DATA SCIENCE

Assignment-4

LANISH ABDULAH QUESTION 1: MK-3720

4

1-itemset frequency = I. 6 工 IZ I2 13 Iz 4 4 Ty I45 4 2 IS 4 16 3 16 3 5 I67 In 5 18 4

 2- itemset frequency							
	,						
I, I2	5						
I, I3	3						
II, Is	2						
I1 > 16	1						
I., In	3						
I, , I8	N						

I2, I3 I2, IS 2 I2, I6

IB

3)

	12, 17	3		1			
	Ī2, I8	3.	l.	I=1,5I2	5	man or a supplementary was the same of a supplementary was	
no funcionalistic company study, postigini, considerant in respectancy subsequent	I3, 75	1		I,, T3	3	and the second of the second o	
aladalis o rapada sarra, aproposição per delitorario constituio, con rela, conj	I3, I6	2		I,, In	,3,	age o magnifest maken in side of the collegification from the tr	
	I3, I7	2		Ī, , Ī 9	3	Milliother Million between Strategies Strategies (Strategies Strategies Strategies (Strategies Strategies Stra	
	[3, [8	3		Ī2, Ī3	3	gitte glavere dimension or set stages glavered plants on	
	I<, IC	2	7	I2, I7	3	anguni mana aggin again (alai) (alai anaker a daa - dagik, siik	
	Is, I7	2		120 I8	3	and the company of the control of th	
	Is, Iq	J		I3', I8	3		
	I6, I7	3		16, In	3		
	I6, I8	2		I7, I8	3		
	Ī7, Ī8	3					
3-itemset frequency:							

	$\overline{1}_1, \overline{1}_2, \overline{1}_3$	2	
	I,, I2, I7	2	
	$\overline{1}_1, \overline{1}_2, \overline{1}_8$	2	
	I1, I3, I8	2	
	I, In I8	2	
	I2, I3, I8	2	
I	Ī2, Ī7, Ī8	2	
Ł			

As all frequencies are less than support count, 3 itemset will be null.

Association rules will be made using 2 itemsets.

$$I_1 \rightarrow I_2 = \frac{5}{6} = 0.633$$
 (Selected)

 $I_2 \rightarrow I_1 = \frac{5}{7} = 0.714$ (Selected)

 $I_1 \rightarrow I_3 = \frac{3}{6} = 0.5$
 $I_3 \rightarrow I_1 = \frac{3}{6} = 0.75$ (Selected)

 $I_1 \rightarrow I_2 = \frac{3}{6} = 0.5$
 $I_1 \rightarrow I_1 = \frac{3}{6} = 0.5$
 $I_2 \rightarrow I_1 = \frac{3}{6} = 0.5$
 $I_3 \rightarrow I_1 = \frac{3}{6} = 0.5$
 $I_4 \rightarrow I_3 = \frac{3}{6} = 0.75$ (Selected)

 $I_2 \rightarrow I_3 = \frac{3}{7} = 0.75$ (Selected)

 $I_2 \rightarrow I_2 = \frac{3}{7} = 0.75$ (Selected)

 $I_2 \rightarrow I_2 = \frac{3}{7} = 0.75$ (Selected)

 $I_3 \rightarrow I_2 = \frac{3}{7} = 0.75$ (Selected)

 $I_3 \rightarrow I_2 = \frac{3}{7} = 0.75$ (Selected)

 $I_3 \rightarrow I_3 = \frac{3}{7} = 0.75$ (Selected)

 $I_4 \rightarrow I_3 = \frac{3}{7} = 0.75$ (Selected)

 $I_7 \rightarrow I_7 = \frac{3}{7} = 0.6$
 $I_7 \rightarrow I_8 = \frac{3}{5} = 0.6$

QUESTION 2:

1. MT.M

$$(2 \times 4) \cdot (4 \times 2)$$
 (2×2)

2. M.MT

 $(4 \times 2) \cdot (2 \times 4)$
 (4×4)

MT.M.

$$\begin{bmatrix}
30 & 20 \\
20 & 30
\end{bmatrix}$$
 $\begin{bmatrix}
30 - \times & 20 \\
20 & 30
\end{bmatrix}$
 $\begin{bmatrix}
101 = (30 - \times)(30 - \times) - (20)(20) \\
= 400 + \times^2 - 60 \times - 400 \\
= \times^2 - 60 \times + 500 = 0
\end{bmatrix}$
 $\begin{cases}
\times 1 = 50 & \text{vector} = \begin{bmatrix} 1/\sqrt{2} \\ 1/\sqrt{2} \end{bmatrix}
\end{cases}$
 $\begin{cases}
\times 2 = 10 & \text{vector} = \begin{bmatrix} 1/\sqrt{2} \\ 1/\sqrt{2} \end{bmatrix}
\end{cases}$
 $\begin{cases}
\times 2 = 10 & \text{vector} = \begin{bmatrix} 1/\sqrt{2} \\ 1/\sqrt{2} \end{bmatrix}
\end{cases}$
 $\begin{cases}
\times 2 = 10 & \text{vector} = \begin{bmatrix} 1/\sqrt{2} \\ 1/\sqrt{2} \end{bmatrix}
\end{cases}$

M.E, =	2	3					
	3	2	×	1/52			
	1	4		1/52			
	4	١					
2	5/52 7		····	***************************************			
	5/52						
	5/52						
	5/52						
		Re	200	ed to 1	- Dimens	sion	
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· M.MT =							
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and other							
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· To calculat	e dime	nsion	of	a new	point	[6 <	2-)
we will n				[1/52]			
	· J			L 1/52			
[6 [6	5] ×	1/52	-				
_		L 1/5			- T		
= 11							
= 11	Δ -						
Victoru	Ans.					D	