# AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH

**Project Name** : *Food Delivery Management System*

**Course Name** : *Introduction To Database*

**Course Teacher** : *Juena Ahmed Noshin*

**Section** : *" L"*

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# Contents

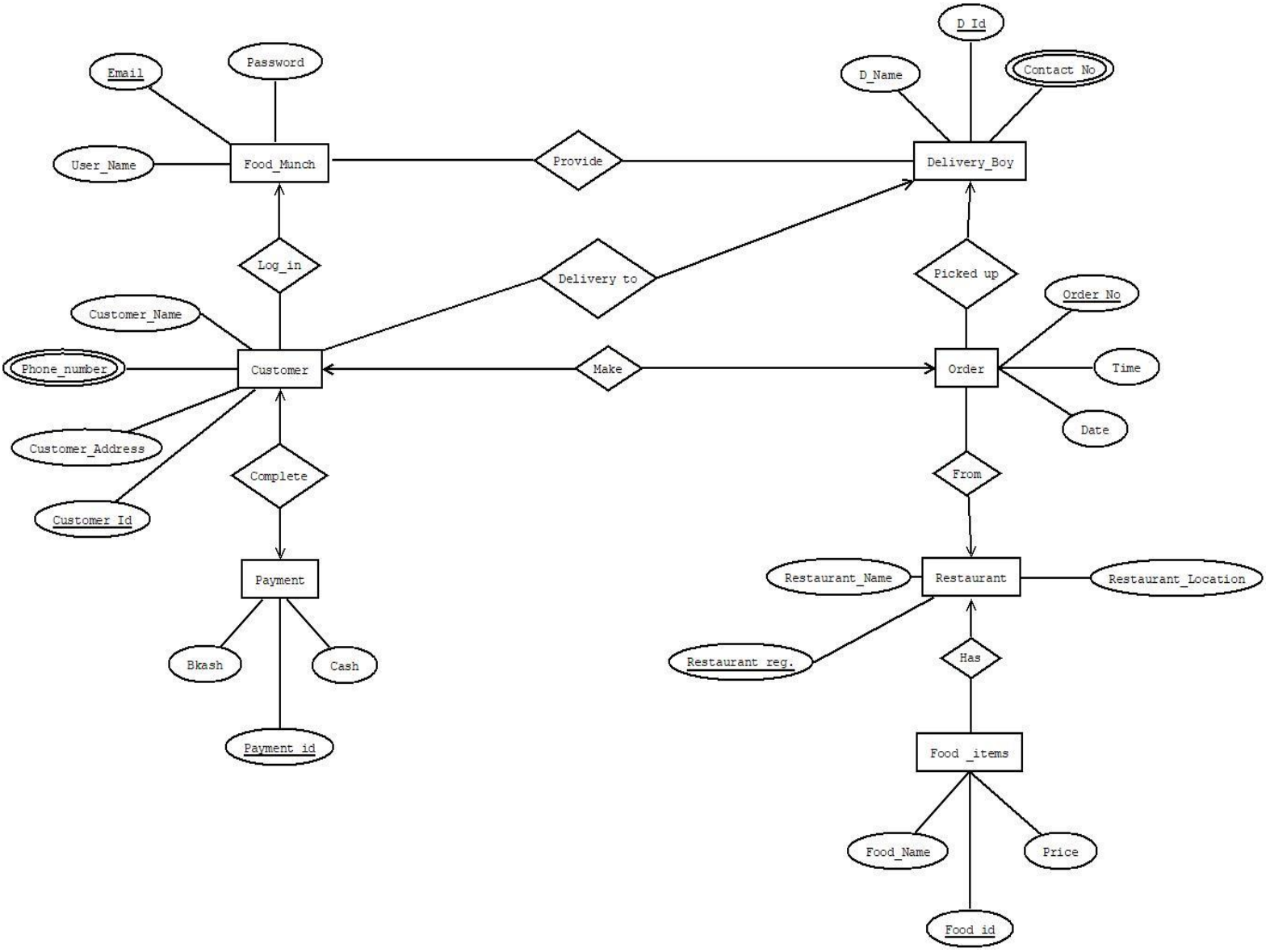
# Introduction

Food delivery management system is a system that allows customers to order food from anywhere and can receive their food at their door steps. An online food delivery system generally has two components a app that allows customers to view the menu and place an order, and an admin interface that enables the restaurant to receive and fulfil customer orders. For our project, we have designed an app which name is FoodMunch. By using this app the food delivery system will be presented. Firstly, customers will log in into the app. After log in they can select foods from their favourite restaurants. When customers confirm their order, delivery boy receives the order and delivers it to the customer.

