

notebook77b99f2c03

March 5, 2024

```
[1]: print("Hello world")
```

Hello world

```
[2]: import pandas as pd
```

```
[7]: p=pd.read_excel("/kaggle/input/employr/SuperStoreUS-2015.xlsx")
P
```

```
[7]:
```

	Row ID	Order	Priority	Discount	Unit Price	Shipping Cost	Customer ID	\
0	20847		High	0.01	2.84	0.93	3	
1	20228	Not Specified		0.02	500.98	26.00	5	
2	21776		Critical	0.06	9.48	7.29	11	
3	24844		Medium	0.09	78.69	19.99	14	
4	24846		Medium	0.08	3.28	2.31	14	
...		
1947	19842		High	0.01	10.90	7.46	3397	
1948	19843		High	0.10	7.99	5.03	3397	
1949	26208	Not Specified		0.08	11.97	5.81	3399	
1950	24911		Medium	0.10	9.38	4.93	3400	
1951	25914		High	0.10	105.98	13.99	3403	

	Customer Name	Ship Mode	Customer Segment	Product Category	\
0	Bonnie Potter	Express Air	Corporate	Office Supplies	
1	Ronnie Proctor	Delivery Truck	Home Office	Furniture	
2	Marcus Dunlap	Regular Air	Home Office	Furniture	
3	Gwendolyn F Tyson	Regular Air	Small Business	Furniture	
4	Gwendolyn F Tyson	Regular Air	Small Business	Office Supplies	
...	
1947	Andrea Shaw	Regular Air	Small Business	Office Supplies	
1948	Andrea Shaw	Regular Air	Small Business	Technology	
1949	Marvin Reid	Regular Air	Small Business	Office Supplies	
1950	Florence Gold	Express Air	Small Business	Furniture	
1951	Tammy Buckley	Express Air	Consumer	Furniture	

	...	Region	State or Province	City	Postal Code	Order Date	\
0	...	West	Washington	Anacortes	98221	2015-01-07	
1	...	West	California	San Gabriel	91776	2015-06-13	

2	...	East	New Jersey	Roselle	7203	2015-02-15
3	...	Central	Minnesota	Prior Lake	55372	2015-05-12
4	...	Central	Minnesota	Prior Lake	55372	2015-05-12
...
1947	...	Central	Illinois	Danville	61832	2015-03-11
1948	...	Central	Illinois	Danville	61832	2015-03-11
1949	...	Central	Illinois	Des Plaines	60016	2015-03-29
1950	...	East	West Virginia	Fairmont	26554	2015-04-04
1951	...	West	Wyoming	Cheyenne	82001	2015-02-08

	Ship Date	Profit	Quantity	ordered	new	Sales	Order ID
0	2015-01-08	4.5600		4		13.01	88522
1	2015-06-15	4390.3665		12		6362.85	90193
2	2015-02-17	-53.8096		22		211.15	90192
3	2015-05-14	803.4705		16		1164.45	86838
4	2015-05-13	-24.0300		7		22.23	86838
...
1947	2015-03-12	-116.7600		18		207.31	87536
1948	2015-03-12	-160.9520		22		143.12	87536
1949	2015-03-31	-41.8700		5		59.98	87534
1950	2015-04-04	-24.7104		15		135.78	87537
1951	2015-02-11	349.4850		5		506.50	87530

[1952 rows x 25 columns]

```
[8]: p.head(15)
```

```
[8]:
```

	Row ID	Order	Priority	Discount	Unit Price	Shipping Cost	Customer ID	\
0	20847		High	0.01	2.84	0.93	3	
1	20228	Not Specified		0.02	500.98	26.00	5	
2	21776		Critical	0.06	9.48	7.29	11	
3	24844		Medium	0.09	78.69	19.99	14	
4	24846		Medium	0.08	3.28	2.31	14	
5	24847		Medium	0.05	3.28	4.20	14	
6	24848		Medium	0.05	3.58	1.63	14	
7	18181		Critical	0.00	4.42	4.99	15	
8	20925		Medium	0.01	35.94	6.66	15	
9	26267		High	0.04	2.98	1.58	16	
10	26268		High	0.05	115.99	2.50	16	
11	23890		High	0.05	26.48	6.93	18	
12	24063	Not Specified		0.07	12.99	9.44	19	
13	5890		High	0.05	26.48	6.93	21	
14	6062	Not Specified		0.08	5.00	3.39	21	

	Customer Name	Ship Mode	Customer Segment	Product Category	\
0	Bonnie Potter	Express Air	Corporate	Office Supplies	
1	Ronnie Proctor	Delivery Truck	Home Office	Furniture	

