Mlearn310 HW2

A	Provide Transaction	Item D milk	Item D Bread	Hem S Buttern	Stem D beer	
-		The part of the second	lu-taka-namada-rianda-phakati bolka-milit-militokohdano.	D	is grown to the state and the state of the s	ninsupport $= 0.26$
	2	0	restriction.	Ì.	0	= 0.26
	3	0	<u> </u>	0	1	
	4				0	min confidence
	5			0	0	= 0.5
	And the state of t				0	
				***		Sono- 28-x18
	8				The state of the s	+000 /s
	4	0		٥	medical responses agreement response or seed on an	Sopr- 28 x13 +05016 = 3.9
	10		1.	0	D	- 517
	11					~4
	C.					•
	and the first first for the first state of the state of t	nem inches de la companya de la comp	a manaritarina and a distribution is		Lance	
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		į.				

Them	Suprort
	6
2	7
3	9
4	3
*	16

Frequent => Support > 4

All items are frequent.

Minimum Supproset = 4/15

4/10

82 Alina

# mbarn 310 Hw2

Item !	Suppose	Ikm	Suppost
malk	Q	milk, bread	6
bread Julter	10	milk, butter	5
Seer	6	milk, beer	2 0 1
,	i	Steed, butter	6 Pruned.
		breed, beer	4 )
		butter, Seer.	3

Milk, bread, butter 3 > pruned.

Milk, bread, bear 3 > pruned.

Aurociation Ruly	Support	Confidence
{milk} >> {Bread}	6.	6/9 = 2/3
{milk} => {Butter}	5	5/9=
{bead} => {Butter}	6	16/10
{ Breed => { Exect).	4	4/6
{ milk, Bread} => { Butter}	4	4/6
{ milk, Dates} => Sisterai)	4	4/5

## $mlear310\_hw2\_8$

### Load data

superMarket = read.transactions('/Users/ravirajmulasa/Documents/Certificate\_in\_MachineLearning/Advanced

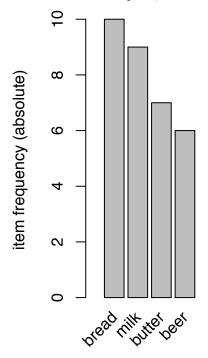
```
## Warning in readLines(file, encoding = encoding): incomplete final line
## found on '/Users/ravirajmulasa/Documents/Certificate_in_MachineLearning/
## Advanced_Machine_Learning/Homework/HW2/market_basket.txt'
```

#### superMarket

```
## transactions in sparse format with
## 15 transactions (rows) and
## 4 items (columns)
```

#### Item Frequency plot

You can also embed plots, for example:



#### **Association Rules**

You can also embed plots, for example:

```
## Apriori
##
```

```
## Parameter specification:
   confidence minval smax arem aval original Support maxtime support minlen
##
                 0.1
                        1 none FALSE
                                                TRUE
##
   maxlen target
                   ext
##
       10 rules FALSE
##
## Algorithmic control:
  filter tree heap memopt load sort verbose
##
       0.1 TRUE TRUE FALSE TRUE
                                         TRUE
##
## Absolute minimum support count: 3
##
## set item appearances ...[0 item(s)] done [0.00s].
## set transactions ...[4 item(s), 15 transaction(s)] done [0.00s].
## sorting and recoding items ... [4 item(s)] done [0.00s].
## creating transaction tree ... done [0.00s].
## checking subsets of size 1 2 3 done [0.00s].
## writing ... [12 rule(s)] done [0.00s].
## creating S4 object ... done [0.00s].
##
        lhs
                          rhs
                                   support
                                            confidence lift
                                   0.6000000 0.6000000 1.000000
## [1]
       {}
                      => {milk}
## [2]
       {}
                      => {bread} 0.6666667 0.6666667 1.000000
## [3]
       {beer}
                      => {bread} 0.2666667 0.6666667 1.000000
## [4]
       {butter}
                      => {milk}
                                  0.3333333 0.7142857 1.190476
## [5]
       {milk}
                      => {butter} 0.3333333 0.5555556 1.190476
## [6]
       {butter}
                      => {bread} 0.4000000 0.8571429 1.285714
## [7]
                      => {butter} 0.4000000 0.6000000 1.285714
        {bread}
## [8]
                      => {bread} 0.4000000 0.6666667
       {milk}
                                                       1.000000
## [9]
       {bread}
                      => {milk}
                                  0.4000000 0.6000000 1.000000
## [10] {butter,milk} => {bread} 0.2666667 0.8000000 1.200000
## [11] {bread,butter} => {milk} 0.2666667 0.6666667 1.111111
## [12] {bread,milk}
                     => {butter} 0.2666667 0.6666667 1.428571
```