# Scenario Description

In a food delivery management system a customer can order food by logging into the FoodMunch app. While logging into the app a customer needs to use his or her username and password. A customer is identified by their name, id, phone number and address. The app can be logged in by many customers but a customer can use only one account. After logged into the app customers can order food from restaurants. A customer can make one order at a time. And a order can be made by one customer at a time. There will be order number for each individual order. There are many restaurants available with different names and locations and registration number. One order can be done from one restaurant only. But restaurants can receive many orders. A Restaurant has many food items. Different food items has different name ,food id and price. From these items customers can select their necessary items and order that items. When a customer confirms a order he can show the order no , order time and date. After confirming a order customers need to select their payment system. They can make payment through bKash or cash on delivery system. A customer will pay one time payment. Our FoodMunch app provides a delivery boy . Each delivery boys has their name, id and contact numbers. When customers confirmed their orders, delivery boys picked up their orders and delivers it to the customers. A order can be picked up by only one delivery boy but a delivery boy can picked up many orders . A delivery boy can be deliver food to many customers but a customer can receive the delivery by only one delivery boy.

# ER Diagram


Email
Password
User_Name
Food_Munch
Provide
D_Id
D_Name
Contact No
Delivery_Boy
Log_in
Delivery to
Picked up
Customer_Name
Phone_number
Customer
Make
Order
Order No
Time
Date
Customer_Address
Customer_Id
Complete
From
Payment
Bkash
Cash
Payment_id
Restaurant_Name
Restaurant
Restaurant_Location
Restaurant reg.
Has
Food _items
Food_Name
Price
Food_id

# Normalization :

## Log_in:

**UNF**

Log_in(Email, User_name Password ,Customer_id , Customer_address, Customer_name , Phone_number)

**1NF**

Phone Number is a multi valued attribute.

1.Email, User_name ,Password ,Customer_id , Customer_address, Customer_name , Phone_number.

**2NF**

1.Email, User_name ,Password

2. Customer_id , Customer_address, Customer_name , Phone number

**3NF**

There is no transitive dependency. Relation already in 3NF.

1.Email, User_name ,Password

2. Customer_id , Customer_address, Name , Phone number

**Table Creation**

1.Email, User_name ,Password

2. Customer_id , Customer_address, Customer_name , Phone number, Email

# MAKE :

**UNF**

Make(Customer_ID,Customer_Name,Phone_number,Customer_address,Order_no, Time,Date)

**1NF**

Phone_number is a multivalued attribute

1.Customer_ID, Customer_Name,Phone_number, Customer_address,Order_no,Time,Date.

**2NF**

1.Customer_Id, Customer_Name,Phone_number, Customer_address.

2.Order_no,Time,Date.

**3NF**

There is no transitive dependency. Relation is already in 3NF.

1.Customer_Id, Customer_Name,Phone_number, Customer_address.

2.Order_no,Time,Date.

**Table creation:**

1. Customer_Id, Customer_Name,Phone_number, Customer_address,
2. Order_no,Time,Date, Customer_Id

# From :

**UNF**

From(Order_no ,Time,Date, Restaurant_reg., Restaurant_Name , Location )

**1NF**

There is no multi valued attribute. Relation already in 1NF.

1. Order_no , Time ,Date , Restaurant_reg., Restaurant_Name , Location

**2NF**

1. Order_no , Time ,Date
2. Restaurant_reg., Restaurant_Name , Location

**3NF**

There is no transitive dependency. Relation already in 3NF.

1. Order_no , Time ,Date
2. Restaurant_reg., Restaurant_Name , Location

**Table Creation**

1. Order_no , Time ,Date, Restaurant_reg
2. Restaurant_reg., Restaurant_Name , Location

## Has :

### UNF

Has(Restaurant_reg. , Restaurant_name, Location, Food_name, Price ,Food_id)

### 1NF

There is no multi valued attribute. Relation already in 1NF.

1. Restaurant_reg. , Restaurant_name, Location, Food_Name, Price ,Food_id

### 2NF

1. Restaurant_reg. , Restaurant_name, Location
2. Food_id , Food_Name, Price

### 3NF

There is no transitive dependency. Relation already in 3NF.

1. Restaurant_Reg. , Restaurant_name, Location
2. Food_id , Food_Name, Price

### Table Creation

1. Restaurant_Reg. , Restaurant_Name, Location
2. Food_id , Food_Name, Price, Restaurant_Reg

# Provide :

## UNF

Provide (Email, User_name, Password , D_Id, D_Name, Contract_No.)

## 1NF

There is no multi valued attribute. Relation already in 1NF.