2	Marcus Dunlap	Regular Air	Home Office	Furniture
3	Gwendolyn F Tyson	Regular Air	Small Business	Furniture
4	Gwendolyn F Tyson	Regular Air	Small Business	Office Supplies
5	Gwendolyn F Tyson	Regular Air	Small Business	Office Supplies
6	Gwendolyn F Tyson	Regular Air	Small Business	Office Supplies
7	Timothy Reese	Regular Air	Small Business	Office Supplies
8	Timothy Reese	Regular Air	Small Business	Office Supplies
9	Sarah Ramsey	Regular Air	Small Business	Office Supplies
10	Sarah Ramsey	Regular Air	Small Business	Technology
11	Laurie Hanna	Regular Air	Small Business	Furniture
12	Jim Rodgers	Regular Air	Small Business	Technology
13	Tony Wilkins Winters	Regular Air	Small Business	Furniture
14	Tony Wilkins Winters	Regular Air	Small Business	Office Supplies

	...	Region	State or Province	City	Postal Code	Order Date	\
0	...	West	Washington	Anacortes	98221	2015-01-07	
1	...	West	California	San Gabriel	91776	2015-06-13	
2	...	East	New Jersey	Roselle	7203	2015-02-15	
3	...	Central	Minnesota	Prior Lake	55372	2015-05-12	
4	...	Central	Minnesota	Prior Lake	55372	2015-05-12	
5	...	Central	Minnesota	Prior Lake	55372	2015-05-12	
6	...	Central	Minnesota	Prior Lake	55372	2015-05-12	
7	...	East	New York	Smithtown	11787	2015-04-08	
8	...	East	New York	Smithtown	11787	2015-05-28	
9	...	East	New York	Syracuse	13210	2015-02-12	
10	...	East	New York	Syracuse	13210	2015-02-12	
11	...	West	Montana	Helena	59601	2015-05-15	
12	...	West	Montana	Missoula	59801	2015-05-21	
13	...	East	New York	New York City	10012	2015-05-15	
14	...	East	New York	New York City	10012	2015-05-21	

	Ship Date	Profit	Quantity	ordered new	Sales	Order ID
0	2015-01-08	4.5600		4	13.01	88522
1	2015-06-15	4390.3665		12	6362.85	90193
2	2015-02-17	-53.8096		22	211.15	90192
3	2015-05-14	803.4705		16	1164.45	86838
4	2015-05-13	-24.0300		7	22.23	86838
5	2015-05-13	-37.0300		4	13.99	86838
6	2015-05-13	-0.7100		4	14.26	86838
7	2015-04-09	-59.8200		7	33.47	86837
8	2015-05-28	261.8757		10	379.53	86839
9	2015-02-15	2.6300		6	18.80	86836
10	2015-02-14	652.7331		10	945.99	86836
11	2015-05-16	314.4813		17	455.77	90031
12	2015-05-23	-114.6399		18	231.79	90032
13	2015-05-16	384.3800		70	1876.69	41793
14	2015-05-22	-17.4900		58	293.06	42949

[15 rows x 25 columns]

[9]: p.isnull

```
[9]: <bound method DataFrame.isnull of          Row ID Order Priority  Discount  Unit
Price  Shipping Cost  Customer ID \
0      20847          High    0.01      2.84      0.93      3
1      20228  Not Specified    0.02    500.98     26.00      5
2      21776          Critical    0.06      9.48      7.29     11
3      24844          Medium    0.09     78.69     19.99     14
4      24846          Medium    0.08      3.28      2.31     14
...
1947    19842          High    0.01     10.90      7.46    3397
1948    19843          High    0.10      7.99      5.03    3397
1949    26208  Not Specified    0.08     11.97      5.81    3399
1950    24911          Medium    0.10      9.38      4.93    3400
1951    25914          High    0.10    105.98     13.99    3403
```

```

Customer Name      Ship Mode Customer Segment Product Category \
0      Bonnie Potter      Express Air      Corporate Office Supplies
1      Ronnie Proctor  Delivery Truck      Home Office      Furniture
2      Marcus Dunlap      Regular Air      Home Office      Furniture
3      Gwendolyn F Tyson      Regular Air      Small Business      Furniture
4      Gwendolyn F Tyson      Regular Air      Small Business Office Supplies
...
1947      Andrea Shaw      Regular Air      Small Business Office Supplies
1948      Andrea Shaw      Regular Air      Small Business      Technology
1949      Marvin Reid      Regular Air      Small Business Office Supplies
1950      Florence Gold      Express Air      Small Business      Furniture
1951      Tammy Buckley      Express Air      Consumer      Furniture
```

```

... Region State or Province      City Postal Code Order Date \
0      ... West      Washington      Anacortes      98221 2015-01-07
1      ... West      California      San Gabriel      91776 2015-06-13
2      ... East      New Jersey      Roselle      7203 2015-02-15
3      ... Central      Minnesota      Prior Lake      55372 2015-05-12
4      ... Central      Minnesota      Prior Lake      55372 2015-05-12
...
1947 ... Central      Illinois      Danville      61832 2015-03-11
1948 ... Central      Illinois      Danville      61832 2015-03-11
1949 ... Central      Illinois      Des Plaines      60016 2015-03-29
1950 ... East      West Virginia      Fairmont      26554 2015-04-04
1951 ... West      Wyoming      Cheyenne      82001 2015-02-08
```

```

Ship Date      Profit Quantity ordered new      Sales Order ID
0      2015-01-08      4.5600      4      13.01      88522
```

