BS-Information Technology
4th Semester

FOOD DELIVERY SYSTEM

CC-215 DATABASE SYSTEMS

PROJECT INCHARGE
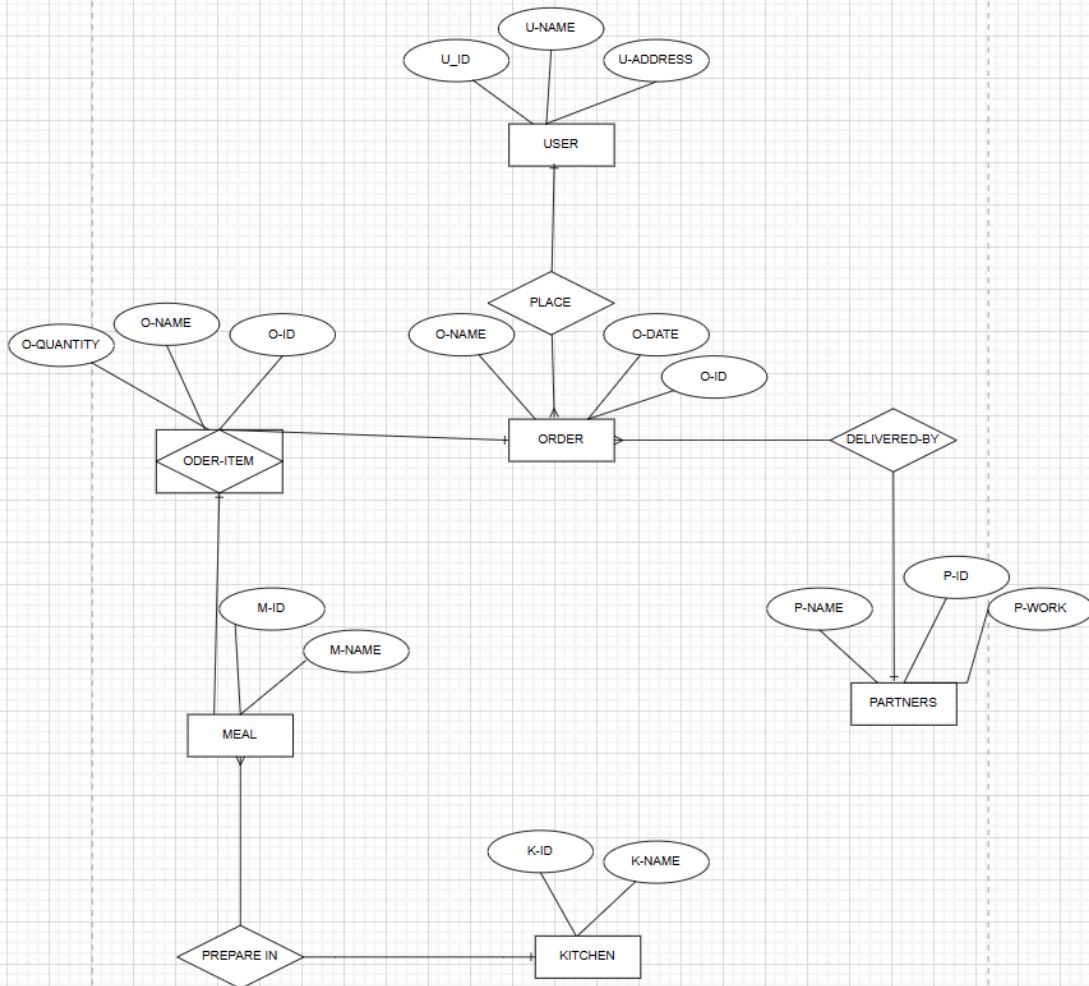
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Entity Relationship Diagrams:

Chen Model

Relational schema / table schema

→ **User** (<u>User ID</u>, Name, Address)

→ **Partners** (<u>Partner_ID</u>, Name, Work, penalties)

→ **Order** (<u>Order ID</u>, Date, u-id(F.K) ,p-id(F.K))

→ **OrderItem (**<u>item_id</u> , item_name**,** <u>Order ID (F.K)</u> , Quantity)

→ **Meal** (<u>Meal ID</u>, Name , Rating_score, complain_description , or_ID (F.K) , kit_ID (F.K))

→ **Kitchen** (<u>Kitchen ID</u>, Name)

Normalization

All tables normalized except the Oder items.

