

**Course Name:** Introduction to Database

**Course Teacher:** JUENA AHMED NOSHIN

**Section:D**

**Project Name: FOOD DELIVERY MANAGEMENT SYSTEM**

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**Introduction:** A Database Management System (DBMS) is a computer software application that interacts with end-users and other application and the database itself to capture and analyze data. A general- purpose DBMS allows the definition, creation, querying, update and administration of database.

In our project (Food delivery management system) the concept of DBMS used. So, this project mainly focuses of realizing the basic concepts of Database Management System, (DBMS).

**SCENARIO:** In a food delivery management system, a customer can place many orders .A customer is identified by a customer id, also customer name, email and multiple phone number is store in the system. A customer has a Address. An address is identified by an address id, also place and zip code is store in the system. An order identified by an order no, also class, time, date, status is stored. A restaurant can take many orders. A restaurant is recognize by restaurant id, also restaurant name, phone number and multiple email is stored. A order has many foods. Foods are identified by food id, also food name, description, price and quantity stored in the system. An order also have payment. A payment is identified by payment id, also payment type and net price is stored. A restaurant hide many employee. Employees are identified by employee id, also employee name, salary and multiple phone number are stored in the system. Employee use vehicles to delivers orders. A vehicle is identified by vehicle id, also registration no and type is store in the system. A vehicle deliver many parcel or delivery. Delivery is identified by product id, also arrival, arrival time, place, signature is stored in the system.

**Normalization**

**Food-\*-order details-\*-orders**

UNF:

Order details(food\_id,food\_name,price,description,qty,order\_no,time,class,date,status)

1NF

There is no multivalued attribute.

(food\_id,food\_name,price,description,qty,order\_no,class,date,status)

2NF

1.(food\_id, food\_name,price,description,qty)

2.(order\_no,time,class,date,status)

3NF

1.(food\_id ,price,qty )

2.(food\_name,description)

3.(order\_no,class,status)

4.(time,date)

Table Creation:

1.(food\_id,price,qty,**f\_id**)

2. (f\_id , food\_name ,description)

3.(order\_no,class,status,**D\_id**)

4.(D\_id,time,date)

5.(**food\_id**,**order\_no**)

**Orders-\*-places-1-customer**

**UNF**

Places (order\_no, time, class, date, status, customer id, phone, name, email)

1NF

Phone is a multivalued attribute.

(Order no, time, class, date, status, customer id, phone, name, email)

**2NF**

1. (Order no, time, class, date, status)

2. (Customer id, phone, name, email)

**3NF**

1. (Order no, class, status)

2. (Time, date)

3. (Customer id, phone, name, email)

Table creation

1. (Order no, class, status, **D\_id, customer\_id**)

2. (D\_id, Time, date)

3. (Customer id, phone, name, email)

**Orders-\*-take-1-resturants**

UNF

Take (order no, time, class, status, date, R\_id, r\_name, r\_phone, email)

1NF

r\_Phone is a multivalued attribute

(Order no, time, class, status, date, R\_id, r\_name, r\_phone, email)

2NF

(Order no, time, class, status, date)

(R\_id, r\_name, r\_phone, email)

3NF

(Order no, class, status)

(Time, date)

(R\_id, r\_name, r\_phone, email)

Table creation

1. (order no, class, status, **D\_id**, **R\_id**)

2. (D\_id, time, date)

3. (R\_id, r\_name, r\_phone, email)

***Orders-1-have-1-payment***

UNF

Have(order\_no,time,class,date,status,payment\_id,payment\_type,netprice)

1NF

There is no multivalued attribute.

(order\_no,time,class,date,status,payment\_id,payment\_type,netprice)

2NF

1.(order\_no,time,class,date,status)

2.(payment\_id,payment\_type,netprice)

3NF

1.(order\_no,class,status)

2.(time,date)

3.(payment\_id,payment\_type,netprice)

Table Creation:

1.(order\_no,class,status,**D\_id,payment\_id**)

2.(D\_id,time,date)

3.(payment\_id,payment\_type,netprice)

**Resturants-1-hire-\*-employee**

**UNF**

Hire (R\_id, r\_name, r\_phone, email, employee id, employee\_name , phone, salary)

1NF

Phone are multivalued attributes.

