**Apple Of Discord.inc**

⮚ Determine a meaningful brand name for your project. o **Apple Of Discord.inc**

⮚ Describe business processes/transactions in sentences.

* Filter restaurants based on reviews – top rated o Filter restaurants based on Chef recommendations
* Filter restaurants by cuisines o Filter restaurants reviews by stars o Filter restaurants by locations o Filter restaurants by price o Filter restaurants by operational hours o Filter restaurants by Dine- in, Delivery and takeout o Filter top rated reviewers o Filter most reviewed restaurants

⮚ **Entities, Attributes and Primary Keys** o Restaurant ( **rstId,** rstName, rstAddress, -rstAddStreet, -rstAddCity, -rstAddState, rstHours, rstOpenTime, -restCloseTime, rstContact, rstLink, rstServiceType[1..3], =rstAvgRating*)*

* Customer( **cstId**, cstName, -cstLastName, -cstFirstName, cstGender, cstAddress, -cstAddCity,

-cstAddState, =cstNumberOfReviews) o Menu(**mnuId**) o Food (**fodId**, fodName, fodType, fodPrice, fodAvailability)

**Relationship:**

Rates: Binary Relationship

1 Restaurant to 0 or more Customer

1 Customer to 0 or more Restaurant

Design: Binary relationships

1 Restaurant to 1 Menu

1 Menu to 1 Restaurant

Contain: Binary Relationships

1 Food to 1 Menu

1 Menu to 1 or more Food

Order: Binary

1 Customer to 1 or more Food 1 Food to 1 or more Customer

| **Mission Statement**:  Apple of Discord. inc is a restaurant rating platform; to connect restaurants and customers in and around College Park, Maryland. We provide a seamless and intuitive method to connect people of all ages to the food of their interest. In turn, creating a feedback loop for restaurants to understand their customers and the general food preferences in the area.  **Mission Objectives**:   * Have robust rating platform * Provide filtering options to customers * Provide a platform for customer feedback * Provide insights to the restaurant on the general eating habits of the sample population |
| --- |



**Relations**:

* Restaurant ( **rstId**, rstName, rstAddStreet, rstAddCity, rstAddState, rstOpenTime, restCloseTime, rstContact, rstLink)
* RestaurantService ( *rstId*, **rstServiceType**)
* Customer ( **cstId**, cstLastName, cstFirstName, cstGender, cstAddCity, cstAddState)
* Menu (**mnuId**, ***rstId***)
* Food (**fodId**, fodName, fodType, fodPrice, fodAvailability, ***mnuId***)
* Order (***cstId***, ***fodId***)
* Rates (***rstId***, ***cstId***, rtnDate, rtnRating, rtnComments)

**Functional dependency**:

**3NF**:

* rstId →rstName, rstAddStreet, rstAddCity, rstAddState, rstOpenTime, restCloseTime, rstContact, rstLink
* cstId → cstLastName, cstFirstName, cstGender, cstAddCity, cstAddState
* cstId, rstId→ rtnDate, rtnRating, rtnComments
* rstServiceType → rstId
* mnuId,rstId →
* cstId, fodId →
* fodId → fodName, fodType, fodPrice, fodAvailability

**ADD rstId or mnuId??**

**Business rules**:

[R1] When restaurant information is deleted from or changed in the database, all information related to the rating should be deleted or changed accordingly.

[R2] When restaurant information is deleted from or changed in the database, the service type should be changed or deleted accordingly.

[R3] When restaurant information is deleted from or changed in the database, information related to the restaurant menu should be changed or deleted accordingly.

[R4] When customer information change or deleted in the database, orders related to that customer will also need to be change or deleted.

[R5] If food information is changed or deleted, the related food orders will need to be changed or deleted.

[R6] When food is deleted or changed in the database the corresponding menu information should be deleted or changed accordingly.

[R7] When a customer is changed or deleted from the database the corresponding ratings should also be changed or deleted.

[R8] When a menu changes information in the database, the corresponding food information should be changed accordingly.

[R9] When an order is placed, the menu and the food cannot be deleted or changed In the database.

**Referential Integrity**:

| Relation | | Forei gn Key | | | Base  Relation | Primary Key | | Busine ss Rule | | | Constrain t: ON DELETE | Busine ss Rule | Constrain t: ON  UPDATE |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RestaurantServ ice | | rstId | | | Restaura nt | rstId | | R2 | | | CASCADE | R2 | CASCADE |
| Menu | | rstId | | | Restaura nt | rstId | | R3 | | | CASCADE | R3 | CASCADE |
| Rates | | rstId | | | Restaura nt | rstId | | R1 | | | CASCADE | R1 | CASCADE |
| Order | | cstId | | | Custom er | cstId | |  | | R4 | CASCADE | R4 | CASCADE |
| Order | | fodId | | | Food | fodId | | R5 | | | CASCADE | R5 | CASCADE |
|  | |  |  |
| Food | |  | | |  |  | | R6 | | | CASCADE | R6 | CASCADE |
|  | mnuI  d | | Menu | mnuId, rstId | |
|  | |  |  | |
| Rates | | cstId | |  | Custom er | cstId |  | | R7 | | CASCADE | R7 | CASCADE |
| Menu | |  | |  |  |  |  | | R8 | | CASCADE | R8 | CASCADE |
|  | rstId |  | Food | mnuId |
|  |  |  |  |
|  | |  | |  |  |  |  | | R9 | | NO  ACTION | R9 | NO  ACTION |
|  | Order |  | |
|  | fodId |  | Food | fodId, mnuId |
|  |  |  |
|  |  |  |  |

**Sample Data**:

Restaurant(‘123456’, ‘Mark’s Cafe’,’22 Jump Street college park maryland’,’11:00’,’22:00’,’301000000’,’www.markscafe.com’, ‘Dine In’,’3.7’)

Customer(‘000001’,’John Mitchell’,’M’,’333 Hyatt Lane College Park Maryland’,’3’)

Food(‘001’,’Shrimp’,’Seafood’,’12$’,’Dinner’)

Menu(‘012’)

Rates(‘11/09/2021’,’4’,’Good Food bad music’)