Dependency: (Partial dependency)

Item-id----->Item-name

Item-id+Oder-id------>Quantity

→To resolve, create two tables from orderitem

Item (<u>Item-id</u>, name)

orderItem (Item-id (F.K) , ord-id (F.K) , quantity)

Normalized Relational Schemas

→ **User** (<u>User ID</u>, Name, Address)

→ **Partners** (<u>Partner_ID</u>, Name, Work, penalties)

→ **Order** (<u>Order ID</u>, Date, u-id(F.K) ,p-id(F.K))

→ **Items** (<u>item_id</u>, name)

→ **OrderItem (**Order ID (F.K) , Item ID (F.K) , Quantity)

→ **Meal** (<u>Meal ID</u>, Name , Rating_score, complain_description , or_ID (F.K) , kit_ID (F.K))

→ **Kitchen** (<u>Kitchen ID</u>, Name)

Useful Commands

→ Show databases

→ Create database

→ Use database

→ Show tables

→ Create tables

→ Describe table

→ Insert into

→ Update

→ Alter

→ select

⟶ As command

Command for database

● <u>Show databases</u>

```
Enter password: ***********
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 16
Server version: 8.0.42 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| college            |
| information_schema |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)
```

● <u>Create and Use database</u>

```
mysql> create database FOOD_DELIVERY;
Query OK, 1 row affected (0.01 sec)

mysql> use FOOD_DELIVERY;
Database changed
```

User

→ Create and describe

```
mysql> create table user(user_id INT(5) PRIMARY KEY, user_name Varchar(25) NOT NULL, user_address Varchar(25) NOT NULL);
Query OK, 0 rows affected, 1 warning (0.03 sec)

mysql> DESCRIBE user;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| user_id      | int         | NO   | PRI | NULL    |       |
| user_name    | varchar(25) | NO   |     | NULL    |       |
| user_address | varchar(25) | NO   |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

→ INSERT INTO

```
mysql> INSERT INTO user Values('1','khadija','sheikhupura'),('2','amna','sheikhupura'),('3','zainab','');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

→ Update

```
mysql> update user set user_address='sheikhupura' where user_id='3';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ Select *

```
mysql> select * from user;
+---------+-----------+--------------+
| user_id | user_name | user_address |
+---------+-----------+--------------+
|       1 | khadija   | sheikhupura  |
|       2 | amna      | sheikhupura  |
|       3 | zainab    | sheikhupura  |
+---------+-----------+--------------+
3 rows in set (0.00 sec)
```

→Select 1 column

```
mysql> select user_id from user;
+----------+
| user_id  |
+----------+
|        1 |
|        2 |
|        3 |
+----------+
```

→Select 1 column (target-value)

```
mysql> select user_name from user where user_id='2';
+-----------+
| user_name |
+-----------+
| amna      |
+-----------+
1 row in set (0.00 sec)
```

→Select 2 columns (target-value)

```
mysql> select user_name, user_address from user where user_id='1';
+-----------+--------------+
| user_name | user_address |
+-----------+--------------+
| khadija   | sheikhupura  |
+-----------+--------------+
1 row in set (0.00 sec)
```

Partner

→Create and describe

