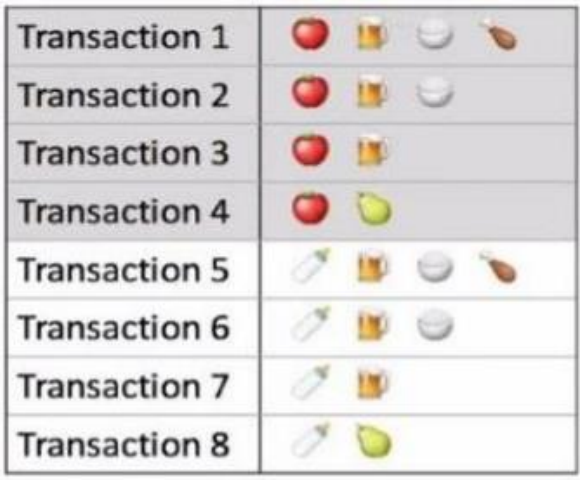
Name: Willie M. Bonavente
BSIT 2-4

Given



TRANSACTION	ITEMSET
Transaction 1	Apple, Beer, Rice, Chicken
Transaction 2	Apple, Beer, Rice
Transaction 3	Apple, Beer
Transaction 4	Apple, Pear
Transaction 5	Milk, Beer, Rice, Chicken
Transaction 6	Milk, Beer, Rice
Transaction 7	Milk, Beer
Transaction 8	Milk, Pear

Minimum Support **2**
Minimum Confidence **50%**

GENERATING CANDIDATES AND GETTING SUPPORT COUNT

CANDIDATE SET - C1

Item Set	Support_Count
Apple	4
Beer	6
Rice	4
Chicken	2
Pear	2
Milk	4

L1 (PRUNE)

Item Set	Support_Count
Apple	4
Beer	6
Rice	4
Chicken	2
Pear	2
Milk	4

CANDIDATE SET - C2

Item Set	Support_Count
Apple, Beer	3
Apple, Rice	2
Apple, Chicken	1
Apple, Pear	1
Apple, Milk	0
Beer, Rice	4
Beer, Chicken	2
Beer, Peer	0
Beer, Milk	3
Rice, Chicken	2
Rice, Pear	0
Rice, Milk	2
Chicken, Pear	0
Chicken, Milk,	1
Pear, Milk	1

FREQUENT SET - L2 (PRUNE)

Item Set	Support_Count
Apple, Beer	3
Apple, Rice	2
Beer, Rice	4
Beer, Chicken	2
Beer, Milk	3
Rice, Chicken	2

Candidate Set - C3 (Join)

Item Set	Support_Count
Apple, Beer, Rice	2
Apple, Beer, Chicken	1
Apple, Beer, Milk	0
Apple, Rice, Chicken	1
Apple, Chicken, Milk	0

Apple, Rice, Milk	0
Beer, Rice, Chicken	2
Beer, Rice, Milk	2
Beer, Chicken, Milk	1
Chicken, Milk, Rice	1

Frequent Set - L3 (Prune)

Item Set	Support_Count
Apple, Beer, Rice	2
Beer, Rice, Chicken	2
Beer, Rice, Milk	2

COMPUTING FOR CONFIDENCE

ITEM SET = [APPLE, BEER, RICE]

Rules	Support	Confidence	Remarks
Apple ^ Beer -> Rice	2	=Sup{(Apple ^ Beer) ^ Rice} / sup(Apple ^ Beer) = 2/3 = 0.667 = **66.67%**	VALID
Apple ^ Rice -> Beer	2	=Sup{(Apple ^ Rice) ^ Beer} / sup(Apple ^ Rice) = 2/2 = 1 = **100%**	VALID
Beer ^ Rice -> Apple	2	=Sup{(Beer ^ Rice) ^ Apple} / sup(Beer ^ Rice) = 2/4 = 0.5 = **50%**	VALID
Apple -> Rice ^ Beer	2	= Sup{Apple ^ (Rice ^ Beer)} / sup(Apple) = 2/4 = 0.5 = **50%**	VALID
Beer -> Apple ^ Rice	2	= Sup{Beer ^ (Apple ^ Rice)} / sup(Beer) = 2/6 = 0.3333 = **33.33%**	INVALID
Rice -> Apple ^ Beer	2	= Sup{Rice ^ (Apple ^ Beer)} / sup(Apple) = 2/4 = 0.5 = **50%**	VALID

COMPUTING FOR CONFIDENCE

ITEMS SET = [BEER, RICE, CHICKEN]

Rules	Support	Confidence	Remarks
Beer ^ Rice -> Chicken	2	= = Sup{(Beer ^ Rice) ^ Chicken} / sup(Beer ^ Rice) = 2/4	VALID

		= 0.5 = **50%**	
Beer ^ Chicken -> Rice	2	= Sup{(Beer Chicken) ^ Rice} / sup(Beer Chicken) = 2/2 = 1 = **100%**	VALID
Rice ^ Chicken -> Beer	2	= Sup{(Rice ^ Chicken) ^ Beer} / sup(Rice ^ Chicken) = 2/2 = 1 = **100%**	VALID
Beer -> Rice ^ Chicken	2	= Sup{Beer ^ (Rice Chicken)} / sup(Beer) = 2/6 = 0.3333 = **33.33%**	INVALID
Rice -> Beer ^ Chicken	2	= Sup{Rice ^ (Beer^ Chicken)} / sup(Rice) = 2/4 = 0.5 = **50%**	VALID
Chicken -> Rice ^ Beer	2	= Sup{Chicken ^ (Rice ^ Beer)} /sup(Chicken) = 2/2 = 1 = **100%**	VALID