(R id, r\_name, r\_phone, email, employee id, employee\_name, phone, salary)

2NF

1., (R\_id,r\_name, r\_phone, email)

2. ( employee id, employee\_name, phone, salary)

3NF

1. (R id, r\_name, r\_phone, email)

2. ( employee id, employee\_name, phone, salary)

Table creation

1. (R\_id, r\_name, r\_phone, email)

2. ( employee id, employee\_name, phone, salary, **r\_id**)

**Customer-\*-lives at-1-address**

UNF

Lives at(Customer Id, phone, name, email, Address id, place, zip code, signature)

1NF

Phone is a multivalued attribute.

(Customer id, phone, name, email. Address id, place , zip code , signature)

2NF

1. (Customer id, phone, name, email)

2. (Address id, place, zip code, signature)

3NF

1. (Customer id, phone, name, email.)

2. (Address id, place, zip code, signature)

Table creation

1. (Customer id, phone, name, email, **Address\_id**)

2. (Address id, place, zip code, signature)

**Employee-1-delivers by-1-vehicles**

UNF

Delivers by(employee\_id, employee\_name, phone, salary, vehicles id, registration\_no, type )

1NF

Phone is a multivalued attribute.

(employee\_id, employee\_name, phone, salary, vehicles id, registration\_no, type )

2NF

1. (employee\_id, employee\_name, phone, salary )
2. (vehicles id, registration\_no,type )

3NF

1. (employee\_id, employee\_name, phone, salary )
2. (vehicles id, registration\_no,type )

Table creation

1. (employee\_id, employee\_name, salary,phone, **vehicles\_id** )
2. (vehicles id, registration\_no,type )

**Vehicles-1-delivers-\*-delivery**

UNF

Delivers(vehicles id, registration\_no, type, product\_id, arrival, arrival\_time,signature )

1NF

There is no multivalued attribute

(vehicles id, registration\_no, type, place, signature, product\_id, arrived, arrival\_time )

2NF

1. (vehicles id, registration\_no, type)
2. (product id, place, signature, arrived, arrival\_time )

3NF

1. (vehicles id, registration\_no, type)
2. (product id, place)
3. (arrived, arrival\_time, signature)

Table creation

1.(vehicles\_id, registration\_no, type)

3.(product\_id, arrival, arrival\_time, signature,**vehicles\_id**)

Table creation:

1.orders(order\_no,class,status,**D\_id**,**customer\_id,R\_id,payment\_id**)

2.customer(customer\_id,phone,name,email,**address\_id**)

3.Addresses(Address\_id,place,zip\_code,signature)

4.Timendate(D\_id,Tm,dt)

5.resturent(R\_id,r\_name,r\_phone,email)

6.employee(employee\_id,employee\_name,phone,salary,**R\_id,vehicles\_id**)

7.vehicles(vehicles\_id,registration\_no,type)

8.deliver(product\_id,arrival,arrival\_time,signature,**vehicles\_id**)

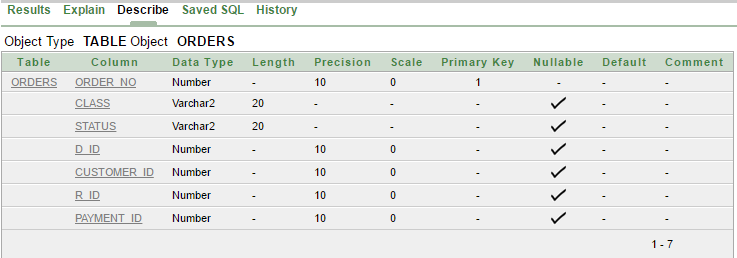
9.food(food\_id,price,qty,**f\_id**,)

10.description(f\_id,food\_name,description)

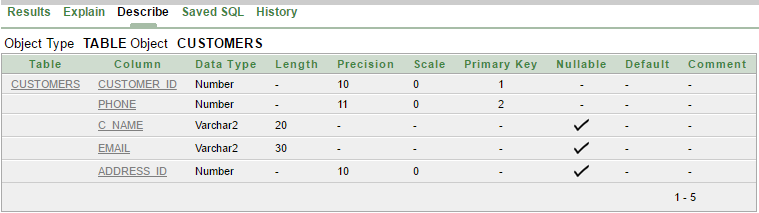
11.payment(payment\_id,payment\_type,netprice)

**Query writing:**

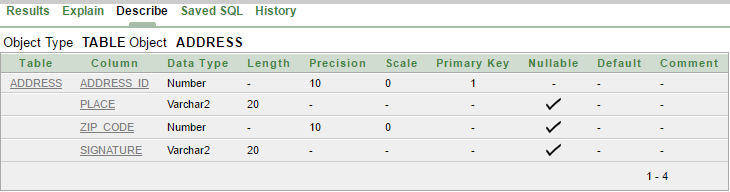
1. CREATE TABLE ORDERS(ORDER\_NO NUMBER(10) PRIMARY KEY,CLASS VARCHAR2(20),STATUS VARCHAR2(20),D\_ID NUMBER(10),CUSTOMER\_ID NUMBER(10),R\_ID NUMBER(10),PAYMENT\_ID NUMBER(10));



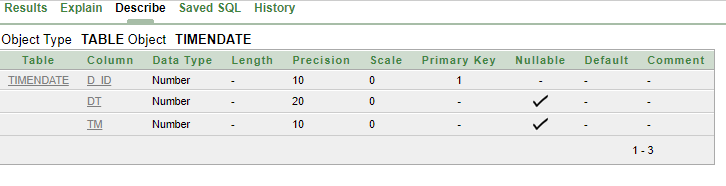
2. CREATE TABLE CUSTOMERS(CUSTOMER\_ID NUMBER(10) UNIQUE,PHONE NUMBER(11),C\_NAME VARCHAR2(20),EMAIL VARCHAR2(30),ADDRESS\_ID NUMBER(10),CONSTRAINT CUSTOMER\_ID PRIMARY KEY(CUSTOMER\_ID,PHONE));



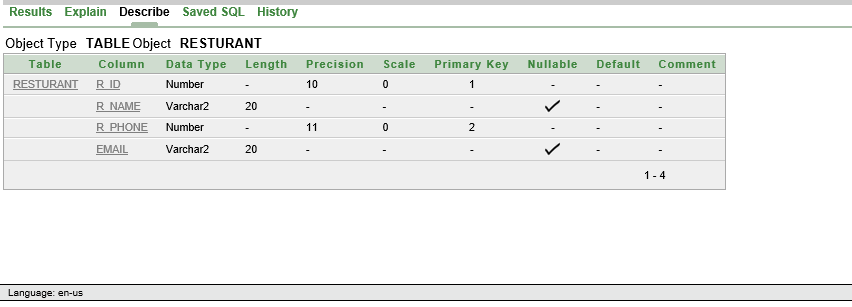
3. CREATE TABLE ADDRESS(ADDRESS\_ID NUMBER(10) PRIMARY KEY,PLACE VARCHAR2(20),ZIP\_CODE NUMBER(10),SIGNATURE VARCHAR2(20));



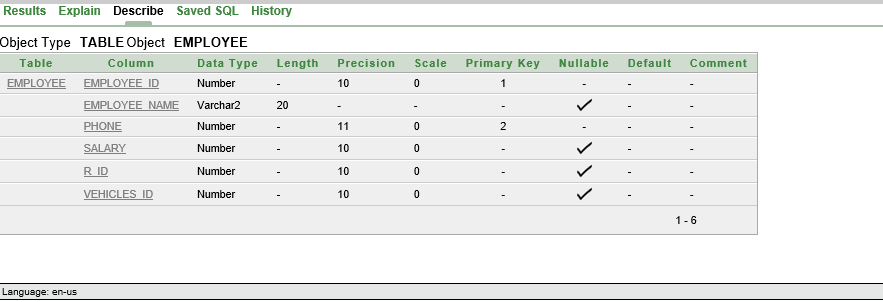
4.CREATE TABLE TIMENDATE(D\_ID NUMBER(10)PRIMARY KEY,DT NUMBER(20),TM NUMBER(10));