```
mysql> create table partners(partner_id INT(5) PRIMARY KEY, partner_name Varchar(25) NOT NULL, work Varchar(25), no_of_penalties INT(5));
Query OK, 0 rows affected, 2 warnings (0.03 sec)

mysql> DESCRIBE partners;
+-----------------+-------------+------+-----+---------+-------+
| Field           | Type        | Null | Key | Default | Extra |
+-----------------+-------------+------+-----+---------+-------+
| partner_id      | int         | NO   | PRI | NULL    |       |
| partner_name    | varchar(25) | NO   |     | NULL    |       |
| work            | varchar(25) | YES  |     | NULL    |       |
| no_of_penalties | int         | YES  |     | NULL    |       |
+-----------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

→ INSERT INTO

```
mysql> INSERT INTO partners Values(201,'sarab','packaging',1),(202,'abdul rehman','holding to rider',1),(203,'hamza','riding to destination',NULL);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

→ Update

```
mysql> update partners set no_of_penalties='1' where partner_id='203';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ Select *

```
mysql> select * from partners;
+------------+--------------+-----------------------+-----------------+
| partner_id | partner_name | work                  | no_of_penalties |
+------------+--------------+-----------------------+-----------------+
|        201 | sarab        | packaging             |               1 |
|        202 | abdul rehman | holding to rider      |               1 |
|        203 | hamza        | riding to destination |               1 |
+------------+--------------+-----------------------+-----------------+
3 rows in set (0.00 sec)
```

→ Select 1 column

```
mysql> select partner_id from partners;
+------------+
| partner_id |
+------------+
|        201 |
|        202 |
|        203 |
+------------+
3 rows in set (0.00 sec)
```

→Select 1 column (target-value)

```
mysql> select partner_name from partners where partner_id='202';
+---------------+
| partner_name |
+---------------+
| abdul rehman |
+---------------+
1 row in set (0.00 sec)
```

→Select 2 columns (target-value)

```
mysql> select partner_name, work from partners where partner_id='201';
+---------------+-----------+
| partner_name | work      |
+---------------+-----------+
| sarab         | packaging |
+---------------+-----------+
1 row in set (0.00 sec)
```

Orders

→Create and describe

```
mysql> create table orders(order_id INT(5) PRIMARY KEY, order_date Varchar(25) NOT NULL);
Query OK, 0 rows affected, 1 warning (0.03 sec)

mysql> describe orders;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| order_id   | int         | NO   | PRI | NULL    |       |
| order_date | varchar(25) | NO   |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

→Adding new columns

```
mysql> alter table orders Add p_id INT(5);
Query OK, 0 rows affected, 1 warning (0.08 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> describe orders;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| order_id   | int         | NO   | PRI | NULL    |       |
| order_date | varchar(25) | NO   |     | NULL    |       |
| u_id       | int         | YES  | MUL | NULL    |       |
| p_id       | int         | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> alter table orders Add u_id INT(5);
Query OK, 0 rows affected, 1 warning (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> describe orders;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| order_id   | int         | NO   | PRI | NULL    |       |
| order_date | varchar(25) | NO   |     | NULL    |       |
| u_id       | int         | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

→ making foreign keys

```
mysql> alter table orders Add constraint fk_const_name FOREIGN KEY (p_id) REFERENCES partners(partner_id);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe orders;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| order_id   | int         | NO   | PRI | NULL    |       |
| order_date | varchar(25) | NO   |     | NULL    |       |
| u_id       | int         | YES  | MUL | NULL    |       |
| p_id       | int         | YES  | MUL | NULL    |       |
+------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

```
mysql> alter table orders Add constraint fk_constraint_name FOREIGN KEY (u_id) REFERENCES user(user_id);
Query OK, 0 rows affected (0.15 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe orders;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| order_id   | int         | NO   | PRI | NULL    |       |
| order_date | varchar(25) | NO   |     | NULL    |       |
| u_id       | int         | YES  | MUL | NULL    |       |
+------------+-------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

→ INSERT INTO

```
mysql> INSERT INTO orders Values(101,'5th May','1',201),(102,'6th May','2',202),(103,'7th May','3',NULL);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

→ Update

