This is a simple implementation of Apriori algorithm using matlab

Use:

[resultItems,resultRules] = **apriori**(yourdata.xlsx, minSupport, minConfidence)

you are free to set the minSupport and minConfidence values to play with the rules.

example:

```
>> apriori("test-dataset2.xlsx");
item: Brooklyn,, 0.152
item: HISPANIC,, 0.164
item: HISPANIC,MBE,, 0.164
item: MBE,WBE,, 0.169
item: MBE,New York,, 0.170
item: New York,WBE,, 0.175
item: ASIAN,MBE,, 0.200
item: ASIAN,, 0.202
item: New York,, 0.295
item: NON-MINORITY,, 0.300
item: NON-MINORITY,WBE,, 0.300
item: BLACK,, 0.301
item: BLACK,MBE,, 0.301
item: WBE,, 0.477
item: MBE,, 0.671
Rules: WBE, ==> NON-MINORITY,, 0.628,2.094
Rules: ASIAN, ==> MBE,, 0.990,1.474
Rules: BLACK, ==> MBE,, 1.000,1.490
Rules: HISPANIC, ==> MBE,, 1.000,1.490
Rules: NON-MINORITY, ==> WBE,, 1.000,2.094
>>
```

```
>> apriori("test-dataset2.xlsx", 0.2);
item: ASIAN,MBE,, 0.200
item: ASIAN,, 0.202
item: New York,, 0.295
item: NON-MINORITY,, 0.300
item: NON-MINORITY,WBE,, 0.300
item: BLACK,, 0.301
item: BLACK,MBE,, 0.301
item: WBE,, 0.477
item: MBE,, 0.671
Rules: WBE, ==> NON-MINORITY,, 0.628,2.094
Rules: ASIAN, ==> MBE,, 0.990,1.474
Rules: BLACK, ==> MBE,, 1.000,1.490
Rules: NON-MINORITY, ==> WBE,, 1.000,2.094
>>
```

```
>> apriori("test-dataset2.xlsx", 0.2, 0.5);
item: ASIAN,MBE,, 0.200
item: ASIAN,, 0.202
item: New York,, 0.295
item: NON-MINORITY,, 0.300
item: NON-MINORITY,WBE,, 0.300
item: BLACK,, 0.301
item: BLACK,MBE,, 0.301
item: WBE,, 0.477
item: MBE,, 0.671
Rules: WBE, ==> NON-MINORITY,, 0.628,2.094
Rules: ASIAN, ==> MBE,, 0.990,1.474
Rules: BLACK, ==> MBE,, 1.000,1.490
Rules: NON-MINORITY, ==> WBE,, 1.000,2.094
>>
```