**Day2**

1-Min support =2 ,Frequency of occurrence

|  |  |
| --- | --- |
| Item | Frequency |
| Hot dog | 4 |
| Buns | 2 |
| Ketchup | 2 |
| Coke | 3 |
| Chips | 4 |

Protizing item

|  |  |  |
| --- | --- | --- |
| Item | Frequnecy | Priority |
| Hot dog | 4 | 1 |
| Buns | 2 | 5 |
| Ketchup | 2 | 4 |
| Coke | 3 | 2 |
| Chips | 4 | 3 |

order item depend on priority

|  |  |
| --- | --- |
| Transactions | order |
| T1 | Hot dog,buns,ketchup |
| T2 | Hot dog , ketchup |
| T3 | Hot dog , chips,coke |
| T4 | Chips,coke |
| T5 | Chips,ketchup |
| T6 | Hot dog,chips,coke |

Validation:true

Conditional pattern case

Ketchup:{hot dog,buns:1},{chips:1}

Buns:{hot dog:2}

Coke:{hot dog,chips:2},{chips:1}

Conditional fb-tree

For item (ketchup):{{hotdog:1,buns:1},{chips:1}}

For item (Buns):{ hotdog:2}

For item (Chips):{ hotdog:2}

For item (coke):{{hotdog:2,chips:2},{chips:1}}  
Accepted

Buns:{hotdog:2}

Chips:{hotdog:2}

Coke:{chips:2,hotdog:2}

2- Min support=3, occuerance frequency:

|  |  |
| --- | --- |
| Item | Frequency |
| A | 3 |
| B | 3 |
| C | 2 |
| D | 5 |
| E | 4 |
| F | 3 |
| G | 1 |
| H | 1 |
| I | 1 |
| J | 1 |
| K | 1 |

Protorizing of items:

|  |  |  |
| --- | --- | --- |
| Item | Frequency | Priority |
| A | 3 | 3 |
| B | 3 | 4 |
| D | 5 | 1 |
| E | 4 | 2 |
| F | 3 | 5 |

Order of items based on priority

|  |  |
| --- | --- |
| Transaction | Order |
| T1 | D,E,A,B,F |
| T2 | D,E,B,F |
| T3 | D,E,A |
| T4 | D,A,F |
| T5 | D,E,B |

Validation :true

Conditional pattern case

For item F: {D,E,A,B:1},{D,E,B,F:1},{D,A:1}

For item B: {D,E,A:1},{D,E:2}

For item A: {D,E:2},{D:1}

For item C: {D:4}

Conditional fb-tree

For item A: {D:3,E:2} == accepted {D:3}

For item B: {{D:3,E:3},A:1} == accepted {D:3,E:3}

For item E : {D:4} == accepted

3)

For level 1: Min support =8, Frequenct:1 // item set: [1,1]

|  |  |
| --- | --- |
| Item set | Support |
| 1\*\* | 12 |
| 2\*\* | 13 |
| 3\*\* | 9 |
| 4\*\* | 7 ( min support) |

Frequent :2 // item set :[1,2]

|  |  |
| --- | --- |
| Item set | Support |
| 1\*\*,2\*\* | 12 |
| 2\*\*,3\*\* | 7 X |
| 1\*\*,3\*\* | 5 X |

Filterd transaction

|  |  |
| --- | --- |
| Transactions | Items |
| T1 | {111,121,211,221} |
| T2 | {111,211,223,323} |
| T3 | {112,122,221} |
| T4 | {112,121,221} |
| T5 | {111,122,211,221} |
| T6 | {221,323} |
| T7 | {323,313} |
| T8 | {111,211,121,313} |
| T9 | {121,211,212,311} |
| T10 | {312,222} |
| T11 | {112,121,122,211} |
| T12 | {221,121,111,313} |
| T13 | {221,121,111,313} |
| T14 | {111,122,211,311} |
| T15 | {111,211,121,313} |

Level 2

Min support=6

Frequent :1 // item set:[2,1]

|  |  |
| --- | --- |
| Item set | Support |
| 11\* | 10 |
| 12\* | 10 |
| 21\* | 8 |
| 22\* | 9 |
| 31\* | 7 |
| 32\* | 3 X |

Frequent :2 itemset [2,2]

|  |  |
| --- | --- |
| Item set | Support |
| {11\*,12\*} | 10 |
| {11\*,21\*} | 7 |
| {11\*,22\*} | 8 |
| {11\*,31\*} | 4 X |
| {12\*,21\*} | 7 |
| {12\*,22\*} | 7 |
| {12\*,31\*} | 5 X |
| {22\*,31\*} | 3 X |
| {21\*,31\*} | 2 X |

Frequent :3

Item set :[2,3]

|  |  |
| --- | --- |
| Item set | Support |
| {11\*,12\*,21\*} | 6 |
| {11\*,12\*,22\*} | 7 |
| {12\*,21\*,22\*] | 3 X |
| {11\*,21\*,22\*} | 4 X |