1	2015-06-15	4390.3665		12	6362.85	90193
2	2015-02-17	-53.8096		22	211.15	90192
3	2015-05-14	803.4705		16	1164.45	86838
4	2015-05-13	-24.0300		7	22.23	86838
...
1947	2015-03-12	-116.7600		18	207.31	87536
1948	2015-03-12	-160.9520		22	143.12	87536
1949	2015-03-31	-41.8700		5	59.98	87534
1950	2015-04-04	-24.7104		15	135.78	87537
1951	2015-02-11	349.4850		5	506.50	87530

[1952 rows x 25 columns]>

```
[11]: p.isnull().any()
```

```
[11]: Row ID                False
      Order Priority        False
      Discount              False
      Unit Price            False
      Shipping Cost         False
      Customer ID           False
      Customer Name         False
      Ship Mode              False
      Customer Segment      False
      Product Category      False
      Product Sub-Category  False
      Product Container     False
      Product Name          False
      Product Base Margin   True
      Country               False
      Region                False
      State or Province     False
      City                  False
      Postal Code           False
      Order Date            False
      Ship Date             False
      Profit                False
      Quantity ordered new  False
      Sales                 False
      Order ID              False
      dtype: bool
```

```
[12]: p.isnull().sum()
```

```
[12]: Row ID                0
      Order Priority        0
      Discount              0
```

```

Unit Price      0
Shipping Cost   0
Customer ID     0
Customer Name   0
Ship Mode       0
Customer Segment 0
Product Category 0
Product Sub-Category 0
Product Container 0
Product Name    0
Product Base Margin 16
Country         0
Region         0
State or Province 0
City           0
Postal Code     0
Order Date      0
Ship Date       0
Profit          0
Quantity ordered new 0
Sales           0
Order ID        0
dtype: int64

```

```

[14]: p=p.drop(columns=['Region'])
      p.head()

```

```

[14]:   Row ID Order Priority  Discount  Unit Price  Shipping Cost  Customer ID \
0    20847           High    0.01      2.84          0.93           3
1    20228  Not Specified    0.02    500.98         26.00           5
2    21776        Critical    0.06      9.48          7.29          11
3    24844         Medium    0.09     78.69         19.99          14
4    24846         Medium    0.08      3.28          2.31          14

```

```

      Customer Name      Ship Mode Customer Segment Product Category ... \
0    Bonnie Potter    Express Air      Corporate Office Supplies ...
1    Ronnie Proctor  Delivery Truck      Home Office      Furniture ...
2    Marcus Dunlap    Regular Air      Home Office      Furniture ...
3  Gwendolyn F Tyson    Regular Air  Small Business      Furniture ...
4  Gwendolyn F Tyson    Regular Air  Small Business Office Supplies ...

```

```

      Country State or Province      City Postal Code Order Date \
0  United States      Washington  Anacortes      98221 2015-01-07
1  United States      California San Gabriel      91776 2015-06-13
2  United States      New Jersey   Roselle        7203 2015-02-15
3  United States      Minnesota   Prior Lake      55372 2015-05-12
4  United States      Minnesota   Prior Lake      55372 2015-05-12

```

	Ship Date	Profit	Quantity ordered	new	Sales	Order ID
0	2015-01-08	4.5600		4	13.01	88522
1	2015-06-15	4390.3665		12	6362.85	90193
2	2015-02-17	-53.8096		22	211.15	90192
3	2015-05-14	803.4705		16	1164.45	86838
4	2015-05-13	-24.0300		7	22.23	86838