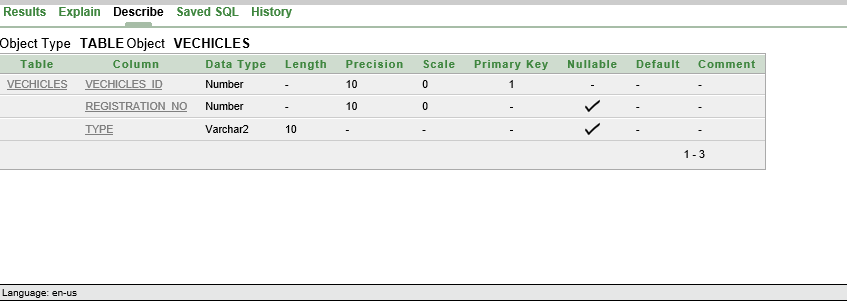
5. CREATE TABLE RESTURANT(R\_ID NUMBER(10) UNIQUE,R\_NAME VARCHAR2(20),R\_PHONE NUMBER(11),EMAIL VARCHAR2(20),CONSTRAINT RESTURANT\_ID PRIMARY KEY(R\_ID,R\_PHONE));



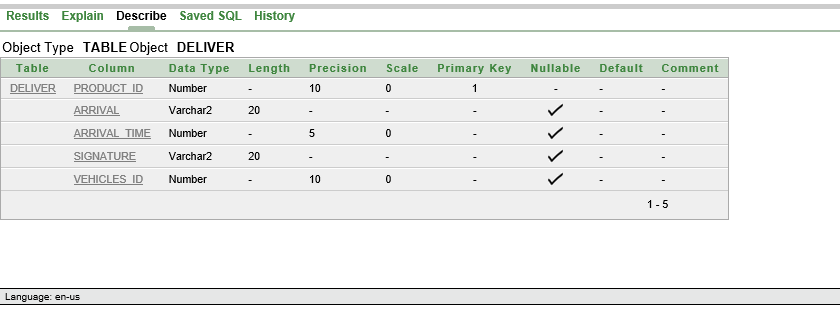
6. CREATE TABLE EMPLOYEE(EMPLOYEE\_ID NUMBER(10) UNIQUE,EMPLOYEE\_NAME VARCHAR2(20),PHONE NUMBER(11),SALARY NUMBER(10),R\_ID NUMBER(10),VEHICLES\_ID NUMBER(10), CONSTRAINT EMPLOYEE\_ID PRIMARY KEY(EMPLOYEE\_ID,PHONE));



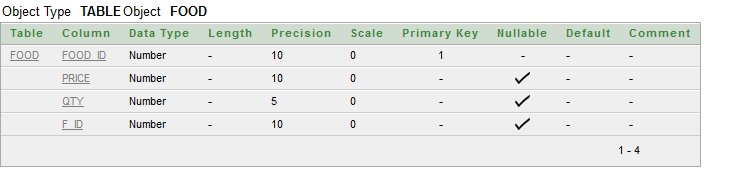
7. CREATE TABLE VECHICLES(VECHICLES\_ID NUMBER(10)PRIMARY KEY,REGISTRATION\_NO NUMBER(10),TYPE VARCHAR2(10));

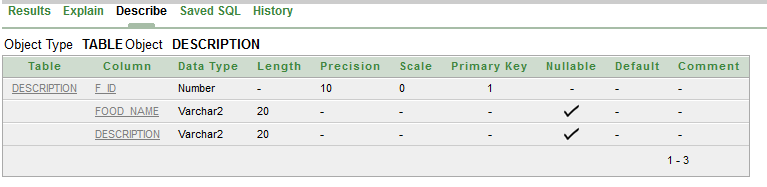


8. CREATE TABLE DELIVER(PRODUCT\_ID NUMBER(10) PRIMARY KEY,ARRIVAL\_DATE VARCHAR2(20),ARRIVAL\_TIME NUMBER(5),SIGNATURE VARCHAR2(20),VEHICLES\_ID NUMBER(10));

