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PRACTICAL NO. 4

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Run Code

In [36]:
```
# Rohan Lohakane Roll no 574 Practical no 4
import numpy as np
import pandas as pd
```

In [37]:
```
data=pd.read_csv("/Users/Downloads/grainsales.csv")
```

In [38]:
```
df=pd.DataFrame(data)
print(df)
```

```
      GrainName       State       City Months  Year    Sales
0          Ragi  Maharashtra     Nagpur    JAN  2023  1000000
1         Bajra       Panjab   Amritsar    FEB  2023  1500000
2          Ragi  Maharashtra     Nagpur    JAN  2023  1000000
3         Bajra       Panjab   Amritsar    FEB  2023  1500000
4          Ragi  Maharashtra     Nagpur    JAN  2023  1000000
5         Bajra       Panjab   Amritsar    FEB  2023  1500000
6          Oats     Hariyana   Gurugram  MARCH  2023  2000000
7        Sattu       Gujarat      Surat  APRIL  2023  2500000
8         Sooji   Tamil Nadu    Madurai    MAY  2023  3000000
9   Brown rice     Telangana  Hyderabad   JUNE  2023  3500000
10        Wheat  West Bengol   Asansole   JULY  2023  4000000
11         Corn           UP     Kanpur    AUG  2023  4500000
12         Ragi  Maharashtra     Nagpur    JAN  2023  1000000
13        Bajra       Panjab   Amritsar    FEB  2023  1500000
14         Oats     Hariyana   Gurugram  MARCH  2023  2000000
15       Sattu       Gujarat      Surat  APRIL  2023  2500000
16        Sooji   Tamil Nadu    Madurai    MAY  2023  3000000
17  Brown rice     Telangana  Hyderabad   JUNE  2023  3500000
18        Wheat  West Bengol   Asansole   JULY  2023  4000000
19         Corn           UP     Kanpur    AUG  2023  4500000
20        Sooji   Tamil Nadu    Madurai    MAY  2023  3000000
21  Brown rice     Telangana  Hyderabad   JUNE  2023  3500000
22        Wheat  West Bengol   Asansole   JULY  2023  4000000
23         Corn           UP     Kanpur    AUG  2023  4500000
24         Ragi  Maharashtra     Nagpur    JAN  2023  1000000
25  Brown rice     Telangana  Hyderabad   JUNE  2023  3500000
26        Wheat  West Bengol   Asansole   JULY  2023  4000000
```

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Run Code

In [39]:
```
df.columns
```

Out[39]:
```
Index(['GrainName', 'State', 'City', 'Months', 'Year', 'Sales'], dtype='object')
```

In [40]:
```
print(df['Sales'].describe())
```

```
count    2.700000e+01
mean     2.685185e+06
std      1.249216e+06
min      1.000000e+06
25%      1.500000e+06
50%      3.000000e+06
75%      3.750000e+06
max      4.500000e+06
Name: Sales, dtype: float64
```

In [41]:
```
df=df.groupby('Months').sum()
```

In [42]:
```
df=df.sort_values(by=['Sales'],ascending=False)
df
```

Out[42]:

Months	GrainName	State	City	Year	Sales
JULY	WheatWheatWheatWheat	West BengolWest BengolWest BengolWest Bengol	AsansoleAsansoleAsansoleAsansole	8092	16000000
JUNE	Brown rice Brown rice Brown rice Brown rice	TelanganaTelanganaTelanganaTelangana	HyderabadHyderabadHyderabadHyderabad	8092	14000000
AUG	CornCornCorn	UPUPUP	KanpurKanpurKanpur	6069	13500000
MAY	SoojiSoojiSooji	Tamil NaduTamil NaduTamil Nadu	MaduraiMaduraiMadurai	6069	9000000
FEB	BajraBajraBajraBajra	PanjabPanjabPanjabPanjab	AmritsarAmritsarAmritsarAmritsar	8092	6000000
APRIL	Sattu Sattu	GujaratGujarat	SuratSurat	4046	5000000
JAN	RagiRagiRagiRagiRagi	MaharashtraMaharashtraMaharashtraMaharashtraMa...	NagpurNagpurNagpurNagpurNagpur	10115	5000000
MARCH	OatsOats	HariyanaHariyana	GurugramGurugram	4046	4000000

In [43]:
```
print("The best month of sales and the amount of sales is :")
```

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Run Code

In [43]:
```
print("The best month of sales and the amount of sales is :")
df.head(1)
```

```
The best month of sales and the amount of sales is :
```

Out[43]:

Months	GrainName	State	City	Year	Sales
JULY	WheatWheatWheatWheat	West BengolWest BengolWest BengolWest Bengol	AsansoleAsansoleAsansoleAsansole	8092	16000000

In [46]:
```
df=df.groupby('GrainName').sum()
df=df.sort_values(by=['Sales'],ascending=False)
df
```

Out[46]:

GrainName	State	City	Year	Sales
WheatWheatWheatWheat	West BengolWest BengolWest BengolWest Bengol	AsansoleAsansoleAsansoleAsansole	8092	16000000
Brown rice Brown rice Brown rice Brown rice	TelanganaTelanganaTelanganaTelangana	HyderabadHyderabadHyderabadHyderabad	8092	14000000
CornCornCorn	UPUPUP	KanpurKanpurKanpur	6069	13500000
SoojiSoojiSooji	Tamil NaduTamil NaduTamil Nadu	MaduraiMaduraiMadurai	6069	9000000
BajraBajraBajraBajra	PanjabPanjabPanjabPanjab	AmritsarAmritsarAmritsarAmritsar	8092	6000000
RagiRagiRagiRagiRagi	MaharashtraMaharashtraMaharashtraMaharashtraMa...	NagpurNagpurNagpurNagpurNagpur	10115	5000000
Sattu Sattu	GujaratGujarat	SuratSurat	4046	5000000
OatsOats	HariyanaHariyana	GurugramGurugram	4046	4000000

In [47]:
```
print("The product sold the most is :")
df.head(1)
```

```
The product sold the most is :
```

Out[47]:

GrainName	State	City	Year	Sales
WheatWheatWheatWheat	West BengolWest BengolWest BengolWest Bengol	AsansoleAsansoleAsansoleAsansole	8092	16000000

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Run Code

In [49]:
```
df=df.groupby('City').sum()
df=df.sort_values(by=['Sales'],ascending=False)
df
```

Out[49]:

City	State	Year	Sales
AsansoleAsansoleAsansoleAsansole	West BengolWest BengolWest BengolWest Bengol	8092	16000000
HyderabadHyderabadHyderabadHyderabad	TelanganaTelanganaTelanganaTelangana	8092	14000000
KanpurKanpurKanpur	UPUPUP	6069	13500000
MaduraiMaduraiMadurai	Tamil NaduTamil NaduTamil Nadu	6069	9000000
AmritsarAmritsarAmritsarAmritsar	PanjabPanjabPanjabPanjab	8092	6000000
NagpurNagpurNagpurNagpurNagpur	MaharashtraMaharashtraMaharashtraMaharashtraMa...	10115	5000000
SuratSurat	GujaratGujarat	4046	5000000
GurugramGurugram	HariyanaHariyana	4046	4000000

In [50]:
```
print("The city which sold the most products is :")
df.head(1)
```

```
The city which sold the most products is :
```

Out[50]:

City	State	Year	Sales
AsansoleAsansoleAsansoleAsansole	West BengolWest BengolWest BengolWest Bengol	8092	16000000

In [ ]: