Explain the notations you have used in the ER diagram (You are open to use any notations, but you must describe them)  
  
The ER diagram has a key that shows the notations at the bottom. The ER diagram has attributes be oval circles and entity sets are in rectangular boxes. Attributes that are composite have parentheses around the inside text while primary keys have the text underlined. There are no multivalued attributes for this ER diagram so it is not listed in the key. Of course connections are shown using lines. The ER uses the line notations for a one to many relationship where on the left is one small line parallel to the connecting line and on the right has a parallel line and the connecting line forking to three lines. The ER uses the line notations for a many to one relationship where on the left has a parallel line and the connecting line forking to three lines and the right is one small line parallel to the connecting line. The ER uses the line notations for a many to many relationship where on the left has a parallel line and the connecting line forking to three lines and the right does also, while it is shown in the key, this ER diagram does not have a many to many relationship in it. One to one uses one small line parallel to the connecting line for both right and left and while it is shown in the key, this ER diagram does not have a one to one relationship for its entity sets.

Describe at least two relationships among entity sets from your ER diagram.

The entities Restaurants and Food have a one to many relationship called Restaurants\_Food in the ER diagram with Restaurants being the one and Food being the many. A single instance of Restaurants would be linked to many instances of Food since a restaurant would have many food entries but a food entry would not have different restaurants. This is because even if two restaurants have the same food, the different name, price, other details, and most importantly the food\_id would differ. The food\_id means that each entry of Food is uniquely associated with an instance of Restaurants. In a relational schema, Food would have a rest\_id foreign key.  
  
The entities Review and Users have a many to one relationship called Review\_Users in the ER diagram with Review being the many and Users being the one. A single instance of Review would be linked to one instance of Users since a review would only have one user, or reviewer/poster, but a user could have many reviews. In a relational schema, Review would have a user\_id foreign key.  
  
The entities Restaurants and Review have a one to many relationship called Restaurants\_Review in the ER diagram with Restaurants being the one and the Review being the many. A single instance of Restaurants would be linked to many instances of Review because a restaurant would have many reviews but one review would not go to many restaurants since a review has a unique review\_id. In a relational schema, Review would have a rest\_id foreign key.

Convert ER diagram to Relational Schemas:  
Restaurants(rest\_id, rest\_name, rest\_desc, rest\_street, rest\_city, rest\_state, rest\_zip, website\_url, phone\_number, service, type)  
Food(food\_ID, food\_name, description, food\_category, price, serving\_size, serving\_amount, calories, sodium, sugar, fat, protein, carbs, *rest\_id*)

Review(review\_ID, review\_title, month, day, year, price\_rating, food\_rating, service\_rating, review\_description, *user\_id*, *rest\_id*)

Users(user\_id, phone\_number, email, blog\_site, first\_name, last\_name, bio\_description)