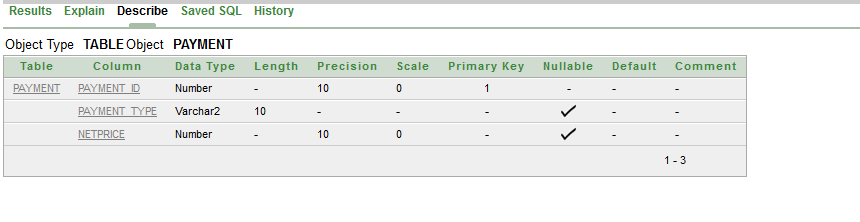


9.CREATE TABLE FOOD(FOOD\_ID NUMBER(10)PRIMARY KEY,PRICE NUMBER(10),QTY NUMBER(5),F\_ID NUMBER(10));



10.CREATE TABLE DESCRIPTION(F\_ID NUMBER(10)PRIMARY KEY,FOOD\_NAME VARCHAR2(20),DESCRIPTION VARCHAR2(20));

11. CREATE TABLE PAYMENT(PAYMENT\_ID NUMBER(10)PRIMARY KEY,PAYMENT\_TYPE VARCHAR2(10),NETPRICE NUMBER(10))



Constraints:

1.Alter table orders add constraint fk foreign key(D\_id) references Timendate(D\_id);

2.Alter table orders add constraint fk1 foreign key(customer\_id) references customer(customer\_id);

3.Alter table orders add constraint fk2 foreign key(payment\_id) references payment(payment\_id);

4.Alter table customer add constraint fk3 foreign key(address\_id) references Address(address\_id);

5.Alter table employee add constraint fk4 foreign key(R\_id) references resturent(R\_id);

6.Alter table employee add constraint fk5 foreign key(vehicles\_id) references vehicles (vehicles\_id);

7.Alter table deliver add constraint fk6 foreign key(vehicles\_id) references vehicles(vehicles\_id);

8.Alter table food add constraint fk7 foreign key(f\_id) references description(f\_id);

**DATA INSERTION:**

**1.orders:**

insert into orders(order\_no,class,status,D\_id,customer\_id,R\_id,payment\_id) values('1','middle','none','1001','101','101','23456');

insert into orders(order\_no,class,status,D\_id,customer\_id,R\_id,payment\_id) values('2','delicious','expensibble dinner','1002','102','102','23458');

insert into orders(order\_no,class,status,D\_id,customer\_id,R\_id,payment\_id) values('3','fast food','breakfast','1003','103','103','23460');

insert into orders(order\_no,class,status,D\_id,customer\_id,R\_id,payment\_id) values('4','low','drinking','1004','104','104','23466');

insert into orders(order\_no,class,status,D\_id,customer\_id,R\_id,payment\_id) values('5','high','chinese','1005','105','105','23476');

**2.customers:**

insert into customers(CUSTOMER\_ID,PHONE,C\_NAME,EMAIL,ADDRESS\_ID) values('101','012345789','RIAZ','RIAZUDDIN88@GMAIL.COM','7902');

insert into customers (CUSTOMER\_ID,PHONE,C\_NAME,EMAIL,ADDRESS\_ID) values('102','012345788','MIRAJ','MIRAJ77@GMAIL.COM','7901');

insert into customers (CUSTOMER\_ID,PHONE,C\_NAME,EMAIL,ADDRESS\_ID) values('103','012345689','RAFI','IKRAMRAFI66@GMAIL.COM','7903');

insert into customers (CUSTOMER\_ID,PHONE,C\_NAME,EMAIL,ADDRESS\_ID) values('104','012344789','KAMRUL','STRKAMRUL55@GMAIL.COM','7904');

insert into customers (CUSTOMER\_ID,PHONE,C\_NAME,EMAIL,ADDRESS\_ID) values('105','012335789','SHANTO','KAMRUJSHANTO44@GMAIL.COM','7905');

**3.Addresses:**

insert into addresses (ADDRESS\_ID,PLACE,ZIP\_CODE,SIGNATURE) values('7902','COMILLA','34576','RZ');

insert into addresses (ADDRESS\_ID,PLACE,ZIP\_CODE,SIGNATURE) values('7901','FENI','34577','MJ');

insert into addresses (ADDRESS\_ID,PLACE,ZIP\_CODE,SIGNATURE) values('7903','NOAKHALI','34578','RI');

insert into addresses (ADDRESS\_ID,PLACE,ZIP\_CODE,SIGNATURE) values('7904','CHITAGONG','34579','STR');

insert into addresses (ADDRESS\_ID,PLACE,ZIP\_CODE,SIGNATURE) values('7905','CHANDPUR','34588','SHT');

