1)we have to take into consideration three columns business\_id, user\_id ,stars.x(stars given by user to that restaurant)

2)then we convert these columns like the table below:

(table -1)

|  |  |  |
| --- | --- | --- |
|  | User 1 | User 2 |
| Res 1 |  |  |
| Res 2 |  |  |
| Res 3 |  |  |

3)then we will have to run 2 for loops one inside the other

For( i =1 to n(no of unique restaurants) )

{ For( j =1 to n(no of unique restaurants) )

{ calculate the pearson similarity between the ith and other jth(1 to n ) restaurants.

}

}

We will store these n^2 values in a table of n\*n dimension as below:

(table-2)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Res 1 | Res 2 | Res 3 |
| Res 1 | 1 | ---- | ---- |
| Res 2 | ---- | 1 | --- |
| Res 3 | --- | --- | 1 |

4)now for a particular restaurant in the above table we will sort the rows in descending order based on similarity and store their indices in the sorted order.

5) now to predict the rating of a restaurant by a particular user, we will take the first K restaurants in the sorted list such that the user has rated them.

6) now we take the desired user column from table -1 and multiply it with the corresponding similarity values in the sorted value only for those values which the user has rated and store it in some variable x

7) the we calculate the sum of the top K elements of the sorted list and store it in some variable y

8)then the rating for a restaurant by a particular user will be (x/y)

9)now we will recommend restaurants for a user in decreasing order of (x/y)

Doubt: maam how would we select the suitable value for K??