Eclat

Importing the libraries

```
!pip install apyori
```

```
Collecting apyori
  Downloading https://files.pythonhosted.org/packages/5e/62/5ffde5c473ea4b033490617ec5ca
Building wheels for collected packages: apyori
  Building wheel for apyori (setup.py) ... done
  Created wheel for apyori: filename=apyori-1.1.2-cp36-none-any.whl size=5975 sha256=3b9
  Stored in directory: /root/.cache/pip/wheels/5d/92/bb/474bbadbc8c0062b9eb168f69982a044
Successfully built apyori
Installing collected packages: apyori
Successfully installed apyori-1.1.2
```

```
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
```

Data Preprocessing

```
dataset = pd.read_csv('Market_Basket_Optimisation.csv', header = None)
transactions = []
for i in range(0, 7501):
  transactions.append([str(dataset.values[i,j]) for j in range(0, 20)])
```

Training the Eclat model on the dataset

```
t = 0.003, min_confidence = 0.2, min_lift = 3, min_length = 2, max_length = 2)
```

Visualising the results

Displaying the first results coming directly from the output of the apriori

```
results = list(rules)
```

```
results
```

```
[RelationRecord(items=frozenset({'chicken', 'light cream'}), support=0.0045327289694707
 RelationRecord(items=frozenset({'escalope', 'mushroom cream sauce'}), support=0.005732
 RelationRecord(items=frozenset({'pasta', 'escalope'}), support=0.005865884548726837, or
 RelationRecord(items=frozenset({'honey', 'fromage blanc'}), support=0.0033328889481402
 RelationRecord(items=frozenset({'herb & pepper', 'ground beef'}), support=0.0159978669
 RelationRecord(items=frozenset({'tomato sauce', 'ground beef'}), support=0.005332622317
 RelationRecord(items=frozenset({'olive oil', 'light cream'}), support=0.003199573390214
 RelationRecord(items=frozenset({'whole wheat pasta', 'olive oil'}), support=0.007998933
 RelationRecord(items=frozenset({'shrimp', 'pasta'}), support=0.005065991201173177, orde
```

Putting the results well organised into a Pandas DataFrame

```
spect(results):
s         = [tuple(result[2][0][0])[0] for result in results]
s         = [tuple(result[2][0][1])[0] for result in results]
pports    = [result[1] for result in results]
turn list(zip(lhs, rhs, supports))
sinDataFrame = pd.DataFrame(inspect(results), columns = ['Product 1', 'Product 2',
```

Displaying the results sorted by descending supports

```
resultsinDataFrame.nlargest(n = 10, columns = 'Support')
```

	Product 1	Product 2	Support
4	herb & pepper	ground beef	0.015998
7	whole wheat pasta	olive oil	0.007999
2	pasta	escalope	0.005866
1	mushroom cream sauce	escalope	0.005733
5	tomato sauce	ground beef	0.005333
8	pasta	shrimp	0.005066
0	light cream	chicken	0.004533
3	fromage blanc	honey	0.003333
6	light cream	olive oil	0.003200