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Subject: DWM LAB
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Experiment No.9

Aim:- To implement association mining algorithm like Apriori using python .

```
import pandas as pd
from mlxtend.frequent_patterns import apriori
from mlxtend.frequent_patterns import association_rules
data = {'Milk': [0, 0, 1, 0, 1],
'Bread': [1, 1, 1, 1, 0],
'Butter': [1, 1, 1, 0, 0],
'Eggs': [1, 0, 0, 0, 0],
'Coke': [0, 0, 0, 1, 1], }
df = pd.DataFrame(data)
frequent_itemsets = apriori(df, min_support=0.3, use_colnames=True)
rules = association_rules(frequent_itemsets, metric="confidence",
min_threshold=0.8)
print("Frequent Itemsets:\n", frequent_itemsets)
print("\nAssociation Rules:\n", rules[['antecedents', 'consequents',
'support', 'confidence']])
```

ouput:

```
Frequent Itemsets:
    support         itemsets
0       0.4          (Milk)
1       0.8         (Bread)
2       0.6        (Butter)
3       0.4          (Coke)
4       0.6  (Butter, Bread)

Association Rules:
   antecedents consequents  support  confidence
0    (Butter)     (Bread)      0.6         1.0
/usr/local/lib/python3.10/dist-packages/mlxtend/frequent
  warnings.warn(
```

Conclusion:hence successfully implement association mining algorithm like Apriori using python .