**4.Timendate:**

insert into timendate(D\_ID,tm,dt) values('1001','15:30','13-01-2018');

insert into timendate(D\_ID,tm,dt) values('1002','17:30','12-01-2018');

insert into timendate(D\_ID,tm,dt) values('1003','13:44','10-01-2018');

insert into timendate(D\_ID,tm,dt) values('1004','16:23','14-01-2018');

insert into timendate(D\_ID,tm,dt) values('1005','13:20','15-01-2018');

**5.Resturants:**

insert into resturant(r\_id,r\_name,r\_phone,email) values('101','pranto','01793456765','pranto96@gmail.com');

insert into resturant(r\_id,r\_name,r\_phone,email) values('102','rahim','01793456766','rahim96@gmail.com');

insert into resturant(r\_id,r\_name,r\_phone,email) values('103','riad','01793456763','riad96@gmail.com');

insert into resturant(r\_id,r\_name,r\_phone,email) values('104','tanvir','01793456754','tanvir96@gmail.com');

insert into resturant(r\_id,r\_name,r\_phone,email) values('105','nafi','01793456755','nafi96@gmail.com');

**6.Employee:**

insert into employee(employee\_id,employee\_name,phone,salary,r\_id,vehicles\_id) values('401','karim','01792502188','9765','101','201');

insert into employee(employee\_id,employee\_name,phone,salary,r\_id,vehicles\_id) values('402','sagor','01792502178','9777','102','202');

insert into employee(employee\_id,employee\_name,phone,salary,r\_id,vehicles\_id) values('403','tuhin','01792502168','9665','103','203');

insert into employee(employee\_id,employee\_name,phone,salary,r\_id,vehicles\_id) values('404','akanto','01792502158','9865','104','204');

insert into employee(employee\_id,employee\_name,phone,salary,r\_id,vehicles\_id) values('405','borkat','01792502138','9762','105','205');

**7.Vehicles:**

insert into vehicles(vehicles\_id,registration\_no,type) values('201','4533','toyota');

insert into vehicles(vehicles\_id,registration\_no,type) values('202','4534','bike');

insert into vehicles(vehicles\_id,registration\_no,type) values('203','4536','cycle');

insert into vehicles(vehicles\_id,registration\_no,type) values('204','4538','toyota');

insert into vehicles(vehicles\_id,registration\_no,type) values('205','4540','toyota');

**8.Delivers:**

insert into deliver(product\_id,arrival\_date,arrival\_time,signature,vehicles\_id) values('301','2-3-2018','10:30','LO','201');

insert into deliver(product\_id,arrival\_date,arrival\_time,signature,vehicles\_id) values('302','4-5-2018','11:30','RO','202');

insert into deliver(product\_id,arrival\_date,arrival\_time,signature,vehicles\_id) values('303','2-6-2018','09:30','MO','203');

insert into deliver(product\_id,arrival\_date,arrival\_time,signature,vehicles\_id) values('304','1-3-2018','08:30','KO','204');

insert into deliver(product\_id,arrival\_date,arrival\_time,signature,vehicles\_id) values('305','3-4-2018','12:30','AO','205');

**9.Food:**

INSERT INTO FOOD (FOOD\_ID ,PRICE ,QTY,F\_ID) VALUES ('2345','200','2','123');

INSERT INTO FOOD (FOOD\_ID ,PRICE ,QTY,F\_ID) VALUES ('2350','250','5','121');

INSERT INTO FOOD (FOOD\_ID ,PRICE ,QTY,F\_ID) VALUES ('2365','250','3','120');

INSERT INTO FOOD (FOOD\_ID , PRICE ,QTY,F\_ID) VALUES ('2330','260','2','122');

INSERT INTO FOOD (FOOD\_ID , PRICE ,QTY,F\_ID) VALUES ('2335','170','4','124');

**10.Description:**

INSERT INTO DESCRIPTION (F\_ID ,FOOD\_NAME ,DESCRIPTION) VALUES ('123','PIZZA','VEGITABLE');

