Assignment no: 4

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Problem Statement:-

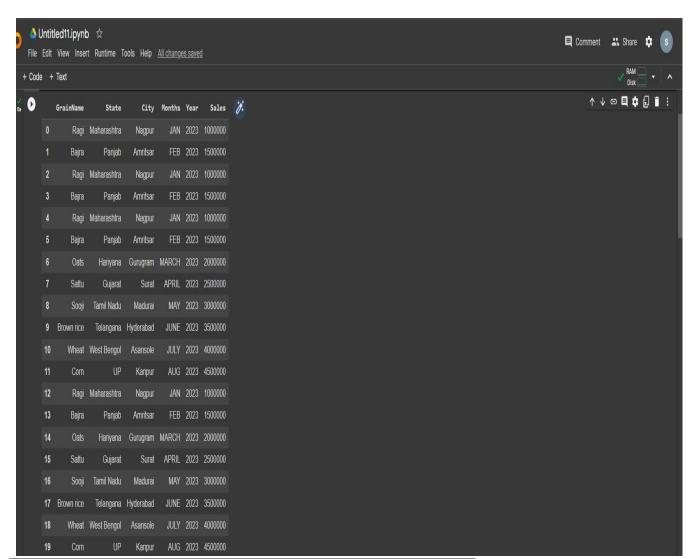
Read any real-life dataset. Store the data in Data Frames. Identify 10 grains for the given dataset.

Implement all 20 grains using Pandas methods. The Sample Grains for the Sales Dataset are as:

- 1. Which was the best month for sales? How much was earned that month?
- 2. Which product sold the most? Why do you think it did?
- 3. Which city sold the most products?
- 4. What Products are most often sold together?

Solution:-

import pandas as pd
df=pd.read csv("/content/sample data/Grainsales.csv") df



Best month for sales? How much was earned that month?
df1=df.groupby(['Months'],sort=False)[["Sales"]].sum()
max1=df1["Sales"].max() df1[df1["Sales"]==max1]

```
Months

JULY 16000000
```

```
Sales %.

GrainName

Wheat 16000000
```

```
#City sold the most products?
df1=df.groupby(['City'],sort=False)[["GrainName"]].sum()
max1=df1["GrainName"].max() df1[df1["GrainName"]==max1]
```

```
City

Asansole WheatWheatWheat
```

```
#Products are most often sold together?
order_products = df[['Sales', 'GrainName']] order_products
= order_products.groupby('Sales')['GrainName'].apply(list)
product_combinations = order_products.apply(lambda x:
pd.Series(x).value_counts()).fillna(0) most_common_combinations =
product_combinations.sum().nlargest(10) print("The most often sold
products together are:") print(most_common_combinations)
```

```
The most often sold products together are:
Ragi
              5.0
              4.0
Bajra
Brown rice
              4.0
Wheat
              4.0
Sooji
              3.0
Corn
              3.0
0ats
              2.0
Sattu
              2.0
dtype: float64
```

```
# Product sold the most?
df1=df.groupby(['GrainName'],sort=False)[["Sales"]].sum()
max1=df1["Sales"].max() df1[df1["Sales"]==max1]
# Why do you think it did?
Answer: Wheat is the staple food of India. It is sold mostly in the months of June and July .
```