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Q 42

A database has 4 transactions

TID	Items bought
T100	{K, A, D, B}
T200	{D, A, C, E}
T300	{C, A, B, E}
T400	{B, A, D}

given min-Sup = 60%.

min - conf = 80%.

given frequent itemsets are: {{A}, {B}, {D}, {A, B}, {B, D}, {A, B, D}}

$2^K - 2 = 2^3 - 2 = 8 - 2 = 6$

The 6 possible association rule are as below

possible frequent itemset,

Frequent Itemset {A, B, D}

{A, B} → {D}

{B, D} → {A}

{A} → {B, D}

{D} → {A, B}

{A, D} → {B}

{B} → {A, D}

Rule	Confidence	confidence percentage %
{A, B} → {D}	2/3	66
{B, D} → {A}	2/2	100
{A, D} → {B}	2/3	66
{A} → {B, D}	2/4	50
{D} → {A, B}	2/3	66
{B} → {A, D}	2/3	66

As confidence minimum = 80%

{B, D} → {A}

I mean X ∈ transaction , (x items) (y items)

→ buys (x, items) (y, c)

{B, D} → {E}

This rule is the strong Association rule with confidence percentage 100