COMPUTING FOR CONFIDENCE

ITEMS SET = [BEER, RICE, MILK]

Rules	Support	Confidence	Remarks
Beer ^ Rice -> Milk	2	= Sup{(Beer ^ Rice) ^ Milk} / sup(Beer ^ Rice) = 2/4 = 0.5 = **50%**	VALID
Beer ^ Milk -> Rice	2	= Sup{(Beer ^ Milk) ^ Rice} / sup(Beer ^ Milk) = 2/6 = 0.3333 = **33.33%**	INVALID
Rice ^ Milk -> Beer	2	= Sup{(Rice ^ Milk) ^ Beer} / sup(Rice ^ Milk) = 2/2 = 1 = **100%**	VALID
Beer -> Rice ^ Milk	2	= Sup{Beer ^ (Rice Milk)} / sup(Beer) = 2/6 = 0.3333 = **33.33%**	INVALID
Rice -> Beer ^ Milk	2	= Sup{Rice ^ (Beer ^ Milk)} / sup(Rice) = 2/4 = 0.5	VALID

		= **50%**	
Milk -> Rice ^ Beer	2	= Sup{Milk ^ (Rice ^ Beer)} / sup(Milk) = 2/4 = 0.5 = 50%	VALID

COMPUTING FOR LIFT

ITEMS SET = [APPLE, BEER, RICE]

Rules	Support	Confidence	Remarks
Apple ^ Beer -> Rice	2	= Sup{(Apple ^ Beer) ^ Rice} / sup(Apple ^ Beer) * sup(Rice) = **1.33**	POSITIVE CORRELATION
Apple ^ Rice -> Beer	2	= Sup{(Apple ^ Rice) ^ Beer} / sup(Apple ^ Rice) * sup(Beer) = **1.33**	POSITIVE RELATIONSHIP
Beer ^ Rice -> Apple	2	= Sup{(Beer ^ Rice) ^ Apple} / sup(Beer^ Rice) * sup(Apple) = **1**	NO CORRELATION
Apple -> Rice ^ Beer	2	= Sup{Apple ^ (Beer ^ Rice)} / sup(Apple) * sup(Beer ^ Rice) = **1**	NO CORRELATION
Beer -> Apple ^ Rice	2	= Sup{Beer ^ (Apple ^ Rice)} / sup(Beer) * sup(Apple ^ Rice) = **1.33**	POSITIVE CORRELATION
Rice -> Apple ^ Beer	2	= Sup{Rice ^ (Apple ^ Rice)} / sup (Rice) * sup(Apple ^ Rice) =**1.33**	POSITIVE CORRELATION

COMPUTING FOR LIFT

ITEMS SET = [BEER, RICE, MILK]

Rules	Support	Confidence	Remarks
Beer ^ Rice -> Chicken	2	= Sup{(Beer ^ Rice) ^ Chicken} / sup(Beer ^ Rice) * sup (Chicken) = **2**	POSITIVE CORRELATION
Beer ^ Chicken -> Rice	2	Sup{(Beer Chicken) ^ Rice} / sup(Beer Chicken) * sup(Rice) = **2**	POSITIVE RELATIONSHIP
Rice ^ Chicken -> Beer	2	= Sup{(Rice ^ Chicken) ^ Beer} / sup (Rice Chicken) * sup(Beer) = **1.33**	POSITIVE RELATIONSHIP
Beer -> Rice ^ Chicken	2	= Sup{Beer ^ (Rice Chicken)} / sup(Beer) * sup(Rice Chicken) = **1.33**	POSITIVE RELATIONSHIP

Rice -> Beer ^ Chicken	2	= Sup{Rice (Beer Chicken)} / sup(Rice) * sup(Beer Chicken) = **2**	POSITIVE CORRELATION
Chicken -> Rice ^ Beer	2	= Sup{Chicken ^ (Rice^ Beer)} / sup (Chicken) * sup(Rice Beer) = **2**	POSITIVE CORRELATION

COMPUTING FOR LIFT

ITEMS SET = [BEER, RICE, CHICKEN]

Rules	Support	Confidence	Remarks
Beer ^ Rice -> Milk	2	= Sup{(Beer ^ Rice) ^ Milk} / sup(Beer ^ Rice) * sup(Milk) = **1.33**	POSITIVE CORRELATION
Beer ^ Milk -> Rice	2	= Sup{(Beer ^ Milk) ^ Rice} / sup(Beer ^ Milk) * sup(Rice) = **1**	I POSITIVE CORRELATION
Rice ^ Milk -> Beer	2	= Sup{(Rice ^ Milk) ^ Beer} / sup(Rice Milk) * sup(Beer) = **1.33**	POSITIVE CORRELATION
Beer -> Rice ^ Milk	2	= Sup{Beer ^ (Rice Milk)} / sup(Beer) * sup(Rice ^ Milk) = **1.33**	POSITIVE CORRELATION
Rice -> Beer ^ Milk	2	= Sup{Rice ^ (Beer ^ Milk)} / sup (Rice) * sup (Beer ^ Milk) = **1.33**	POSITIVE CORRELATION
Milk -> Rice ^ Beer	2	= Sup{Milk ^ (Rice^ Beer)} / sup(Milk) * sup (Rice ^ Beer) = **1**	POSITIVE CORRELATION