```
mysql> update orders set p_id='203' where order_id='103';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ Select *

```
mysql> select * from orders;
+----------+------------+------+------+
| order_id | order_date | u_id | p_id |
+----------+------------+------+------+
|      101 | 5th May    |    1 |  201 |
|      102 | 6th May    |    2 |  202 |
|      103 | 7th May    |    3 |  203 |
+----------+------------+------+------+
3 rows in set (0.00 sec)
```

→ Select 1 column

```
mysql> select order_id from orders;
+----------+
| order_id |
+----------+
|      101 |
|      102 |
|      103 |
+----------+
3 rows in set (0.00 sec)
```

→ Select 1 column (target-value)

```
mysql> select order_date from orders where order_id='103';
+------------+
| order_date |
+------------+
| 7th May    |
+------------+
1 row in set (0.00 sec)
```

→ Select 2 columns (target-value)

```
mysql> select order_date, u_id from orders where order_id='101';
+------------+------+
| order_date | u_id |
+------------+------+
| 5th May    |    1 |
+------------+------+
1 row in set (0.00 sec)
```

Items

→ Create and describe

```
mysql> create table items(item_id INT(5) PRIMARY KEY, item_name Varchar(25) NOT NULL);
Query OK, 0 rows affected, 1 warning (0.03 sec)

mysql> describe items;
+-----------+-------------+------+-----+---------+-------+
| Field     | Type        | Null | Key | Default | Extra |
+-----------+-------------+------+-----+---------+-------+
| item_id   | int         | NO   | PRI | NULL    |       |
| item_name | varchar(25) | NO   |     | NULL    |       |
+-----------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

→ INSERT INTO

```
mysql> INSERT INTO items Values(301,'burger'),(302,'biryani'),(303,'');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

→ Update

```
mysql> update items set item_name='nuggets' where item_id='303';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ Select *

```
mysql> select * from items;
+---------+-----------+
| item_id | item_name |
+---------+-----------+
|     301 | burger    |
|     302 | biryani   |
|     303 | nuggets   |
+---------+-----------+
3 rows in set (0.00 sec)
```

→ Select 1 column

```
mysql> select item_id from items;
+---------+
| item_id |
+---------+
|     301 |
|     302 |
|     303 |
+---------+
3 rows in set (0.00 sec)
```

→ Select 1 column (target-value)

```
mysql> select item_name from items where item_id='303';
+-----------+
| item_name |
+-----------+
| nuggets   |
+-----------+
1 row in set (0.00 sec)
```

→ Select 2 columns (target-value)

```
mysql> select item_id,item_name from items where item_id='301';
+---------+-----------+
| item_id | item_name |
+---------+-----------+
|     301 | burger    |
+---------+-----------+
```

→ Create and describe

```
ine 1
mysql> create table orderItem(quantity INT(10) NOT NULL);
Query OK, 0 rows affected, 1 warning (0.03 sec)

mysql> describe orderItem;
+----------+------+------+-----+---------+-------+
| Field    | Type | Null | Key | Default | Extra |
+----------+------+------+-----+---------+-------+
| quantity | int  | NO   |     | NULL    |       |
+----------+------+------+-----+---------+-------+
1 row in set (0.00 sec)
```

→ Adding new columns and making foreign keys

