Afghanistan	Clothes	Offline	M	8-27-2016	579814469.0	10-05-2016	0	
9	Sub-Saharan Africa	Ethiopia	Baby Food	Online	M	4-13-2015	192993152.0	05-07-2015	0	

In [20]:
```
df[1:20:1]
```

Out[20]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
5	Middle East and North Africa	Morocco	Personal Care	Offline	L	11-08-2010	412882792.0	11-22-2010	0	
6	Australia and Oceania	Federated States of Micronesia	Clothes	Offline	H	3-28-2011	932776868.0	05-10-2011	0	
7	Europe	Bosnia and Herzegovina	Clothes	Online	M	10-14-2013	919133651.0	11-04-2013	0	
8	Middle East and North Africa	Afghanistan	Clothes	Offline	M	8-27-2016	579814469.0	10-05-2016	0	
9	Sub-Saharan Africa	Ethiopia	Baby Food	Online	M	4-13-2015	192993152.0	05-07-2015	0	
10	Middle East and North Africa	Turkey	Office Supplies	Offline	C	9-25-2013	557156026.0	10-15-2013	0	
11	Middle East and North Africa	Oman	Cosmetics	Online	M	05-12-2013	741101920.0	5-17-2013	0	
12	Asia	Malaysia	Cereal	Offline	L	7-31-2016	333942162.0	8-25-2016	0	
13	Central America and the Caribbean	Saint Lucia	Cosmetics	Offline	H	07-06-2015	795100581.0	7-16-2015	0	
14	Central America and the Caribbean	Saint Vincent and the Grenadines	Baby Food	Online	L	11-28-2010	504313504.0	12-03-2010	0	
15	Middle East and North Africa	Lebanon	Meat	Offline	H	12-17-2015	611629760.0	1-31-2016	0	
16	Europe	Austria	Cereal	Offline	C	8-13-2014	987410676.0	09-06-2014	0	
17	Europe	Bulgaria	Office Supplies	Online	L	10-31-2010	672330081.0	11-29-2010	0	
18	North America	Mexico	Beverages	Online	C	3-13-2017	127374303.0	3-20-2017	0	
19	Central America and the Caribbean	Trinidad and Tobago	Baby Food	Offline	C	4-16-2013	783842170.0	06-01-2013	0	

In [21]:
```
df[1:30:2]
```

Out[21]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
5	Middle East and North Africa	Morocco	Personal Care	Offline	L	11-08-2010	412882792.0	11-22-2010	0	
7	Europe	Bosnia and Herzegovina	Clothes	Online	M	10-14-2013	919133651.0	11-04-2013	0	
9	Sub-Saharan Africa	Ethiopia	Baby Food	Online	M	4-13-2015	192993152.0	05-07-2015	0	
11	Middle East and North Africa	Oman	Cosmetics	Online	M	05-12-2013	741101920.0	5-17-2013	0	
13	Central America and the Caribbean	Saint Lucia	Cosmetics	Offline	H	07-06-2015	795100581.0	7-16-2015	0	
15	Middle East and North Africa	Lebanon	Meat	Offline	H	12-17-2015	611629760.0	1-31-2016	0	
17	Europe	Bulgaria	Office Supplies	Online	L	10-31-2010	672330081.0	11-29-2010	0	
19	Central America and the Caribbean	Trinidad and Tobago	Baby Food	Offline	C	4-16-2013	783842170.0	06-01-2013	0	
21	Middle East and North Africa	Algeria	Baby Food	Offline	M	09-05-2015	977806651.0	10-14-2015	0	
23	Australia and Oceania	Tuvalu	Beverages	Offline	L	3-22-2012	610864150.0	04-07-2012	0	
25	Central America and the Caribbean	Cuba	Cereal	Online	H	3-13-2014	164655292.0	05-01-2014	0	
27	Central America and the Caribbean	Guatemala	Office Supplies	Online	M	1-17-2012	345820701.0	02-01-2012	0	
29	Australia and Oceania	Vanuatu	Snacks	Online	C	04-01-2013	286001002.0	4-15-2013	0	

In [22]:
```
df[1:50:4]
```

Out[22]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
5	Middle East and North Africa	Morocco	Personal Care	Offline	L	11-08-2010	412882792.0	11-22-2010	0	
9	Sub-Saharan Africa	Ethiopia	Baby Food	Online	M	4-13-2015	192993152.0	05-07-2015	0	
13	Central America and the Caribbean	Saint Lucia	Cosmetics	Offline	H	07-06-2015	795100581.0	7-16-2015	0	
17	Europe	Bulgaria	Office Supplies	Online	L	10-31-2010	672330081.0	11-29-2010	0	
21	Middle East and North Africa	Algeria	Baby Food	Offline	M	09-05-2015	977806651.0	10-14-2015	0	
25	Central America and the Caribbean	Cuba	Cereal	Online	H	3-13-2014	164655292.0	05-01-2014	0	
29	Australia and Oceania	Vanuatu	Snacks	Online	C	04-01-2013	286001002.0	4-15-2013	0	
33	Sub-Saharan Africa	Malawi	Meat	Online	L	2-17-2012	694968783.0	04-02-2012	0	
37	Europe	Luxembourg	Vegetables	Offline	L	2-13-2010	744683635.0	04-01-2010	0	
41	Middle East and North Africa	Saudi Arabia	Personal Care	Offline	L	02-02-2014	688270556.0	03-04-2014	0	
45	Sub-Saharan Africa	Angola	Office Supplies	Offline	C	10-03-2015	778854548.0	10-03-2015	0	
49	Asia	Taiwan	Baby Food	Online	M	5-27-2014	369560611.0	6-13-2014	0	