INSERT INTO DESCRIPTION (F\_ID ,FOOD\_NAME ,DESCRIPTION) VALUES ('120','AMERICAN BURGER','AMERICAN');

INSERT INTO DESCRIPTION (F\_ID ,FOOD\_NAME ,DESCRIPTION) VALUES ('122','CHICKEN BURGER','CHECKEN');

INSERT INTO DESCRIPTION (F\_ID ,FOOD\_NAME ,DESCRIPTION) VALUES ('121','PASTA','ITALIAN');

INSERT INTO DESCRIPTION (F\_ID ,FOOD\_NAME ,DESCRIPTION) VALUES ('124','AZZURII','ITALIAN');

**11.Payment:**

INSERT INTO PAYMENT(PAYMENT\_ID ,PAYMENT\_TYPE,NETPRICE) VALUES ('23456','VISA','600');

INSERT INTO PAYMENT(PAYMENT\_ID ,PAYMENT\_TYPE,NETPRICE) VALUES ('23458','UPAY','1000');

INSERT INTO PAYMENT(PAYMENT\_ID ,PAYMENT\_TYPE,NETPRICE) VALUES ('23460','BIKASH','450');

INSERT INTO PAYMENT(PAYMENT\_ID ,PAYMENT\_TYPE,NETPRICE) VALUES ('23466','VISA','900');

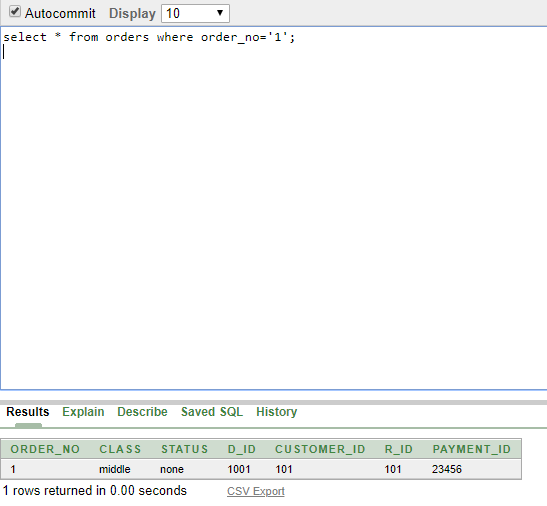
INSERT INTO PAYMENT(PAYMENT\_ID ,PAYMENT\_TYPE,NETPRICE) VALUES ('23476','CASH','360');

**Query Writing:**

**single-row functions :**

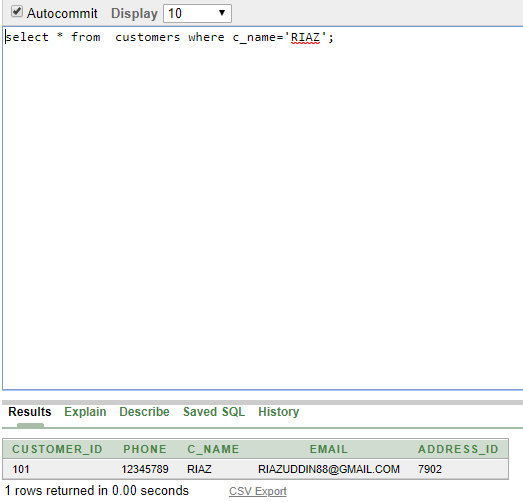
**Que:Display all data of orders 1.**

**Ans:select \* from orders where order\_id=’1’;**



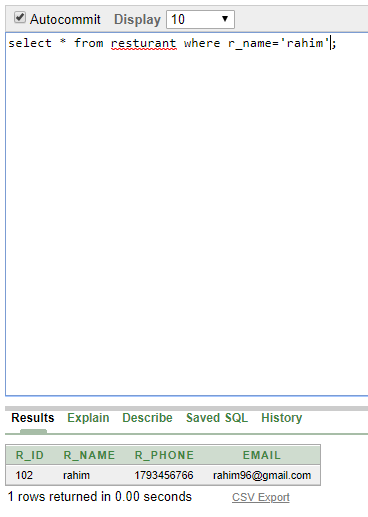
**Que:display all data of customer Riaz.**