```
mysql> alter table orderItem Add it_id INT(5);
Query OK, 0 rows affected, 1 warning (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> alter table orderItem Add constraint fk_constr_name FOREIGN KEY (it_id) REFERENCES item(item_id);
ERROR 1824 (HY000): Failed to open the referenced table 'item'
mysql> alter table orderItem Add constraint fk_constr_name FOREIGN KEY (it_id) REFERENCES items(item_id);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe orderItem;
+----------+------+------+-----+---------+-------+
| Field    | Type | Null | Key | Default | Extra |
+----------+------+------+-----+---------+-------+
| quantity | int  | NO   |     | NULL    |       |
| or_id    | int  | YES  | MUL | NULL    |       |
| it_id    | int  | YES  | MUL | NULL    |       |
+----------+------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

```
mysql> alter table orderItem Add or_id INT(5);
Query OK, 0 rows affected, 1 warning (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> describe orderItem;
+----------+------+------+-----+---------+-------+
| Field    | Type | Null | Key | Default | Extra |
+----------+------+------+-----+---------+-------+
| quantity | int  | NO   |     | NULL    |       |
| or_id    | int  | YES  |     | NULL    |       |
+----------+------+------+-----+---------+-------+
2 rows in set (0.00 sec)

mysql> alter table orderItem Add constraint fk_cons_name FOREIGN KEY (or_id) REFERENCES orders(order_id);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe orderItem;
+----------+------+------+-----+---------+-------+
| Field    | Type | Null | Key | Default | Extra |
+----------+------+------+-----+---------+-------+
| quantity | int  | NO   |     | NULL    |       |
| or_id    | int  | YES  | MUL | NULL    |       |
+----------+------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

→ INSERT INTO

```
mysql> INSERT INTO orderItem Values('3','101','301'),('3','102','302'),('3','103',NULL);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

→ Update

```
mysql> update orderItem set it_id='303' where or_id='103';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ Select *

```
mysql> select * from orderItem;
+----------+-------+-------+
| quantity | or_id | it_id |
+----------+-------+-------+
|        3 |   101 |   301 |
|        3 |   102 |   302 |
|        3 |   103 |   303 |
+----------+-------+-------+
3 rows in set (0.00 sec)
```

→ Select 1 column

```
mysql> select it_id from orderItem;
+-------+
| it_id |
+-------+
|   301 |
|   302 |
|   303 |
+-------+
3 rows in set (0.00 sec)
```

→ Select 1 column (target-value)

```
mysql> select quantity from orderItem where it_id='302';
+----------+
| quantity |
+----------+
|        3 |
+----------+
1 row in set (0.00 sec)
```

→ Select 2 columns (target-value)

```
mysql> select quantity, or_id from orderItem where it_id='301';
+----------+-------+
| quantity | or_id |
+----------+-------+
|        3 |   101 |
+----------+-------+
1 row in set (0.00 sec)
```

Kitchen

→ Create and describe

```
mysql> create table kitchen(kitchen_id INT(5) PRIMARY KEY, kitchen_name Varchar(25) NOT NULL);
Query OK, 0 rows affected, 1 warning (0.04 sec)

mysql> describe kitchen;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| kitchen_id   | int         | NO   | PRI | NULL    |       |
| kitchen_name | varchar(25) | NO   |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

→ INSERT INTO

```
mysql> INSERT INTO kitchen Values(401,'rustam foods'),(402,'mehar baba'),(403,'');
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

→ Update

```
mysql> update kitchen set kitchen_name='food master' where kitchen_id='403';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ Select *

```
mysql> select * from kitchen;
+------------+----------------+
| kitchen_id | kitchen_name   |
+------------+----------------+
|        401 | rustam foods   |
|        402 | mehar baba     |
|        403 | food master    |
+------------+----------------+
3 rows in set (0.00 sec)
```

→ Select 1 column

```
mysql> select kitchen_name from kitchen;
+----------------+
| kitchen_name   |
+----------------+
| rustam foods   |
| mehar baba     |
| food master    |
+----------------+
3 rows in set (0.00 sec)
```

→ Select 1 column (target-value)

```
mysql> select kitchen_name from kitchen where kitchen_id='403';
+--------------+
| kitchen_name |
+--------------+
| food master  |
+--------------+
1 row in set (0.00 sec)
```

→ Select 2 columns (target-value)

```
mysql> select kitchen_name, kitchen_id from kitchen where kitchen_id='401';
+--------------+------------+
| kitchen_name | kitchen_id |
+--------------+------------+
| rustam foods |        401 |
+--------------+------------+
1 row in set (0.00 sec)
```

