

Practical 2  
Set A  
Q.1

```
import pandas as pd
from mlxtend.frequent_patterns import apriori, association_rules
from mlxtend.preprocessing import TransactionEncoder

## Read the data, encode the data
transactions = [["Bread", "Milk"],
                ["Bread", "Diaper", "Beer", "Eggs"],
                ["Milk", "Diaper", "Beer", "Coke"],
                ["Bread", "Milk", "Diaper", "Beer"],
                ["Bread", "Milk", "Diaper", "Coke"]]

te=TransactionEncoder()
te_array=te.fit(transactions).transform(transactions)
df=pd.DataFrame(te_array, columns=te.columns_)
print(df);

## Find the frequent itemsets
freq_items = apriori(df, min_support = 0.5, use_colnames = True)
print(freq_items);

## Generate the association rules
rules = association_rules(freq_items, metric='support', min_threshold=0.05)
rules = rules.sort_values(['support', 'confidence'], ascending =[False,False])

print(rules)
```