1. Email, User_name Password ,Customer_id , Address, Name , Phone number

## 2NF

1. Email, User_name, Password
2. D_Id, D_Name, Contract_No

## 3NF

There is no transitive dependency. Relation already in 3NF.

1. Email, User_name, Password
2. D_Id, D_Name, Contract_No

## Table Creation

1. Email, User_name ,Password
2. D_Id, D_Name, Contract No
3. Email, D_Id

# PICKED UP:

**UNF:**

Picked up(Order_no,Time,Date, D_id,D_Name,Contact_no)

**1NF:**

Contact_no is a multivalued attribute .

1. Order_no,Time,Date,D_id,D_Name,Contact_no.

**2NF:**

1. Order_no,Time,Date.
2. D_id,D_Name,Contact_no.

**3NF:**

There is no transitive dependency.Relation is already in 3NF.

1. Order_no,Time,Date.
2. D_id,D_Name,Contact_no.

**Table creation:**

1. Order_no,Time,Date,D_id.
3. D_id,D_Name,Contact_no.

# DELIVERY TO:

**UNF:**

Delivary to(Customer_ID, Customer_Name,Phone_number, Customer_address,

D_id,D_Name,Contact_no)

**1NF:**

Contact_no is a multivalued attribute .

1. Customer_ID, Customer_Name,Phone_number, Customer_address,

   D_id, D_Name, Contact_no.

**2NF:**

1. Customer_ID, Customer_Name,Phone_number, Customer_address.
2. D_id,D_Name,Contact_no.

**3NF:**

There is no transitive dependency.Relation is already in 3NF.

1. Customer_ID, Customer_Name,Phone_number, Customer_address.
2. D_id,D_Name,Contact_no.

**Table creation:**

1. Customer_ID,Name,Phone_number, Customer_address, D_id.
2. D_id,D_Name,Contact_no.

# Complete :

## UNF

Complete(Customer_id,Customer_name,Phone_number,Address,Payment_id, Bkash, Cash )

## 1NF

Phone_number is a multivalued attribute.

1. Customer_id,Customer_name,Phone_number,Address,Payment_id, Bkash, Cash

## 2NF

1. Customer_id,Customer_name,Phone_number,Address
2. Payment_id, Bkash, Cash

## 3NF

There is no transitive dependency. Relation already in 3NF.

1. Customer_id,Customer_name,Phone_number,Address
2. Payment_id, Bkash, Cash

## Table Creation

1. Customer_id,Customer_name,Phone_number,Address
2. Payment_id, Bkash, Cash, Customer_id

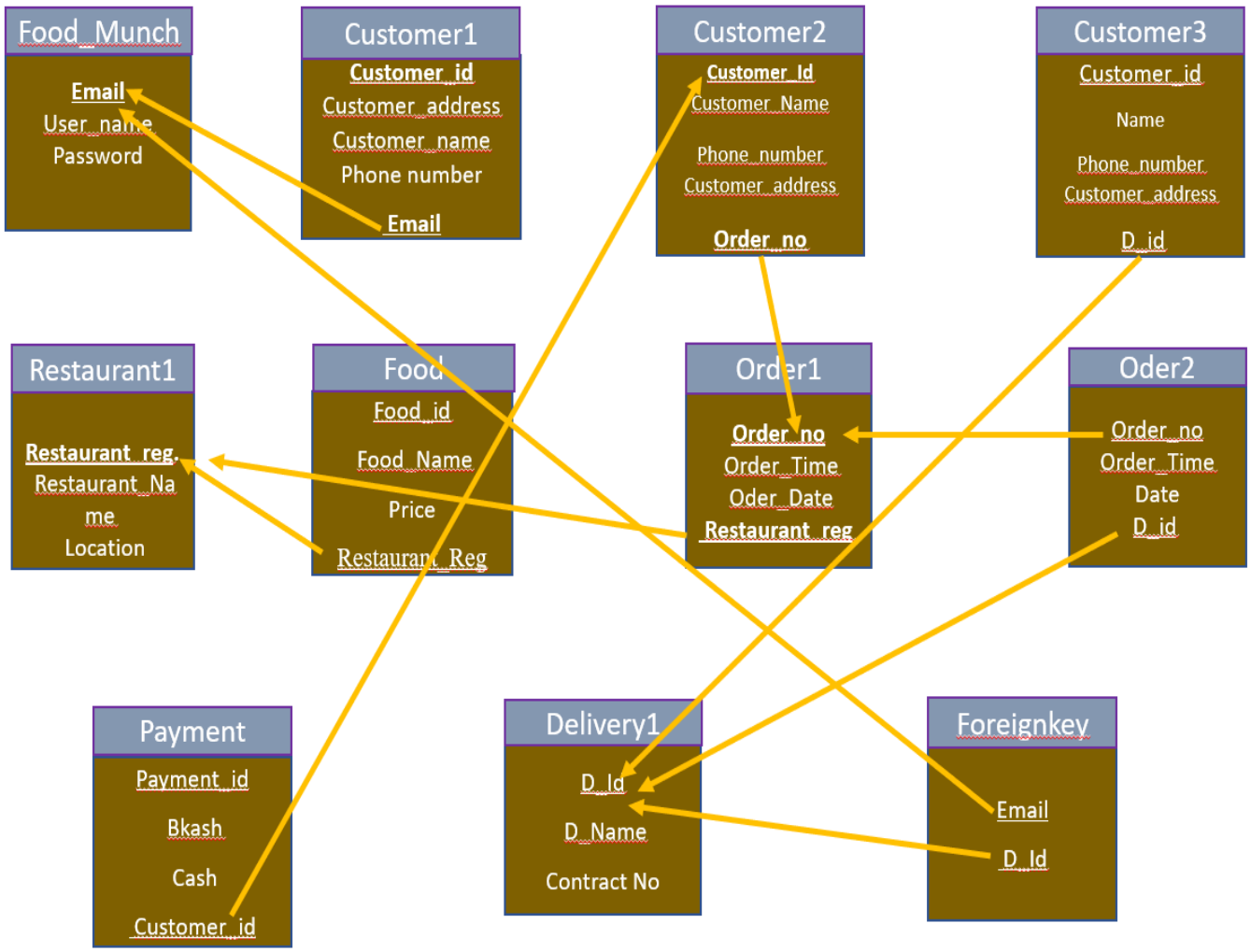
# Temporary Tables :

1. Email, User_name ,Password
2. Customer_id , Customer_address, Customer_name , Phone number, Email
3. Customer_Id, Customer_Name,Phone_number, Customer_address,Order_no.
4. ~~Order_no,Time,Date.~~
5. Order_no , Time ,Date, Restaurant_reg
6. Restaurant_reg., Restaurant_Name , Location
7. ~~Restaurant_Reg. , Restaurant_Name, Location~~
8. Food_id , Food_Name, Price, Restaurant_Reg.
9. ~~Email, User_name ,Password~~
10. D_Id, D_Name, Contract No
11. Email, D_Id
12. Order_no,Time,Date,D_id.
13. ~~D_id,D_Name,Contact_no.~~
14. Customer_ID, Customer_name,Phone_number, Customer_address, D_id.
15. ~~D_id,D_Name,Contact_no.~~
16. ~~Customer_id,Customer_name,Phone_number,Address~~
17. Payment_id, Bkash, Cash, Customer_id

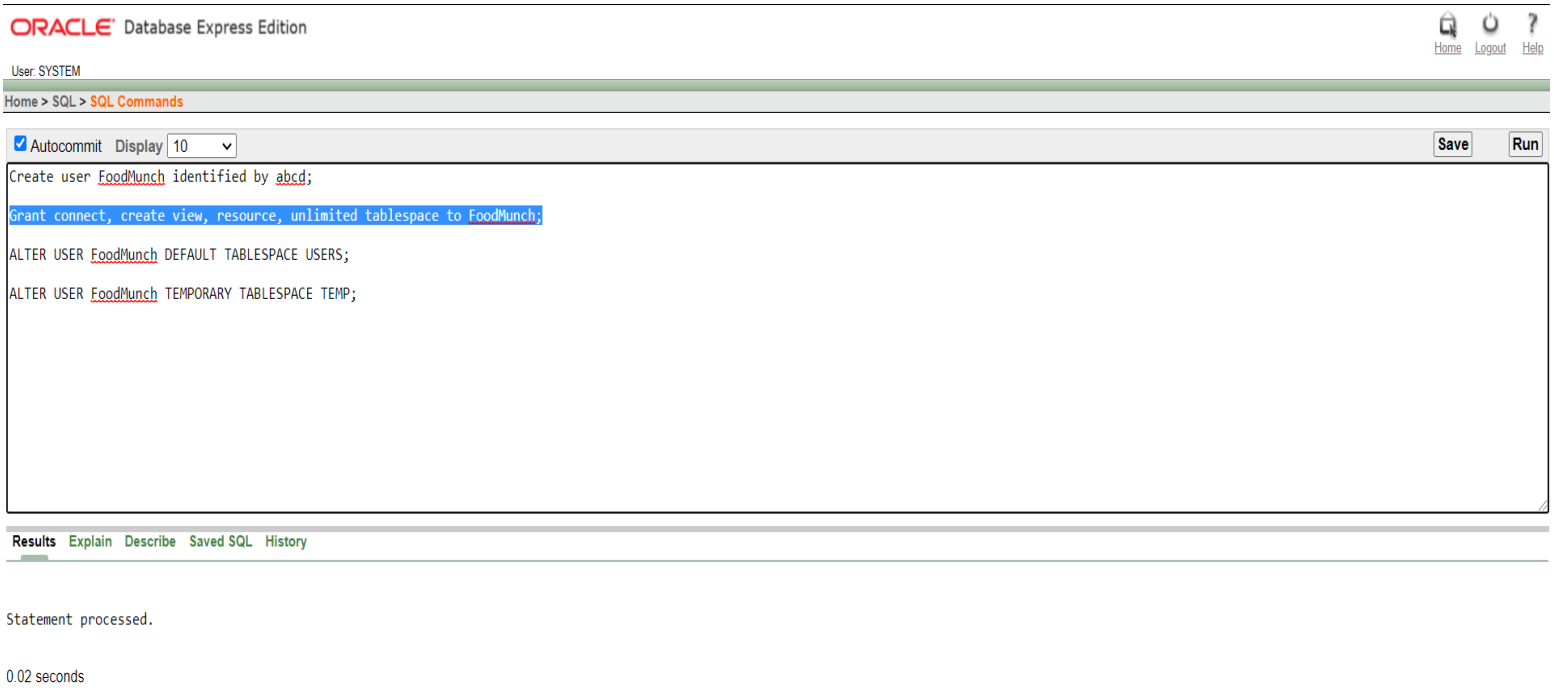
# Final Tables :

1. Email, User_name ,Password
2. Customer_id , Customer_address, Customer_name , Phone number, Email
3. Customer_Id, Customer_Name,Phone_number, Customer_address,Order_no.
4. Order_Name , Time ,Date, Restaurant_reg
5. Restaurant_reg., Restaurant_Name , Location
6. Food_id , Food_Name, Price , Restaurant_Reg
7. D_Id, D_Name, Contract No
8. Email, D_Id
9. Order_no,Time,Date,D_id.
10. Customer_ID, Customer_name,Phone_number, Customer_address, D_id.
11. Payment_id, Bkash, Cash, Customer_id

# Schema Diagram

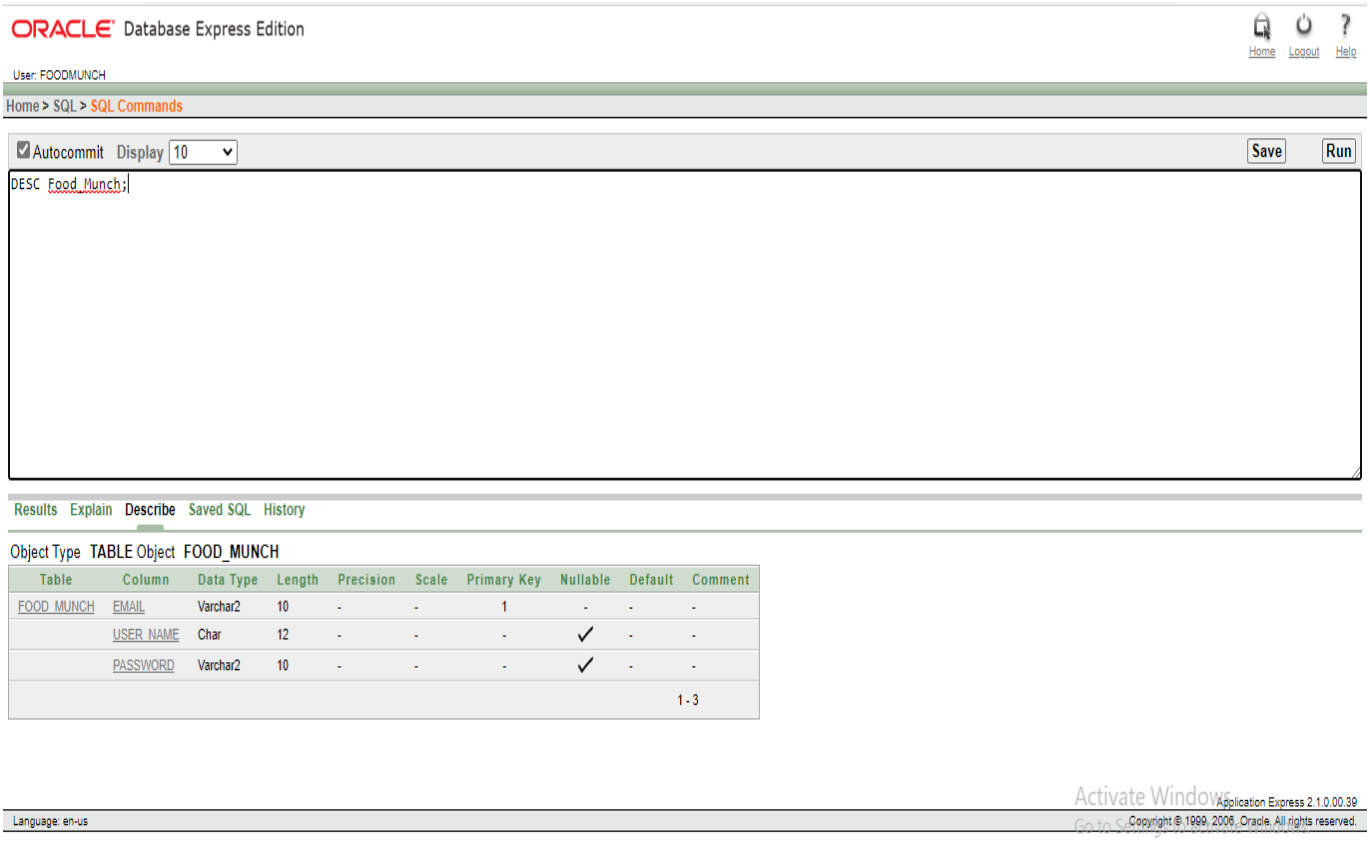


# Create user

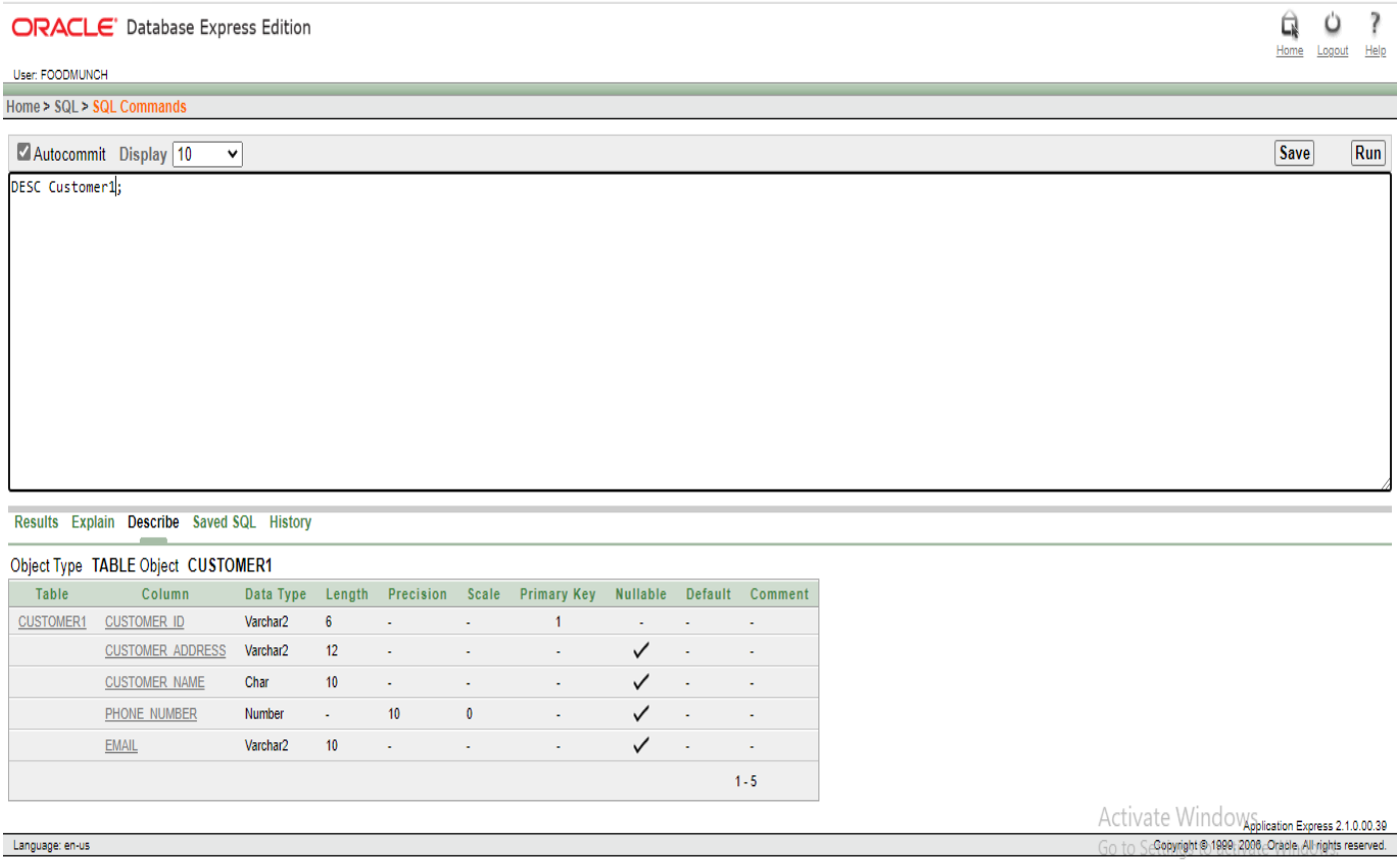

ORACLE Database Express Edition
Home
Logout
Help
User: SYSTEM
Home > SQL > SQL Commands
Autocommit
Display 10
Save
Run
Create user FoodMunch identified by abcd;
