Using Bread Basket Dataset develop a Association Rule Mining using Appriori and FPGrouth algorithms.

In [ ]:
```
pip install pandas mlxtend
```

In [ ]:
```
import pandas as pd

# Load the dataset
data = pd.read_csv('desktop/python/BreadBasket.csv')

# Display some basic information about the dataset
print(data.head())
```

In [ ]:
```
# Perform one-hot encoding
basket = (data.groupby(['Tx', 'products'])
          .size().unstack(fill_value=1)
          .reset_index())
```

In [ ]:
```
from mlxtend.frequent_patterns import apriori, association_rules

# Convert item counts to binary values (0 or 1)
def encode_units(x):
    if x <= 0:
        return 0
    if x >= 1:
        return 1

basket_sets = basket.drop('Tx', axis=1).applymap(encode_units)

# Find frequent itemsets with Apriori
frequent_itemsets_apriori = apriori(basket_sets, min_support=0.02, use_colnames=True)

# Generate association rules
rules_apriori = association_rules(frequent_itemsets_apriori, metric='lift', min_thresh

# Display the rules
print("Apriori Rules:")
print(rules_apriori.head())
```

In [ ]:
```
from mlxtend.frequent_patterns import fpgrowth

# Find frequent itemsets with FP-Growth
frequent_itemsets_fpgrowth = fpgrowth(basket_sets, min_support=0.02, use_colnames=True

# Generate association rules
rules_fpgrowth = association_rules(frequent_itemsets_fpgrowth, metric='lift', min_thre

# Display the rules
print("\nFP-Growth Rules:")
print(rules_fpgrowth.head())
```