(O) write the apriori algorithm some the following by Applying apriori algorithm

Consider the transcation below.

TID	Hen
7,	1,3,4
72	2,3,5
7,	1, 2,3,5
74	2,5
75	1,3,5

Create all possible association rule by generating Canchidateses Considering human Support as 2 and the Confidence. In the Rule Should be >=60%.

Ans) Constitute set C,

Hen	Support Court
1	3
2	3
3	4
4	2 1
5	4

Candidate set Cz

1 Ken	Support cons
1,2	1
1,3	3
1,5	à
2.3	à
4,5	3
3, 5	3

t'	frequent Henses
1	3
2	3
3	4
5	4

t	frequent Hensel
1,3	3
1,5	2
2,3	2
۵,5	3
3, 5	3

Candidale set C;

(km	Support Court
1,3,5	٩
2,3,5	2

5	Request ses
1,1,5	ع
2,3,5	ع

Candidek set Cy Carib be generated, then the Hern set only one latentifical as two Final frequent Ukm set one 1,3,5 and 3,3,5

Rules for {1,3,53-> {1,33 {1,5} {3,5} {1} {3} {5}}

- @ 115 -> 3 Support = 2/2 = 100>.
- 3 3n5 → 1 Support = 2/3 = 66%.
- Support = 2/3 = 66x.
- (5) 3 → 1 N5 Support = 3/4 = 50%.
- © 5 → 1 N3 Support = 0/4 = 50×

Rule for (2,3,53 -> (2,3), (2,53 (3,5) (2) (3) [5]

- (1) 2/13 -55 Support = 3/5/4 = (w).
- & 2012 33 = 66 x.
- 3 3 N5 → 2 Support = 2/2 = 661.
- (4) 2 →315
  Support = 2/3 = 66%
- (5) 3 → 2 N 5 Support : 2/4 = 5 6%.
- (B) 5 → 2 13 Support = 2/4 = 56%.

Threshold confidence = {1,3} (1,53 {3,5} [1]
{2,3} {2,5} {3,5} {31}

(02) Considering any transcation database with minimum 15 transcati Apply hash based technique and partitioning technique to leartly frequent womset

Solution

Hem TID	United.
Tı	Collee, Tea, Juile
72	Cultee, Souta
73	Tea, Soda
74	Coffee, Julie
75	Coffee, Tea
76	Soda, Jule
77	Coffee, Soda, Juice
37	Tea, Jule
79	Coffee, Tea, Soda
TIO	Suda, water
TII	Coffee, Tea, water
TIZ	Tea, water
713	Julie, Scola, Water
T14	Coffee, June, Water
TIS	Tea, Soda, Jule

Pair ( Colfee, Tea): h ( Colfee, Tea) = (1+2) × 7 = 3 Par ( Coller, June): h ( coffee, June) = (1+3) x = 4 Pair ( Collee, Suda): h (Collee, Suda) = (1+4) + 7 = 5 pair ( collee, water): h (collee, water) = (1+5) x 7 = 6 pair (Tea, July): h (Tea, July) = (2+3) / 7 = 5 pair (Tea, soda): h (Tea, soda) = (2+4) 1.7 = 6 pair (Tex, wale): h(Tex, wale) = (2+5) 17 =0. Pair (Jule, Soda): h(Jule, Soda) = (3+4) x.7 =0

Pair (Jule, wale): h (Jule, wale) = (3+5) x.2=1

Pair (Soda, wale): h (Soda, wale) = (4+5) x.2=2.

Hash Bucket	Count	pair
0	1	(Teg, wate), (Julie, Soda)
1-	1	(June, water)
2	í	( Sucha, water)
3		(coffee, 7ea)
4		(coffee, June)
5	2	(cottee, soula), (Tea, Jule)
6	2	( casher, water), (Tea, Suda)

### Count > a

Pair	count
Tea, water	3
Jule, Suda	3
Collee, Suda	4
Tea, Jule	4
collectuates	2
Tea, Souls	4

## partition 1

710	(tems
71	Coffee, Tea, June
72	coffee, Suda
73	Tea, soda
74	Collea, Julie
75	Coffee, Tea.

### Parthur 2

#### Parthur 3

710	Hems	710	items
To	Soda, Jule	Tu	culter, Tex, water
77	Collee, Soula, Jule	712	Tec, hades
18	Tea, Jule	7(3	Jule, Suda, wake
T9	culter, Tex, Soda	714	collee, June, wake
710	Suda, water	715	Tea, Soda, Jule.

# Partition 1

lenset	count
offee	4
	4
Tea	3
Jule	2
Soda	2
(Collee, Tea)	2
( Collee, June)	
(Tea, Soda)	2

## partition 3

Henset	count
Cullee	3
Soda	4
Julie	3
(Soda, Jule)	2
Coffee, sudd	2

# Partition3

Henset	Cant
(ACTO)	2
caree	3
Tea	3
Jule	3
Suda	3
water	2
(Teg, walk)	
(July, Soda)	2

Hem Set	Count
Coffee	4+3+2=9
Tea	4+6+3=7
Tuile	3+3+3=9
Soda	2+4+3=9
tuctes	64643-3
Coffee, June	2+0+0=2
Cuffee, Tea	2+0+0=2
Tea, soda	2+0+0=2
Soda, June	042+2=4
Cotlee, Soula	0+2+0=2
Tea, water	04049=9
Jule, Suda	0+0+2=2

frequent Hernet: Coffee, Tea, June, Soda, water, Esuda, June)