Grant connect, create view, resource, unlimited tablespace to FoodMunch;
ALTER USER FoodMunch DEFAULT TABLESPACE USERS;
ALTER USER FoodMunch TEMPORARY TABLESPACE TEMP;
Results
Explain
Describe
Saved SQL
History
Statement processed.
0.02 seconds

# Table Creation

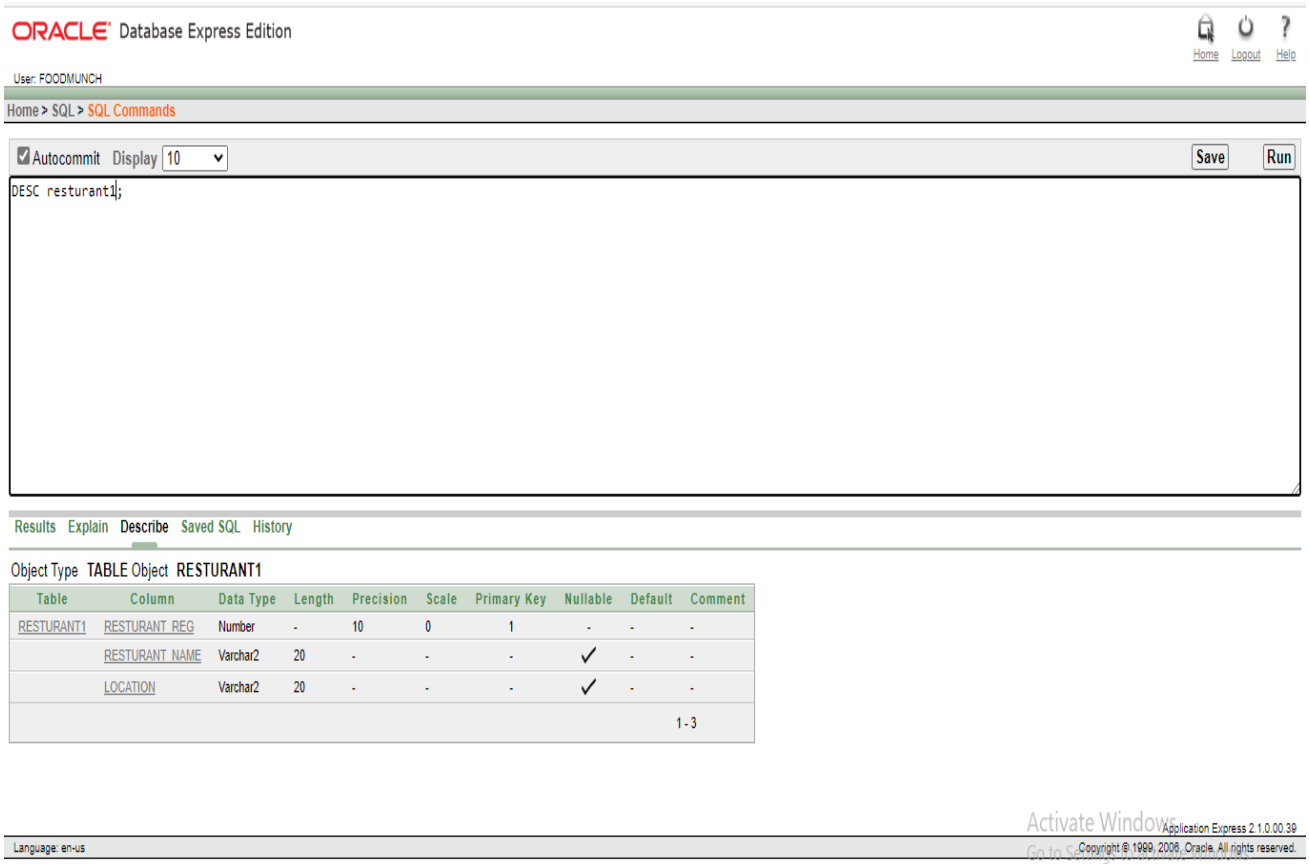
1. Create table Food_Munch (Email varchar (10)primary key , User_name char (12) , password varchar (10)) ;



