```
market basket analysis is frequently used by restaurants ,retail stores,
and online shopping platforms to encourage customers to make more purchase in single visit
this is a use case of data science in marketing that increases company sales and drive
business growth and commodity utilizes the apriori algorithm
```

what is APRIORI algorithm the apriori algo is the most common technique for performing market basket analysis it is used for association rule mining which is rule based process used to identify correlations between items purchased by users

components of apriori algo .Support .Lift .Confidence

```
support -the first component of apriori algorithm is support
support=transactions comprising item/total transaction
```

```
confidence tell us likelihood of different purchase combinations .we calculate that using formula
conf(Bread->Milk)=Transaction comprising milk and bread/transaction comprising bread
```

```
lift refers to increase in the ratio of sale of milk when you sell bread
lift=Confidence(bread->milk)/Support(Bread)=0.75/1=1.3
that means customers are 1.3 times more likely to buy milk if you also sell bread
```

```
pre requisites for performing market based analysis
Step 1:
download the dataset "groceries_dataset.csv"
Step 2:
reading the dataset
```

```
import pandas as pd
from google.colab import drive

df=pd.read_csv('/content/Groceries_dataset.csv')
df.head()
```

	Member_number	Date	itemDescription
0	1808	21-07-2015	tropical fruit
1	2552	05-01-2015	whole milk
2	2300	19-09-2015	pip fruit
3	1187	12-12-2015	other vegetables
4	3037	01-02-2015	whole milk

```
df['single_transaction']=df['Member_number'].astype(str)+'_'+df['Date'].astype(str)
df.head()
```

	Member_number	Date	itemDescription	single_transaction
0	1808	21-07-2015	tropical fruit	1808_21-07-2015
1	2552	05-01-2015	whole milk	2552_05-01-2015
2	2300	19-09-2015	pip fruit	2300_19-09-2015
3	1187	12-12-2015	other vegetables	1187_12-12-2015
4	3037	01-02-2015	whole milk	3037_01-02-2015

Start coding or generate with AI.