

APRIORI ALGORITHM - Example

TID	Items
100	1 3 4
200	2 3 5
300	1 2 3 5
400	2 5

Min. Support - 2

Frequent - 1

C_1	Items	Support	L_1	Items	Support
	{1}	2		{1}	2
	{2}	3		{2}	3
	{3}	3		{3}	3
	{4}	1	x		
	{5}	3		{5}	3

Frequent - 2

C_2	Items	Support	L_2	Items	Support
	{1, 2}	1	x		
	{1, 3}	2		{1, 3}	2
	{1, 5}	1	x		
	{2, 3}	2		{2, 3}	2
	{2, 5}	3		{2, 5}	3
	{3, 5}	2		{3, 5}	2

Frequent - 3

C_3	Item	Support		L_3	Item	Support
	$\{1, 2, 3\}$	1	x			
	$\{1, 3, 5\}$	1	x		$\{2, 3, 5\}$	2
	$\{2, 3, 5\}$	2				

Rule Generation

Association Rule	Support	Confidence	(%)
$2 \wedge 3 \rightarrow 5$	2	$2/2 = 1$	100%
$3 \wedge 5 \rightarrow 2$	2	$2/2 = 1$	100%
$2 \wedge 5 \rightarrow 3$	2	$2/3 = 0.66$	66%
$2 \rightarrow 3 \wedge 5$	2	$2/3 = 0.66$	66%
$3 \rightarrow 2 \wedge 5$	2	$2/3 = 0.66$	66%
$5 \rightarrow 2 \wedge 3$	2	$2/3 = 0.66$	66%

Flow: strong-association

$$2 \wedge 3 \rightarrow 5$$

$$3 \wedge 5 \rightarrow 2$$