

```
In [1]: import pandas as pd
import numpy as np
```

```
In [2]: master_basket = pd.read_csv(r"D:\PG-DAI\MachineLearning\Dec 28 Apriori\Market_Basket_Optimisation.csv", header= None)
```

```
In [5]: master_basket.fillna(0, inplace=True)
```

```
In [24]: master_basket
```

```
Out[24]:
```

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	
	0	shrimp	almonds	avocado	vegetables mix	green grapes	whole weat flour	yams	cottage cheese	energy drink	tomato juice	low fat yogurt	green tea	honey	salad	mineral water	salmon	antioxydar juic
	1	burgers	meatballs	eggs	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	chutney	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3	turkey	avocado	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4	mineral water	milk	energy bar	whole wheat rice	green tea	0	0	0	0	0	0	0	0	0	0	0	
	
	7496	butter	light mayo	fresh bread	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7497	burgers	frozen vegetables	eggs	french fries	magazines	green tea	0	0	0	0	0	0	0	0	0	0	
	7498	chicken	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7499	escalope	green tea	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7500	eggs	frozen smoothie	yogurt cake	low fat yogurt	0	0	0	0	0	0	0	0	0	0	0	0	

7501 rows × 20 columns

```
In [7]: transacts = []  
        # populating a list of transactions  
        for i in range(0, 7501):  
            transacts.append([str(master_basket.values[i,j]) for j in range(0, 20)])
```

```
In [10]: transacts[1]
```

```
Out[10]: ['burgers',  
          'meatballs',  
          'eggs',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0',  
          '0']
```

```
In [15]: from apyori import apriori
```

```
In [16]: rule = apriori(transactions = transacts, min_support = 0.003, min_confidence = 0.2, min_lift = 3, min_length = 2, max_length = 2)
```

```
In [23]: for i in rule:  
          print(i)
```

```

RelationRecord(items=frozenset({'escalope', 'mushroom cream sauce'}), support=0.005732568990801226, ordered_statistics=[OrderedStatistic(items_base=frozenset({'mushroom cream sauce'}), items_add=frozenset({'escalope'}), confidence=0.3006993006993007, lift=3.790832696715049)])
RelationRecord(items=frozenset({'escalope', 'pasta'}), support=0.005865884548726837, ordered_statistics=[OrderedStatistic(items_base=frozenset({'pasta'}), items_add=frozenset({'escalope'}), confidence=0.3728813559322034, lift=4.700811850163794)])
RelationRecord(items=frozenset({'honey', 'fromage blanc'}), support=0.003332888948140248, ordered_statistics=[OrderedStatistic(items_base=frozenset({'fromage blanc'}), items_add=frozenset({'honey'}), confidence=0.2450980392156863, lift=5.164270764485569)])
RelationRecord(items=frozenset({'herb & pepper', 'ground beef'}), support=0.015997866951073192, ordered_statistics=[OrderedStatistic(items_base=frozenset({'herb & pepper'}), items_add=frozenset({'ground beef'}), confidence=0.3234501347708895, lift=3.2919938411349285)])
RelationRecord(items=frozenset({'tomato sauce', 'ground beef'}), support=0.005332622317024397, ordered_statistics=[OrderedStatistic(items_base=frozenset({'tomato sauce'}), items_add=frozenset({'ground beef'}), confidence=0.3773584905660377, lift=3.840659481324083)])
RelationRecord(items=frozenset({'olive oil', 'light cream'}), support=0.003199573390214638, ordered_statistics=[OrderedStatistic(items_base=frozenset({'light cream'}), items_add=frozenset({'olive oil'}), confidence=0.20512820512820515, lift=3.1147098515519573)])
RelationRecord(items=frozenset({'olive oil', 'whole wheat pasta'}), support=0.007998933475536596, ordered_statistics=[OrderedStatistic(items_base=frozenset({'whole wheat pasta'}), items_add=frozenset({'olive oil'}), confidence=0.2714932126696833, lift=4.122410097642296)])
RelationRecord(items=frozenset({'shrimp', 'pasta'}), support=0.005065991201173177, ordered_statistics=[OrderedStatistic(items_base=frozenset({'pasta'}), items_add=frozenset({'shrimp'}), confidence=0.3220338983050847, lift=4.506672147735896)])

```

In [4]:

Requirement already satisfied: apriori in c:\programdata\anaconda3\lib\site-packages (1.0.0)

Note: you may need to restart the kernel to use updated packages.

WARNING: Error parsing requirements for python-jsonrpc-server: [Errno 2] No such file or directory: 'c:\\programdata\\anaconda3\\lib\\site-packages\\python_jsonrpc_server-0.4.0.dist-info\\METADATA'

WARNING: Error parsing requirements for pathtools: [Errno 2] No such file or directory: 'c:\\programdata\\anaconda3\\lib\\site-packages\\pathtools-0.1.2.dist-info\\METADATA'