[5 rows x 24 columns]

```
[50]: import pandas as pd
import matplotlib.pyplot as plot
```

```
[51]: p=pd.read_excel("/kaggle/input/employr/SuperStoreUS-2015.xlsx")
p
```

```
[51]:
```

	Row ID	Order	Priority	Discount	Unit Price	Shipping Cost	Customer ID	\
0	20847		High	0.01	2.84	0.93	3	
1	20228	Not Specified		0.02	500.98	26.00	5	
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...		
1947	19842		High	0.01	10.90	7.46	3397	
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1	Ronnie Proctor	Delivery Truck	Home Office	Furniture	
2	Marcus Dunlap	Regular Air	Home Office	Furniture	
3	Gwendolyn F Tyson	Regular Air	Small Business	Furniture	
4	Gwendolyn F Tyson	Regular Air	Small Business	Office Supplies	
...	
1947	Andrea Shaw	Regular Air	Small Business	Office Supplies	
1948	Andrea Shaw	Regular Air	Small Business	Technology	
1949	Marvin Reid	Regular Air	Small Business	Office Supplies	
1950	Florence Gold	Express Air	Small Business	Furniture	
1951	Tammy Buckley	Express Air	Consumer	Furniture	

	...	Region	State or Province	City	Postal Code	Order Date	\
0	...	West	Washington	Anacortes	98221	2015-01-07	
1	...	West	California	San Gabriel	91776	2015-06-13	
2	...	East	New Jersey	Roselle	7203	2015-02-15	
3	...	Central	Minnesota	Prior Lake	55372	2015-05-12	

4	...	Central	Minnesota	Prior Lake	55372	2015-05-12
...
1947	...	Central	Illinois	Danville	61832	2015-03-11
1948	...	Central	Illinois	Danville	61832	2015-03-11
1949	...	Central	Illinois	Des Plaines	60016	2015-03-29
1950	...	East	West Virginia	Fairmont	26554	2015-04-04
1951	...	West	Wyoming	Cheyenne	82001	2015-02-08

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3	2015-05-14	803.4705			16	1164.45	86838
4	2015-05-13	-24.0300			7	22.23	86838
...
1947	2015-03-12	-116.7600			18	207.31	87536
1948	2015-03-12	-160.9520			22	143.12	87536
1949	2015-03-31	-41.8700			5	59.98	87534
1950	2015-04-04	-24.7104			15	135.78	87537
1951	2015-02-11	349.4850			5	506.50	87530

[1952 rows x 25 columns]

```
[52]: p.isnull()
```

```
[52]:
```

	Row ID	Order	Priority	Discount	Unit Price	Shipping Cost	\
0	False		False	False	False	False	
1	False		False	False	False	False	
2	False		False	False	False	False	
3	False		False	False	False	False	
4	False		False	False	False	False	
...	
1947	False		False	False	False	False	
1948	False		False	False	False	False	
1949	False		False	False	False	False	
1950	False		False	False	False	False	
1951	False		False	False	False	False	

	Customer ID	Customer Name	Ship Mode	Customer Segment	\
0	False	False	False	False	
1	False	False	False	False	
2	False	False	False	False	
3	False	False	False	False	
4	False	False	False	False	
...	
1947	False	False	False	False	
1948	False	False	False	False	

1949	False	False	False	False
1950	False	False	False	False
1951	False	False	False	False

	Product Category	...	Region	State or Province	City	Postal Code	\
0	False	...	False	False	False	False	
1	False	...	False	False	False	False	
2	False	...	False	False	False	False	
3	False	...	False	False	False	False	
4	False	...	False	False	False	False	
...	
1947	False	...	False	False	False	False	
1948	False	...	False	False	False	False	
1949	False	...	False	False	False	False	
1950	False	...	False	False	False	False	
1951	False	...	False	False	False	False	

	Order Date	Ship Date	Profit	Quantity ordered	new	Sales	Order ID
0	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False
...
1947	False	False	False	False	False	False	False
1948	False	False	False	False	False	False	False
1949	False	False	False	False	False	False	False
1950	False	False	False	False	False	False	False
1951	False	False	False	False	False	False	False

[1952 rows x 25 columns]

```
[63]: sorted_p = p.sort_values(by='City', ascending=False)
```

```
top_10_cities = sorted_p.head(30)
```

```
[64]: plot.figure(figsize=(20, 10))
plot.bar(top_10_cities['City'], top_10_cities['Customer ID'])
plot.xlabel('City')
plot.ylabel('Customer ID')
plot.title('Top 10 Cities by Customer ID')
plot.xticks(rotation=45, ha='right') # Rotate x-axis labels for better
visibility
plot.tight_layout()
plot.show()
```