In [23]:
```
df[1:50:3]
```

Out[23]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
7	Europe	Bosnia and Herzegovina	Clothes	Online	M	10-14-2013	919133651.0	11-04-2013	0	
10	Middle East and North Africa	Turkey	Office Supplies	Offline	C	9-25-2013	557156026.0	10-15-2013	0	
13	Central America and the Caribbean	Saint Lucia	Cosmetics	Offline	H	07-06-2015	795100581.0	7-16-2015	0	
16	Europe	Austria	Cereal	Offline	C	8-13-2014	987410676.0	09-06-2014	0	
19	Central America and the Caribbean	Trinidad and Tobago	Baby Food	Offline	C	4-16-2013	783842170.0	06-01-2013	0	
22	Europe	Estonia	Fruits	Online	L	9-28-2016	579463422.0	11-01-2016	0	
25	Central America and the Caribbean	Cuba	Cereal	Online	H	3-13-2014	164655292.0	05-01-2014	0	
28	Sub-Saharan Africa	Guinea	Baby Food	Online	M	12-27-2012	975111138.0	1-21-2013	0	
31	Australia and Oceania	Australia	Clothes	Offline	M	1-17-2012	241836822.0	1-17-2012	0	
34	Middle East and North Africa	Lebanon	Fruits	Online	H	04-05-2013	441150701.0	05-12-2013	0	
37	Europe	Luxembourg	Vegetables	Offline	L	2-13-2010	744683635.0	04-01-2010	0	
40	Europe	Switzerland	Meat	Online	L	3-21-2014	169378983.0	04-10-2014	0	
43	Asia	Kyrgyzstan	Snacks	Online	C	08-06-2013	727492606.0	9-22-2013	0	
46	Sub-Saharan Africa	Mauritania	Cosmetics	Offline	M	5-30-2014	676592862.0	07-09-2014	0	
49	Asia	Taiwan	Baby Food	Online	M	5-27-2014	369560611.0	6-13-2014	0	

In [24]:
```
df[['Country','Total_Revenue']][1:10]
```

Out[24]:

	Country	Total_Revenue
1	Panama	330640.86
2	Czech Republic	226716.10
3	North Korea	1854591.20
4	Sri Lanka	1150758.36
5	Morocco	3923.04
6	Federated States of Micronesia	902434.24
7	Bosnia and Herzegovina	101302.56
8	Afghanistan	966144.48
9	Ethiopia	2506083.76

In [25]:
```
df[['Country','Total_Revenue']][1:10:2]
```

Out[25]:

	Country	Total_Revenue
1	Panama	330640.86
3	North Korea	1854591.20
5	Morocco	3923.04
7	Bosnia and Herzegovina	101302.56
9	Ethiopia	2506083.76

In [26]:
```
df[['Country','Total_Revenue']][1:40:3]
```

Out[26]:

	Country	Total_Revenue
1	Panama	330640.86
4	Sri Lanka	1150758.36
7	Bosnia and Herzegovina	101302.56
10	Turkey	2412081.84
13	Saint Lucia	2966839.20
16	Austria	1155211.20
19	Trinidad and Tobago	1320308.16
22	Estonia	46258.14
25	Cuba	825885.50
28	Guinea	1508704.80
31	Australia	409144.32
34	Lebanon	48049.50
37	Luxembourg	1123251.46

In [27]:
```
df[['Country','Total_Revenue']][:40:2]
```

Out[27]:

	Country	Total_Revenue
0	Antigua and Barbuda	140914.56
2	Czech Republic	226716.10
4	Sri Lanka	1150758.36
6	Federated States of Micronesia	902434.24
8	Afghanistan	966144.48
10	Turkey	2412081.84
12	Malaysia	2008043.40
14	Saint Vincent and the Grenadines	1640939.84
16	Austria	1155211.20
18	Mexico	82657.90
20	Libya	81519.10
22	Estonia	46258.14
24	Saudi Arabia	515415.24
26	Montenegro	12968.70
28	Guinea	1508704.80
30	United Arab Emirates	2776220.00
32	Oman	505529.28
34	Lebanon	48049.50
36	Vanuatu	2115173.60
38	Benin	253689.92

In [28]:
```
df[['Country','Total_Revenue']][:40:3]
```

Out[28]:

	Country	Total_Revenue
0	Antigua and Barbuda	140914.56
3	North Korea	1854591.20
6	Federated States of Micronesia	902434.24
9	Ethiopia	2506083.76
12	Malaysia	2008043.40
15	Lebanon	1558039.77
18	Mexico	82657.90
21	Algeria	911860.16
24	Saudi Arabia	515415.24
27	Guatemala	3181160.85
30	United Arab Emirates	2776220.00
33	Malawi	2346552.18
36	Vanuatu	2115173.60
39	Somalia	659067.68

In [29]:
```
df[['Country','Total_Revenue']][:40:]
```

Out[29]:

	Country	Total_Revenue
0	Antigua and Barbuda	140914.56
1	Panama	330640.86
2	Czech Republic	226716.10
3	North Korea	1854591.20
4	Sri Lanka	1150758.36
5	Morocco	3923.04
6	Federated States of Micronesia	902434.24
7	Bosnia and Herzegovina	101302.56
8	Afghanistan	966144.48
9	Ethiopia	2506083.76
10	Turkey	2412081.84
11	Oman	3227410.40
12	Malaysia	2008043.40
13	Saint Lucia	2966839.20
14	Saint Vincent and the Grenadines	1640939.84
15	Lebanon	1558039.77
16	Austria	1155211.20
17	Bulgaria	4080481.86
18	Mexico	82657.90
19	Trinidad and Tobago	1320308.16
20	Libya	81519.10
21	Algeria	911860.16
22	Estonia	46258.14
23	Tuvalu	338413.40
24	Saudi Arabia	515415.24
25	Cuba	825885.50
26	Montenegro	12968.70
27	Guatemala	3181160.85
28	Guinea	1508704.80
29	Vanuatu	443550.06
30	United Arab Emirates	2776220.00
31	Australia	409144.32
32	Oman	505529.28
33	Malawi	2346552.18
34	Lebanon	48049.50
35	Czech Republic	1855825.40
36	Vanuatu	2115173.60
37	Luxembourg	1123251.46
38	Benin	253689.92
39	Somalia	659067.68

What is locate Row?

