P6 Part B

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4. Confirm the results above of the Apriori algorithm. For R, the arules package is available. Matlab has the Association Rules package available from File Exchange1. Pythonhas the ‘mlxtend‘ library.

```
import pandas as pd
import numpy as np
import matplotlib as mpl
import matplotlib.pyplot as plt
import seaborn as sb
import math
%matplotlib inline

from mlxtend.preprocessing import TransactionEncoder
from mlxtend.frequent_patterns import apriori
from mlxtend.frequent_patterns import association_rules


item_data = []
with open("A.txt") as inputfile:
   for line in inputfile:
       item_data.append(line.strip().split(','))

te = TransactionEncoder()
tedata = te.fit(item_data).transform(item_data)
itemdf = pd.DataFrame(tedata, columns = te.columns_)
fi = apriori(itemdf, min_support=0.5, use_colnames=True)
fi
```

	support	itemsets
0	0.8	(E)
1	1.0	(K)
2	0.6	(O)
3	0.6	(Y)

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8	0.6	(Y, K)
9	0.6	(K, M)
10	0.6	(K, O, E)