Meal

→ Create , adding and describe

```
mysql> create table meal(meal_id INT(5) PRIMARY KEY, meal_name Varchar(25) NOT NULL, rating_score INT(5), complain_description Varchar(25));
Query OK, 0 rows affected, 2 warnings (0.04 sec)

mysql> alter table meal Add ord_id INT(5);
Query OK, 0 rows affected, 1 warning (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> alter table meal Add kit_id INT(5);
Query OK, 0 rows affected, 1 warning (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 1

mysql> describe meal;
+----------------------+-------------+------+-----+---------+-------+
| Field                | Type        | Null | Key | Default | Extra |
+----------------------+-------------+------+-----+---------+-------+
| meal_id              | int         | NO   | PRI | NULL    |       |
| meal_name            | varchar(25) | NO   |     | NULL    |       |
| rating_score         | int         | YES  |     | NULL    |       |
| complain_description | varchar(25) | YES  |     | NULL    |       |
| ord_id               | int         | YES  |     | NULL    |       |
| kit_id               | int         | YES  |     | NULL    |       |
+----------------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```

→ Making foreign keys

```
mysql> alter table meal Add constraint fk_c_name FOREIGN KEY (ord_id) REFERENCES orders(order_id);
Query OK, 0 rows affected (0.09 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> alter table meal Add constraint fk_cn_name FOREIGN KEY (kit_id) REFERENCES kitchen(kitchen_id);
Query OK, 0 rows affected (0.12 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> describe meal;
+----------------------+-------------+------+-----+---------+-------+
| Field                | Type        | Null | Key | Default | Extra |
+----------------------+-------------+------+-----+---------+-------+
| meal_id              | int         | NO   | PRI | NULL    |       |
| meal_name            | varchar(25) | NO   |     | NULL    |       |
| rating_score         | int         | YES  |     | NULL    |       |
| complain_description | varchar(25) | YES  |     | NULL    |       |
| ord_id               | int         | YES  | MUL | NULL    |       |
| kit_id               | int         | YES  | MUL | NULL    |       |
+----------------------+-------------+------+-----+---------+-------+
6 rows in set (0.00 sec)
```

→ INSERT INTO

```
mysql> INSERT INTO meal Values(501, 'super offer', '4', 'no complain', '101', '401'),(502, 'special party', '3', 'late delivery', '102', '402'),(503, 'night craving', '2', 'poor packaging', '103',
NULL);
Query OK, 3 rows affected (0.01 sec)
Records: 3  Duplicates: 0  Warnings: 0
```

→ Update

```
mysql> update meal set kit_id='403' where meal_id='503';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

→ Select *

```
mysql> select * from meal;
+---------+---------------+--------------+----------------------+--------+--------+
| meal_id | meal_name     | rating_score | complain_description | ord_id | kit_id |
+---------+---------------+--------------+----------------------+--------+--------+
|     501 | super offer   |            4 | no complain          |    101 |    401 |
|     502 | special party |            3 | late delivery        |    102 |    402 |
|     503 | night craving |            2 | poor packaging       |    103 |    403 |
+---------+---------------+--------------+----------------------+--------+--------+
3 rows in set (0.00 sec)
```

→ Select 1 column

```
mysql> select meal_name from meal;
+---------------+
| meal_name     |
+---------------+
| super offer   |
| special party |
| night craving |
+---------------+
3 rows in set (0.00 sec)
```

→ Select 1 column (target-value)

```
mysql> select meal_name from meal where meal_id='503';
+---------------+
| meal_name     |
+---------------+
| night craving |
+---------------+
1 row in set (0.00 sec)
```

→ Select 2 columns (target-value)

```
mysql> select meal_name,rating_score from meal where meal_id='501';
+-------------+--------------+
| meal_name   | rating_score |
+-------------+--------------+
| super offer |            4 |
+-------------+--------------+
1 row in set (0.00 sec)
```

As command

```
mysql> select meal_name as food_name from meal;
+---------------+
| food_name     |
+---------------+
| super offer   |
| special party |
| night craving |
+---------------+
3 rows in set (0.00 sec)
```