1. As you can see from the result above, the DataFrame is like a table with rows and columns.
2. Pandas use the loc attribute to return one or more specified row(s).

In [31]:
```
df.loc[1]
```

Out[31]:
```
Region                Central America and the Caribbean
Country                                          Panama
Item_Type                                        Snacks
Sales_Channel                                   Offline
Order_Priority                                        C
Order_Date                                   07-05-2010
Order_ID                                   301644504.0
Ship_Date                                    7-26-2010
Units_Sold                                           0
Unit_SellingPrice                               152.58
Unit_MakingCost                                  97.44
Total_Revenue                                330640.86
Total_Cost                                   211152.48
Total_Profit                                 119488.38
Name: 1, dtype: object
```

In [32]:
```
df.loc[3]
```

Out[32]:
```
Region                        Asia
Country                North Korea
Item_Type                   Cereal
Sales_Channel              Offline
Order_Priority                   L
Order_Date                5-13-2010
Order_ID                892599952.0
Ship_Date                 6-15-2010
Units_Sold                        0
Unit_SellingPrice             205.7
Unit_MakingCost              117.11
Total_Revenue             1854591.2
Total_Cost               1055863.76
Total_Profit              798727.44
Name: 3, dtype: object
```

In [33]:
```
df.loc[0]
```

Out[33]:
```
Region                Central America and the Caribbean
Country                             Antigua and Barbuda
Item_Type                                     Baby Food
Sales_Channel                                    Online
Order_Priority                                        M
Order_Date                                   12-20-2013
Order_ID                                   957081544.0
Ship_Date                                    01-11-2014
Units_Sold                                           0
Unit_SellingPrice                               255.28
Unit_MakingCost                                  159.42
Total_Revenue                                140914.56
Total_Cost                                    87999.84
Total_Profit                                  52914.72
Name: 0, dtype: object
```

In [34]:
```
df.loc[1:11]
```

Out[34]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
5	Middle East and North Africa	Morocco	Personal Care	Offline	L	11-08-2010	412882792.0	11-22-2010	0	
6	Australia and Oceania	Federated States of Micronesia	Clothes	Offline	H	3-28-2011	932776868.0	05-10-2011	0	
7	Europe	Bosnia and Herzegovina	Clothes	Online	M	10-14-2013	919133651.0	11-04-2013	0	
8	Middle East and North Africa	Afghanistan	Clothes	Offline	M	8-27-2016	579814469.0	10-05-2016	0	
9	Sub-Saharan Africa	Ethiopia	Baby Food	Online	M	4-13-2015	192993152.0	05-07-2015	0	
10	Middle East and North Africa	Turkey	Office Supplies	Offline	C	9-25-2013	557156026.0	10-15-2013	0	
11	Middle East and North Africa	Oman	Cosmetics	Online	M	05-12-2013	741101920.0	5-17-2013	0	

In [35]:
```
df.loc[:40:2]
```

Out[35]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
6	Australia and Oceania	Federated States of Micronesia	Clothes	Offline	H	3-28-2011	932776868.0	05-10-2011	0	
8	Middle East and North Africa	Afghanistan	Clothes	Offline	M	8-27-2016	579814469.0	10-05-2016	0	
10	Middle East and North Africa	Turkey	Office Supplies	Offline	C	9-25-2013	557156026.0	10-15-2013	0	
12	Asia	Malaysia	Cereal	Offline	L	7-31-2016	333942162.0	8-25-2016	0	
14	Central America and the Caribbean	Saint Vincent and the Grenadines	Baby Food	Online	L	11-28-2010	504313504.0	12-03-2010	0	
16	Europe	Austria	Cereal	Offline	C	8-13-2014	987410676.0	09-06-2014	0	
18	North America	Mexico	Beverages	Online	C	3-13-2017	127374303.0	3-20-2017	0	
20	Middle East and North Africa	Libya	Beverages	Offline	L	1-18-2010	993345010.0	03-03-2010	0	
22	Europe	Estonia	Fruits	Online	L	9-28-2016	579463422.0	11-01-2016	0	
24	Middle East and North Africa	Saudi Arabia	Snacks	Offline	L	4-25-2017	604870164.0	06-05-2017	0	
26	Europe	Montenegro	Fruits	Offline	L	5-29-2016	313705861.0	07-10-2016	0	
28	Sub-Saharan Africa	Guinea	Baby Food	Online	M	12-27-2012	975111138.0	1-21-2013	0	
30	Middle East and North Africa	United Arab Emirates	Cosmetics	Offline	H	6-26-2015	483226621.0	08-06-2015	0	
32	Middle East and North Africa	Oman	Clothes	Online	H	07-03-2011	557192933.0	07-05-2011	0	
34	Middle East and North Africa	Lebanon	Fruits	Online	H	04-05-2013	441150701.0	05-12-2013	0	
36	Australia and Oceania	Vanuatu	Cosmetics	Offline	C	2-24-2012	504240548.0	3-27-2012	0	
38	Sub-Saharan Africa	Benin	Personal Care	Online	L	08-07-2016	440603101.0	9-15-2016	0	
40	Europe	Switzerland	Meat	Online	L	3-21-2014	169378983.0	04-10-2014	0	

In [36]:
```
df.loc[df['Total_Cost']==87999.84]
```

Out[36]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_Sellin
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	

In [37]:
```
df.loc[df['Country']=='Turkey']
```

Out[37]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
10	Middle East and North Africa	Turkey	Office Supplies	Offline	C	9-25-2013	557156026.0	10-15-2013	0	
191	Middle East and North Africa	Turkey	Personal Care	Offline	H	05-10-2013	126329314.0	5-21-2013	0	
498	Middle East and North Africa	Turkey	Cosmetics	Online	L	4-20-2012	677775609.0	05-05-2012	0	
	Middle East							02-06-		

