1.Calculate the Average Sales in each Shops?

import pandas as pd

dic2={'Retail\_shops':['croma','Reliance\_mart','RMKV','chennai\_silks','Big\_Basket','walmart','Big\_Basket','walmart','Big\_Basket','walmart','croma','Reliance\_mart','chennai\_silks'], 'city':["chennai","kovai","Tirupathi","hydrabad","Tirupathi","chennai","Hydrabad","Hydrabad","kovai","Agra","Agra","Bangalore","Bangalore"], 'Sales':[60000,50000,70000,55000,40000,30000,70000,40000,55000,40000,25000,90000,55000]}

df2=pd.DataFrame(dic2)

df2.groupby(by='Retail\_shops')['Sales'].min()

**OUTPUT:**

Retail\_shops

Big\_Basket 40000

RMKV 70000

Reliance\_mart 50000

chennai\_silks 55000

croma 25000

walmart 30000

Name: Sales, dtype: int64

2.Calculate the total sales in each city?

df2.groupby(by='city')['Sales'].min()

df2.sort\_values(by=['city','Sales']=[True,True])

**OUTPUT:**

Retail\_shopscitySales10cromaAgra250009walmartAgra4000012chennai\_silks Bangalore5500011Reliance\_martBangalore 900007walmart Hydrabad400006Big\_BasketHydrabad700004Big\_BasketTirupathi400002RMKVTirupathi700005n walmart chennai 300000cromachennai600003chennai\_silkshydrabad550001Reliance\_martkovai500008Big\_Basketkovai55000

3.sort the cities in ascending order?

df2.sort\_values(by=['city','Sales'],ascending=[True,True])

**OUTPUT:**

retail\_shops city 10cromaAgra250009walmartAgra4000012chennai\_silksBangalore5500011Reliance\_martBangalore900007walmartHydrabad400006Big\_BasketHydrabad700004Big\_BasketTirupathi400002RMKVTirupathi700005walmartchennai300000cromachennai600003chennai\_silkshydrabad550001Reliance\_martkovai500008Big\_Basketkovai55000

4.Sort the cities in descending order and the corresponding sales in Ascending order?

df2.sort\_values(by=['city','Sales'],ascending=[False,True])

**OUTPUT:**

Retail\_shopscitySales1Reliance\_martkovai500008Big\_Basketkovai550003chennai\_silkshydrabad550005walmartchennai300000cromachennai600004Big\_BasketTirupathi400002RMKVTirupathi700007walmartHydrabad400006Big\_BasketHydrabad7000012chennai\_silksBangalore5500011Reliance\_martBangalore9000010cromaAgra250009walmartAgra40000

5.Display all the Coloumns other then city?

**df2.loc[:,df2.columns!='city']**

**OUTPUT:**

Retail\_shopsSales0croma600001Reliance\_mart500002RMKV700003chennai\_silks550004Big\_Basket400005walmart300006Big\_Basket700007walmart400008Big\_Basket550009walmart4000010croma2500011Reliance\_mart9000012chennai\_silks55000

6.Create a new coloumns Which as Rank of the Shops Based on Sales?

df2["Rank"]=df2["Sales"].rank()

df2

**OUTPUT:**

Retail\_shopscitySalesRank0cromachennai6000010.01Reliance\_martkovai500006.02RMKVTirupathi7000011.53chennai\_silkshydrabad550008.04Big\_BasketTirupathi400004.05walmartchennai300002.06Big\_BasketHydrabad7000011.57walmartHydrabad400004.08Big\_Basketkovai550008.09walmartAgra400004.010cromaAgra250001.011Reliance\_martBangalore9000013.012chennai\_silksBangalore550008.0

7.Sort the Rank to Coloumns,in Ascending order?

**df2["Rank"]=df2["Sales"].rank(ascending=True)**

**df2**

**OUTPUT:**

| **Retail\_shops** | **city** | **Sales** | **Rank** |
| --- | --- | --- | --- |
| **0** | croma | chennai | 60000 | 10.0 |
| **1** | Reliance\_mart | kovai | 50000 | 6.0 |
| **2** | RMKV | Tirupathi | 70000 | 11.5 |
| **3** | chennai\_silks | hydrabad | 55000 | 8.0 |
| **Retail\_shops** | **city** | **sales** | **Rank** |  |
| **4** | Big\_Basket | Tirupathi | 40000 | 4.0 |
| **5** | walmart | chennai | 30000 | 2.0 |
| **6** | Big\_Basket | Hydrabad | 70000 | 11.5 |
| **7** | walmart | Hydrabad | 40000 | 4.0 |
| **8** | Big\_Basket | kovai | 55000 | 8.0 |
| **9** | walmart | Agra | 40000 | 4.0 |
| **10** | croma | Agra | 25000 | 1.0 |
| **11** | Reliance\_mart | Bangalore | 90000 | 13.0 |
| **12** | chennai\_silks | Bangalore | 55000 | 8.0 |

8.Display the Minimum sales in each shops bar graph?

df2.groupby(by='Retail\_shops')['Sales'].min()

**OUTPUT:**

Retail\_shops

Big\_Basket 40000

RMKV 70000

Reliance\_mart 50000

chennai\_silks 55000

croma 25000

walmart 30000

Name: Sales, dtype: int64