**Ans:select \* from customer where c\_name=’RIAZ’;**



**Que:find all data of Rahim restaurant.**

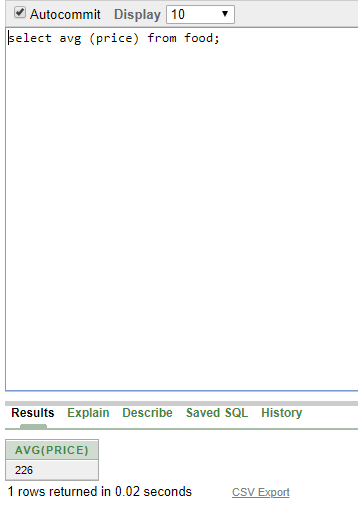
**Ans:select \* from restaurant where r\_name=’rahim’;**



***Group functions:***

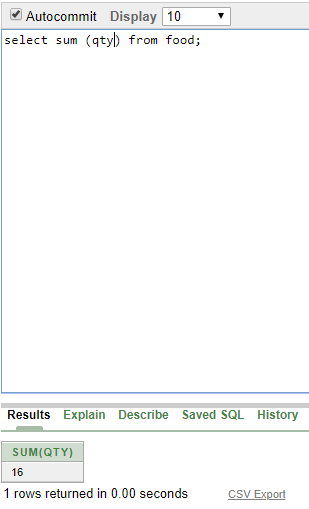
**Ques:find average price of all food.**

**Ans:select avg(price) from food;**



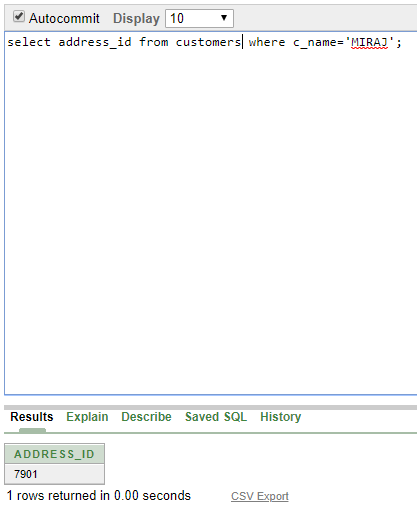
**Que:find total quantity of food.**

**Ans:select sum(qty) from food;**



**Que:find address of Miraz.**

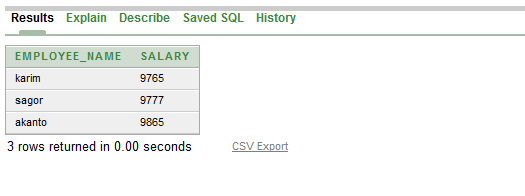
**Ans:select address\_id from customers where c\_name=’MIRAZ’;**



***subquery* :**

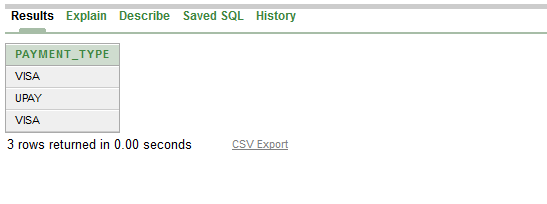
**1.** **Select employee\_name from employee where salary>(select salary from employee**

**where employee\_name='borkat');**



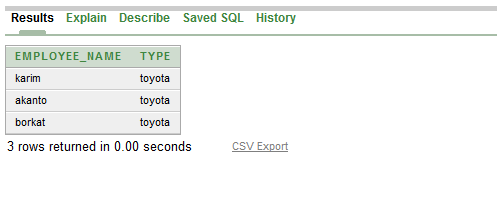
2. Select payment\_type from payment where NETPRICE>(select NETPRICE from payment

where payment\_id='23460');



***joining*:**

1. Select employee.employee\_name ,vehicles.type from employee, vehicles where employee.vehicles\_id=vehicles.vehicles\_id and type='toyota';



**Conclusion:**

**After finishing the project we have learned many things about creating a database, Creating scenarios, Normalisation, Table making, Query Writing, Data insertion and much more. It is an interesting Project.**