In [38]:
```
df.loc[df['Item_Type']=='Baby Food']
```

Out[38]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
9	Sub-Saharan Africa	Ethiopia	Baby Food	Online	M	4-13-2015	192993152.0	05-07-2015	0	
14	Central America and the Caribbean	Saint Vincent and the Grenadines	Baby Food	Online	L	11-28-2010	504313504.0	12-03-2010	0	
19	Central America and the Caribbean	Trinidad and Tobago	Baby Food	Offline	C	4-16-2013	783842170.0	06-01-2013	0	
21	Middle East and North Africa	Algeria	Baby Food	Offline	M	09-05-2015	977806651.0	10-14-2015	0	
...	...	...	...	...	...	...	...	...	...	...
4949	Asia	Bangladesh	Baby Food	Online	C	11-19-2010	915761363.0	01-03-2011	0	
4957	Central America and the Caribbean	Belize	Baby Food	Online	L	11-26-2014	624736964.0	11-28-2014	0	
4960	Sub-Saharan Africa	Niger	Baby Food	Offline	C	10-19-2013	666534364.0	11-18-2013	0	
4970	Asia	Myanmar	Baby Food	Online	M	06-06-2012	670026814.0	6-15-2012	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	

445 rows × 14 columns

In [39]:
```
df.sort_values("Country")
```

Out[39]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
3766	Middle East and North Africa	Afghanistan	Vegetables	Online	M	08-04-2011	292788922.0	09-08-2011	0	
4322	Middle East and North Africa	Afghanistan	Cereal	Online	C	2-15-2013	910569036.0	3-25-2013	0	
1590	Middle East and North Africa	Afghanistan	Personal Care	Online	C	6-26-2016	966855084.0	7-16-2016	0	
2668	Middle East and North Africa	Afghanistan	Cereal	Online	C	08-05-2014	128539025.0	8-16-2014	0	
3523	Middle East and North Africa	Afghanistan	Vegetables	Offline	M	04-06-2017	766669166.0	4-21-2017	0	
...	...	...	...	...	...	...	...	...	...	...
649	Sub-Saharan Africa	Zimbabwe	Beverages	Offline	H	12-04-2013	282916247.0	12-29-2013	0	
2569	Sub-Saharan Africa	Zimbabwe	Fruits	Online	L	8-22-2013	102685534.0	8-23-2013	0	
712	Sub-Saharan Africa	Zimbabwe	Snacks	Offline	L	1-26-2013	704921281.0	02-05-2013	0	
4642	Sub-Saharan Africa	Zimbabwe	Cereal	Online	L	1-27-2012	190003240.0	03-08-2012	0	
2128	Sub-Saharan Africa	Zimbabwe	Vegetables	Online	L	01-07-2011	610387361.0	1-20-2011	0	

5000 rows × 14 columns

In [40]:
```
df.sort_values("Item_Type")
```

Out[40]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
605	Europe	Georgia	Baby Food	Online	L	1-26-2014	359197413.0	03-08-2014	0	
606	Middle East and North Africa	Azerbaijan	Baby Food	Online	M	05-11-2014	349880063.0	05-12-2014	0	
2766	Sub-Saharan Africa	Chad	Baby Food	Online	H	06-07-2017	625025784.0	07-04-2017	0	
609	Middle East and North Africa	United Arab Emirates	Baby Food	Offline	C	04-08-2012	110743319.0	05-09-2012	0	
...	...	...	...	...	...	...	...	...	...	
4986	Asia	Sri Lanka	NaN	Online	C	12-01-2012	307045400.0	12-02-2012	0	
4987	Europe	Norway	NaN	Offline	M	1-14-2014	634033286.0	1-15-2014	0	
4988	Middle East and North Africa	United Arab Emirates	NaN	Online	H	8-31-2014	925384271.0	10-12-2014	0	
4989	Asia	Thailand	NaN	Online	C	08-08-2012	615522181.0	9-20-2012	0	
4990	Europe	Ukraine	NaN	Offline	L	4-14-2014	559183347.0	5-21-2014	0	

5000 rows × 14 columns

In [41]:
```
df.sort_values("Sales_Channel")
```

Out[41]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Un
2499	Europe	Russia	Snacks	Offline	H	7-28-2012	189667212.0	09-03-2012	0	
2064	Asia	Kazakhstan	Vegetables	Offline	M	9-19-2015	594539582.0	10-29-2015	0	
3962	Central America and the Caribbean	Cuba	Vegetables	Offline	L	03-08-2011	475355947.0	4-26-2011	0	
2066	Europe	Germany	Vegetables	Offline	C	3-14-2011	465753209.0	3-14-2011	0	
3960	Asia	Brunei	Snacks	Offline	H	04-04-2014	893961656.0	05-01-2014	0	
...	...	...	...	...	...	...	...	...	...	...
2248	Europe	Belarus	Fruits	Online	L	08-01-2010	466517961.0	09-07-2010	0	
2249	Middle East and North Africa	Iran	Fruits	Online	C	12-03-2016	929598987.0	01-03-2017	0	
2250	Middle East and North Africa	Jordan	Fruits	Online	L	5-21-2013	203039205.0	5-29-2013	0	
2299	Asia	Turkmenistan	Cosmetics	Online	C	8-14-2014	820965659.0	8-18-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [42]:
```
df.sort_values("Order_Priority")
```

