**Entities:** All the entities are strong.

**Table:** Table contain tableID, isAvailable and tableDetails attiributes. tableID is unique Id. I keep table information in table Details,for example table location, number of chairs. isAvailable says the table is available or not at current time.

There may be more than one order in one table or not.

**Menu:** Menu contains menuID and menu\_date. MenuID is unique Id. In menu there are at least one menu\_item.However each menu\_iten is located in just one menu.

**Order:** Order contains orderID, date and totalPrice. OrderId is unique Id. totalPrice is calculated from order\_menu\_item and menu\_ıtem.

There are 3 relationships. First one is with table and one order can be located in just one table. Second one is with employee and one order has just one employee. Last one is with order\_menu\_ıtem , order can have at least one order\_menu\_ıtem.

**Menu\_Item:** Menu\_Item contains menuItemID, name and price. menuItemID is unique Id.

Menu\_Item has 3 relationships. First one is with menu, each menu\_item is located in just one menu. Second one is with order\_menu\_item, each menu\_item may be located in many order\_menu\_item or not. Last one with menu\_iten\_ingredients, each menu item has at least one menu\_item\_ingredients.

**Order\_Menu\_Item:**  Order\_menu\_item contains orderMenuItemID and quantity. orderMenuItemID is unique ID.

Order\_menu\_ıtem has 2 relationships. First one with menu\_item, each order\_menu\_item is just one menu\_item.Second one is with order, each order\_menu\_ıtem is in just one order.

**Ingredient:** Ingredients contains ingredientsID, name, cost, quantity. ingredientsId is uniqueID.

Ingredients has 2 relationships.First one with menu\_item\_ingredients, one ingredient can be located in one or more menu\_item\_ingredients or not. Second one with inventory, one ingredient is located in just one inventory.

**Menu\_Item\_Ingredients:** Menu\_Item\_Ingredients contains menuItemIngredientsID and quantity. menuItemIngredientsID is unique ID.

Menu\_Item\_Ingredients has 2 relationships. First one with Menu\_Item, we have just ve menu\_item for this Menu\_item\_ingredients.Second one with ingredient, we have just one ingredient for this menu\_item\_ingredients.

**Inventory:** Inventory contains inventoryID and adress. inventoryID is uniqueID.

Inventory has 2 relationships. First one with employee, in one inventory we have at least one employee. Second one with ingredient, inventory has at least one ingredient.

**Employee:** Employee contains employeeID, fName, lName, birthDate, category. employeeID is uniqueID.

Employee has 3 relationships. First one with itself, it is unary relationship. One manager have at least one employees but manager dont have to have a manager for himself. Second one with inventoy, employee may work in inventory or not. Third one with order, employee can take one or more orders or not.

**Explain:**

When customer comes the table waiter asks for order. When he/she get ther orders. We can see the orders via order\_menu\_item because all the orders stored in order\_menu\_item in order\_menu\_item data specified with tableID and menuItemID so we can figure out what is the complete order for specific table in specific time. And we can see which waiter takes the order.

In menu we can see list of menu items and their details like price or name. In menu\_Item\_ingredients we can figure out how many specific ingredients we need for this specific menu\_item. For example for hamburger we need 200 gr. Meat. So menu\_item\_ingredients specifies how many meat we need. And we can figure out how many ingredients we need for hamburger like meat, bread,tomatoes so it is 3 ingredients we need. In Ingredient we keep stock for specific ingredient. And quantity attiribute is update compare to menu\_item\_ingredients.quantity . And we can also see costs for ingredients maybe later we can calculate cost and profit.

In inventory we can see list of ingredients and quantity. And in inventory we have one or more employees.

There can be a manager and employees for manager. All employees connected to one manager. And manager can have any manager or not. So employee category is for that reason categories are manager, waiter, inventory\_employee,cook.