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PRACTICAL NO. 4

Jupyter Assignment 4 EDS Last Checkpoint: 16 hours ago (unsaved changes)

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Not Trusted Python 3 (ipykernel)

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 Bengal	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 Bengal	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 Bengal	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 Bengal	Asansole	JULY	2023	4000000

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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]:
```

	GrainName	State	City	Year	Sales
Months					
JULY	WheatWheatWheatWheat	West BengalWest BengalWest BengalWest Bengal	AsansoleAsansoleAsansoleAsansole	8092	16000000
JUNE	Brown rice Brown rice Brown rice Brown rice	TelanganaTelanganaTelanganaTelangana	HyderabadHyderabadHyderabadHyderabad	8092	14000000
AUG	CornCornCornCorn	UPUPUPUP	KanpurKanpurKanpurKanpur	6069	13500000
MAY	SoojiSoojiSoojiSooji	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 :")
```

```
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]:
```

GrainName	State	City	Year	Sales
Months				
JULY	WheatWheatWheatWheat	West BengalWest BengalWest BengalWest Bengal	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 BengalWest BengalWest BengalWest Bengal	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	HaryanaHaryana	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 BengalWest BengalWest BengalWest Bengal	AsansoleAsansoleAsansoleAsansole	8092	16000000

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

```
Out[49]:
```

City	State	Year	Sales
AsansoleAsansoleAsansoleAsansole	West BengalWest BengalWest BengalWest Bengal	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	HaryanaHaryana	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 BengalWest BengalWest BengalWest Bengal	8092	16000000

```
In [ ]:
```