Out[42]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit
2335	Sub-Saharan Africa	Botswana	Office Supplies	Offline	C	11-29-2014	682278716.0	01-01-2015	0	
2338	Asia	South Korea	Cosmetics	Online	C	8-31-2012	315576970.0	9-14-2012	0	
1895	Asia	Maldives	Fruits	Online	C	01-04-2012	300754439.0	02-06-2012	0	
846	Central America and the Caribbean	Honduras	Office Supplies	Offline	C	8-21-2011	272639310.0	9-29-2011	0	
845	Europe	Netherlands	Baby Food	Offline	C	1-21-2011	611766231.0	2-26-2011	0	
...	...	...	...	...	...	...	...	...	...	
1725	Europe	Vatican City	Meat	Offline	M	6-13-2012	697617518.0	07-07-2012	0	
1727	Middle East and North Africa	Iran	Household	Offline	M	11-24-2015	794957244.0	12-31-2015	0	
1731	Middle East and North Africa	Oman	Beverages	Offline	M	12-12-2010	881915748.0	12-14-2010	0	
3798	Europe	Czech Republic	Meat	Offline	M	12-05-2011	693583905.0	01-06-2012	0	
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	

5000 rows × 14 columns

In [43]:
```
df.sort_values("Total_Revenue")
```

Out[43]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
664	North America	United States of America	Fruits	Online	M	12-09-2014	158660447.0	01-09-2015	0	
1435	Australia and Oceania	East Timor	Beverages	Offline	L	10-11-2015	309510886.0	10-17-2015	0	
3284	Central America and the Caribbean	Saint Kitts and Nevis	Clothes	Offline	L	10-14-2013	532441079.0	11-08-2013	0	
1405	Sub-Saharan Africa	Rwanda	Clothes	Online	M	10-23-2013	410077846.0	12-02-2013	0	
1457	Europe	Finland	Fruits	Offline	H	01-12-2016	182078921.0	2-14-2016	0	
...	...	...	...	...	...	...	...	...	...	
1993	Asia	Sri Lanka	Household	Offline	C	6-19-2017	173629748.0	6-19-2017	0	
1565	Sub-Saharan Africa	Sierra Leone	Household	Offline	L	05-01-2017	406191432.0	06-01-2017	0	
1922	Sub-Saharan Africa	Mauritania	Household	Offline	M	12-28-2011	992156255.0	1-25-2012	0	
4765	Sub-Saharan Africa	Mali	Household	Online	H	04-06-2012	244088160.0	5-13-2012	0	
974	Europe	San Marino	Household	Offline	H	12-09-2015	821131742.0	12-09-2015	0	

5000 rows × 14 columns

In [44]:
```
df.sort_values("Total_Profit")
```

Out[44]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
664	North America	United States of America	Fruits	Online	M	12-09-2014	158660447.0	01-09-2015	0	
1435	Australia and Oceania	East Timor	Beverages	Offline	L	10-11-2015	309510886.0	10-17-2015	0	
1457	Europe	Finland	Fruits	Offline	H	01-12-2016	182078921.0	2-14-2016	0	
1405	Sub-Saharan Africa	Rwanda	Clothes	Online	M	10-23-2013	410077846.0	12-02-2013	0	
3284	Central America and the Caribbean	Saint Kitts and Nevis	Clothes	Offline	L	10-14-2013	532441079.0	11-08-2013	0	
...	...	...	...	...	...	...	...	...	...	...
2290	Sub-Saharan Africa	Democratic Republic of the Congo	Cosmetics	Online	H	09-05-2013	523857152.0	10-09-2013	0	
4672	Middle East and North Africa	Qatar	Cosmetics	Offline	M	7-30-2012	918656861.0	8-17-2012	0	
2471	Sub-Saharan Africa	Burkina Faso	Cosmetics	Online	H	2-16-2011	980396163.0	2-24-2011	0	
4599	Sub-Saharan Africa	South Sudan	Cosmetics	Online	H	01-03-2014	128990066.0	1-24-2014	0	
896	Sub-Saharan Africa	Benin	Cosmetics	Online	M	4-27-2012	813325440.0	5-15-2012	0	

5000 rows × 14 columns

In [45]:
```
df.sort_values(['Country',"Total_Profit"])
```

Out[45]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1459	Middle East and North Africa	Afghanistan	Fruits	Online	L	6-16-2016	118688666.0	7-15-2016	0	
4969	Middle East and North Africa	Afghanistan	Snacks	Offline	M	2-29-2012	503178393.0	03-06-2012	0	
1590	Middle East and North Africa	Afghanistan	Personal Care	Online	C	6-26-2016	966855084.0	7-16-2016	0	
1523	Middle East and North Africa	Afghanistan	Personal Care	Online	M	07-03-2014	956313788.0	7-19-2014	0	
3766	Middle East and North Africa	Afghanistan	Vegetables	Online	M	08-04-2011	292788922.0	09-08-2011	0	
...	...	...	...	...	...	...	...	...	...	...
612	Sub-Saharan Africa	Zimbabwe	Baby Food	Offline	M	8-18-2016	172261178.0	9-13-2016	0	
2241	Sub-Saharan Africa	Zimbabwe	Clothes	Online	M	12-22-2011	201531589.0	01-09-2012	0	
3003	Sub-Saharan Africa	Zimbabwe	Vegetables	Online	L	8-23-2013	915310752.0	9-23-2013	0	
547	Sub-Saharan Africa	Zimbabwe	Household	Offline	M	10-03-2015	165538489.0	10-08-2015	0	
3491	Sub-Saharan Africa	Zimbabwe	Office Supplies	Offline	M	7-29-2014	755669105.0	8-27-2014	0	

5000 rows × 14 columns

In [46]:
```
df.sort_values(['Country',"Total_Profit"],ascending = False)
```

Out[46]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
3491	Sub-Saharan Africa	Zimbabwe	Office Supplies	Offline	M	7-29-2014	755669105.0	8-27-2014	0	
547	Sub-Saharan Africa	Zimbabwe	Household	Offline	M	10-03-2015	165538489.0	10-08-2015	0	
3003	Sub-Saharan Africa	Zimbabwe	Vegetables	Online	L	8-23-2013	915310752.0	9-23-2013	0	
2241	Sub-Saharan Africa	Zimbabwe	Clothes	Online	M	12-22-2011	201531589.0	01-09-2012	0	
612	Sub-Saharan Africa	Zimbabwe	Baby Food	Offline	M	8-18-2016	172261178.0	9-13-2016	0	
...	...	...	...	...	...	...	...	...	...	
3766	Middle East and North Africa	Afghanistan	Vegetables	Online	M	08-04-2011	292788922.0	09-08-2011	0	
1523	Middle East and North Africa	Afghanistan	Personal Care	Online	M	07-03-2014	956313788.0	7-19-2014	0	
1590	Middle East and North Africa	Afghanistan	Personal Care	Online	C	6-26-2016	966855084.0	7-16-2016	0	
4969	Middle East and North Africa	Afghanistan	Snacks	Offline	M	2-29-2012	503178393.0	03-06-2012	0	
1459	Middle East and North Africa	Afghanistan	Fruits	Online	L	6-16-2016	118688666.0	7-15-2016	0	

5000 rows × 14 columns

In [47]:
```
df.sort_values(['Country',"Total_Profit"],ascending = False).head()
```

Out[47]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_Se
3491	Sub-Saharan Africa	Zimbabwe	Office Supplies	Offline	M	7-29-2014	755669105.0	8-27-2014	0	
547	Sub-Saharan Africa	Zimbabwe	Household	Offline	M	10-03-2015	165538489.0	10-08-2015	0	
3003	Sub-Saharan Africa	Zimbabwe	Vegetables	Online	L	8-23-2013	915310752.0	9-23-2013	0	
2241	Sub-Saharan Africa	Zimbabwe	Clothes	Online	M	12-22-2011	201531589.0	01-09-2012	0	
612	Sub-Saharan Africa	Zimbabwe	Baby Food	Offline	M	8-18-2016	172261178.0	9-13-2016	0	

In [48]:
```
df.sort_values(['Country',"Total_Profit"],ascending = [1,0]).head()
```

Out[48]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1626	Middle East and North Africa	Afghanistan	Baby Food	Offline	L	12-18-2012	556970632.0	01-02-2013	0	
2002	Middle East and North Africa	Afghanistan	Office Supplies	Offline	C	11-19-2015	455178868.0	12-15-2015	0	
8	Middle East and North Africa	Afghanistan	Clothes	Offline	M	8-27-2016	579814469.0	10-05-2016	0	
3261	Middle East and North Africa	Afghanistan	Household	Offline	C	8-21-2014	592807948.0	9-19-2014	0	
4322	Middle East and North Africa	Afghanistan	Cereal	Online	C	2-15-2013	910569036.0	3-25-2013	0	

In [49]:
```
df.sort_values(['Country',"Total_Profit"],ascending = [1,1]).head()
```

Out[49]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
1459	Middle East and North Africa	Afghanistan	Fruits	Online	L	6-16-2016	118688666.0	7-15-2016	0	
4969	Middle East and North Africa	Afghanistan	Snacks	Offline	M	2-29-2012	503178393.0	03-06-2012	0	
1590	Middle East and North Africa	Afghanistan	Personal Care	Online	C	6-26-2016	966855084.0	7-16-2016	0	
1523	Middle East and North Africa	Afghanistan	Personal Care	Online	M	07-03-2014	956313788.0	7-19-2014	0	
3766	Middle East and North Africa	Afghanistan	Vegetables	Online	M	08-04-2011	292788922.0	09-08-2011	0	

In [50]:
```
df.sort_values(['Country',"Total_Profit"],ascending = [0,1]).head(50)
```

Out[50]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit
649	Sub-Saharan Africa	Zimbabwe	Beverages	Offline	H	12-04-2013	282916247.0	12-29-2013	0	
2569	Sub-Saharan Africa	Zimbabwe	Fruits	Online	L	8-22-2013	102685534.0	8-23-2013	0	
3632	Sub-Saharan Africa	Zimbabwe	Beverages	Offline	H	2-18-2014	553903901.0	04-06-2014	0	
2746	Sub-Saharan Africa	Zimbabwe	Snacks	Online	C	12-06-2016	253349721.0	01-06-2017	0	
712	Sub-Saharan Africa	Zimbabwe	Snacks	Offline	L	1-26-2013	704921281.0	02-05-2013	0	
	Sub-									

In [51]:
```
df.sort_values("Total_Profit",ascending = [0])
```

Out[51]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
896	Sub-Saharan Africa	Benin	Cosmetics	Online	M	4-27-2012	813325440.0	5-15-2012	0	
4599	Sub-Saharan Africa	South Sudan	Cosmetics	Online	H	01-03-2014	128990066.0	1-24-2014	0	
2471	Sub-Saharan Africa	Burkina Faso	Cosmetics	Online	H	2-16-2011	980396163.0	2-24-2011	0	
4672	Middle East and North Africa	Qatar	Cosmetics	Offline	M	7-30-2012	918656861.0	8-17-2012	0	
2290	Sub-Saharan Africa	Democratic Republic of the Congo	Cosmetics	Online	H	09-05-2013	523857152.0	10-09-2013	0	
...	...	...	...	...	...	...	...	...	...	...
1405	Sub-Saharan Africa	Rwanda	Clothes	Online	M	10-23-2013	410077846.0	12-02-2013	0	
3284	Central America and the Caribbean	Saint Kitts and Nevis	Clothes	Offline	L	10-14-2013	532441079.0	11-08-2013	0	
1457	Europe	Finland	Fruits	Offline	H	01-12-2016	182078921.0	2-14-2016	0	
1435	Australia and Oceania	East Timor	Beverages	Offline	L	10-11-2015	309510886.0	10-17-2015	0	
664	North America	United States of America	Fruits	Online	M	12-09-2014	158660447.0	01-09-2015	0	

5000 rows × 14 columns

In [52]:
```
df.sort_values("Total_Profit",ascending = [1]).head()
```

Out[52]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_Se
664	North America	United States of America	Fruits	Online	M	12-09-2014	158660447.0	01-09-2015	0	
1435	Australia and Oceania	East Timor	Beverages	Offline	L	10-11-2015	309510886.0	10-17-2015	0	
1457	Europe	Finland	Fruits	Offline	H	01-12-2016	182078921.0	2-14-2016	0	
1405	Sub-Saharan Africa	Rwanda	Clothes	Online	M	10-23-2013	410077846.0	12-02-2013	0	
3284	Central America and the Caribbean	Saint Kitts and Nevis	Clothes	Offline	L	10-14-2013	532441079.0	11-08-2013	0	

In [53]:
```
df.sort_values("Total_Profit",ascending = False).head()
```

Out[53]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
896	Sub-Saharan Africa	Benin	Cosmetics	Online	M	4-27-2012	813325440.0	5-15-2012	0	
4599	Sub-Saharan Africa	South Sudan	Cosmetics	Online	H	01-03-2014	128990066.0	1-24-2014	0	
2471	Sub-Saharan Africa	Burkina Faso	Cosmetics	Online	H	2-16-2011	980396163.0	2-24-2011	0	
4672	Middle East and North Africa	Qatar	Cosmetics	Offline	M	7-30-2012	918656861.0	8-17-2012	0	
2290	Sub-Saharan Africa	Democratic Republic of the Congo	Cosmetics	Online	H	09-05-2013	523857152.0	10-09-2013	0	

In [54]:
```
df.sort_values("Total_Revenue",ascending = False)
```

Out[54]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_S
974	Europe	San Marino	Household	Offline	H	12-09-2015	821131742.0	12-09-2015	0	
4765	Sub-Saharan Africa	Mali	Household	Online	H	04-06-2012	244088160.0	5-13-2012	0	
1922	Sub-Saharan Africa	Mauritania	Household	Offline	M	12-28-2011	992156255.0	1-25-2012	0	
1565	Sub-Saharan Africa	Sierra Leone	Household	Offline	L	05-01-2017	406191432.0	06-01-2017	0	
1993	Asia	Sri Lanka	Household	Offline	C	6-19-2017	173629748.0	6-19-2017	0	
...	...	...	...	...	...	...	...	...	...	...
1457	Europe	Finland	Fruits	Offline	H	01-12-2016	182078921.0	2-14-2016	0	
1405	Sub-Saharan Africa	Rwanda	Clothes	Online	M	10-23-2013	410077846.0	12-02-2013	0	
3284	Central America and the Caribbean	Saint Kitts and Nevis	Clothes	Offline	L	10-14-2013	532441079.0	11-08-2013	0	
1435	Australia and Oceania	East Timor	Beverages	Offline	L	10-11-2015	309510886.0	10-17-2015	0	
664	North America	United States of America	Fruits	Online	M	12-09-2014	158660447.0	01-09-2015	0	

5000 rows × 14 columns

In [55]:
```
df.sort_values("Total_Revenue",ascending = False).head()
```

Out[55]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_Se
974	Europe	San Marino	Household	Offline	H	12-09-2015	821131742.0	12-09-2015	0	
4765	Sub-Saharan Africa	Mali	Household	Online	H	04-06-2012	244088160.0	5-13-2012	0	
1922	Sub-Saharan Africa	Mauritania	Household	Offline	M	12-28-2011	992156255.0	1-25-2012	0	
1565	Sub-Saharan Africa	Sierra Leone	Household	Offline	L	05-01-2017	406191432.0	06-01-2017	0	
1993	Asia	Sri Lanka	Household	Offline	C	6-19-2017	173629748.0	6-19-2017	0	

In [56]:
```
for index, rows in df.iterrows():
    print(index,rows)
```

```
0 Region               Central America and the Caribbean
Country                             Antigua and Barbuda
Item_Type                                    Baby Food
Sales_Channel                                   Online
Order_Priority                                       M
Order_Date                                  12-20-2013
Order_ID                                   957081544.0
Ship_Date                                   01-11-2014
Units_Sold                                           0
Unit_SellingPrice                               255.28
Unit_MakingCost                                 159.42
Total_Revenue                                 140914.56
Total_Cost                                     87999.84
Total_Profit                                   52914.72
Name: 0, dtype: object
1 Region               Central America and the Caribbean
Country                                         Panama
Item_Type                                       Snacks
Sales_Channel                                  Offline
```

In [57]:
```
for index, rows in df.iterrows():
    print(index,rows['Country'])
```

```
0 Antigua and Barbuda
1 Panama
2 Czech Republic
3 North Korea
4 Sri Lanka
5 Morocco
6 Federated States of Micronesia
7 Bosnia and Herzegovina
8 Afghanistan
9 Ethiopia
10 Turkey
11 Oman
12 Malaysia
13 Saint Lucia
14 Saint Vincent and the Grenadines
15 Lebanon
16 Austria
17 Bulgaria
18 Mexico
```

In [58]:
```
for index, rows in df.iterrows():
    print(index,rows['Item_Type'])
```

```
0 Baby Food
1 Snacks
2 Beverages
3 Cereal
4 Snacks
5 Personal Care
6 Clothes
7 Clothes
8 Clothes
9 Baby Food
10 Office Supplies
11 Cosmetics
12 Cereal
13 Cosmetics
14 Baby Food
15 Meat
16 Cereal
17 Office Supplies
18 Beverages
```

In [59]:
```
for index, rows in df.iterrows():
    print(index,rows[['Item_Type','Total_Revenue']])
```

```
0 Item_Type        Baby Food
Total_Revenue    140914.56
Name: 0, dtype: object
1 Item_Type           Snacks
Total_Revenue    330640.86
Name: 1, dtype: object
2 Item_Type        Beverages
Total_Revenue     226716.1
Name: 2, dtype: object
3 Item_Type           Cereal
Total_Revenue    1854591.2
Name: 3, dtype: object
4 Item_Type            Snacks
Total_Revenue    1150758.36
Name: 4, dtype: object
5 Item_Type        Personal Care
Total_Revenue           3923.04
Name: 5, dtype: object
6 Item_Type          Clothes
```

In [60]:
```
for index, rows in df.iterrows():
    print(index,rows[['Item_Type','Total_Revenue','Total_Profit']])
```

```
0 Item_Type        Baby Food
Total_Revenue    140914.56
Total_Profit      52914.72
Name: 0, dtype: object
1 Item_Type           Snacks
Total_Revenue    330640.86
Total_Profit     119488.38
Name: 1, dtype: object
2 Item_Type        Beverages
Total_Revenue     226716.1
Total_Profit      74823.48
Name: 2, dtype: object
3 Item_Type           Cereal
Total_Revenue    1854591.2
Total_Profit     798727.44
Name: 3, dtype: object
4 Item_Type            Snacks
Total_Revenue    1150758.36
Total_Profit      415865.88
```

In [62]:
```
df['Units_Sold']=0
df
```

Out[62]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [63]:
```
df
```

Out[63]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [64]:
```
df['Total_Profit']=df["Total_Revenue"] - df["Total_Cost"]
df
```

Out[64]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [65]:
```
df1 = df.drop(columns = 'Region')
df1
```

Out[65]:

	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_SellingPrice
0	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	255.28
1	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	152.58
2	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	47.45
3	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	205.70
4	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	152.58
...	...	...	...	...	...	...	...	...	...
4995	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	668.27
4996	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	109.28
4997	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	255.28
4998	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	109.28
4999	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	154.06

5000 rows × 13 columns

In [66]:
```
df2 = df.drop(columns = 'Units_Sold')
df2
```

Out[66]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Unit_SellingPrice
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	255.28
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	152.58
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	47.45
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	205.70
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	152.58
...	...	...	...	...	...	...	...	...	...
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	668.27
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	109.28
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	255.28
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	109.28
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	154.06

5000 rows × 13 columns

In [67]:
```
df
```

Out[67]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [68]:
```
df.drop(columns = ["Region","Units_Sold"])
```

Out[68]:

	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Unit_SellingPrice	Unit_Makin
0	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	255.28	
1	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	152.58	
2	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	47.45	
3	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	205.70	
4	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	152.58	
...	...	...	...	...	...	...	...	...	
4995	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	668.27	
4996	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	109.28	
4997	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	255.28	
4998	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	109.28	
4999	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	154.06	

5000 rows × 12 columns

In [5]:
```
df
```

Out[5]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

Write CSV file in Pandas

Differences between CSV and XLS (excel) file formats:

1. CSV format is a plain text format in which values are seperated by commas(comma seperated values).
2. XLS file format is an excel sheets binary file format which holds information about all the worksheets in a file,including both content and formatting.

Read CSV files in Python Pandas

CSV files:

1. A simple way to store big data sets is to use csv files (comma seperated files).
2. CSV files contains plain text and is a well know format that can be read by everyone including pandas.

How to use Read csv in pandas?

1. A simple way to store big data series is to use csv files(comma seperated files).
2. Csv files contains plain text and is a well known format that can be read by everyone including pandas.
3. Tip: Use to_string() to print the entire DataFrame by default, when you print a DataFrame, you will only get the first 5 rows, and the last 5 rows.

How to Load Files into a DataFrame?

If your data sets are stored in a file, Pandas,can load them into a DataFrame.

How to view and analyze the data?

1. One of the most used method for getting a quick overview of the DataFrame, is the head() method.
2. The head() method returns the headers and a specified number of rows, starting from the top.

Note: if the number of rows is not specified, the head() method will return the top 5 rows.

How to check info about the data?

In [4]:
```
df.to_excel("C:\\Users\\mouni\\Desktop\\whole folder\\Sales_Data.xlsx")
df
```

Out[4]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	...
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [6]:
```
df.to_excel("C:\\Users\\mouni\\Desktop\\whole folder\\Sales_Data.xlsx",index = False)
df
```

Out[6]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [7]:
```
df.to_excel("C:\\Users\\mouni\\Desktop\\whole folder\\Sales_Data.xlsx",index = True)
df
```

Out[7]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [8]:
```
df.to_csv("C:\\Users\\mouni\\Desktop\\whole folder\\Sales_Data.csv",index = False)
df
```

Out[8]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns

In [9]:
```
df.to_csv("C:\\Users\\mouni\\Desktop\\whole folder\\Sales_Data.txt",index = False,sep="\t")
df
```

Out[9]:

	Region	Country	Item_Type	Sales_Channel	Order_Priority	Order_Date	Order_ID	Ship_Date	Units_Sold	Unit_
0	Central America and the Caribbean	Antigua and Barbuda	Baby Food	Online	M	12-20-2013	957081544.0	01-11-2014	0	
1	Central America and the Caribbean	Panama	Snacks	Offline	C	07-05-2010	301644504.0	7-26-2010	0	
2	Europe	Czech Republic	Beverages	Offline	C	09-12-2011	478051030.0	9-29-2011	0	
3	Asia	North Korea	Cereal	Offline	L	5-13-2010	892599952.0	6-15-2010	0	
4	Asia	Sri Lanka	Snacks	Offline	C	7-20-2015	571902596.0	7-27-2015	0	
...	...	...	...	...	...	...	...	...	...	
4995	Australia and Oceania	New Zealand	Household	Offline	C	04-03-2015	217984473.0	4-20-2015	0	
4996	Middle East and North Africa	Azerbaijan	Clothes	Offline	L	8-17-2014	169748055.0	10-02-2014	0	
4997	Asia	Myanmar	Baby Food	Offline	H	11-23-2016	NaN	12-10-2016	0	
4998	Europe	Finland	Clothes	Online	L	4-22-2014	NaN	05-11-2014	0	
4999	Sub-Saharan Africa	Tanzania	Vegetables	Online	L	07-08-2011	NaN	08-07-2011	0	

5000 rows × 14 columns