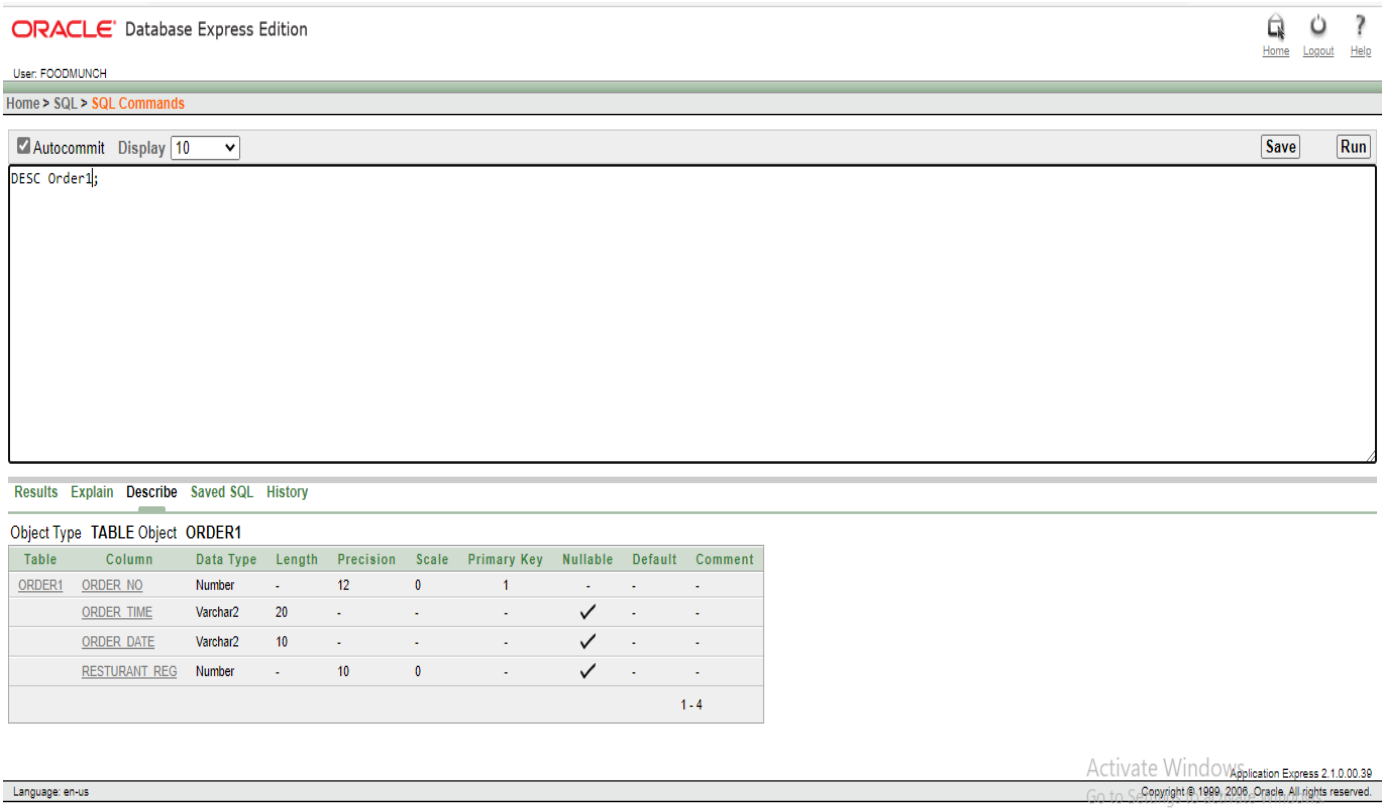
2. Create table Customer1 (Customer_id varchar (6)primary key , Customer_address varchar (12) , Customer_name char (10) , Phone_number number (10), Email varchar (10)) ;
   Alter table Customer1 add constraint ff1 foreign key (Email) references Food_Munch (Email);



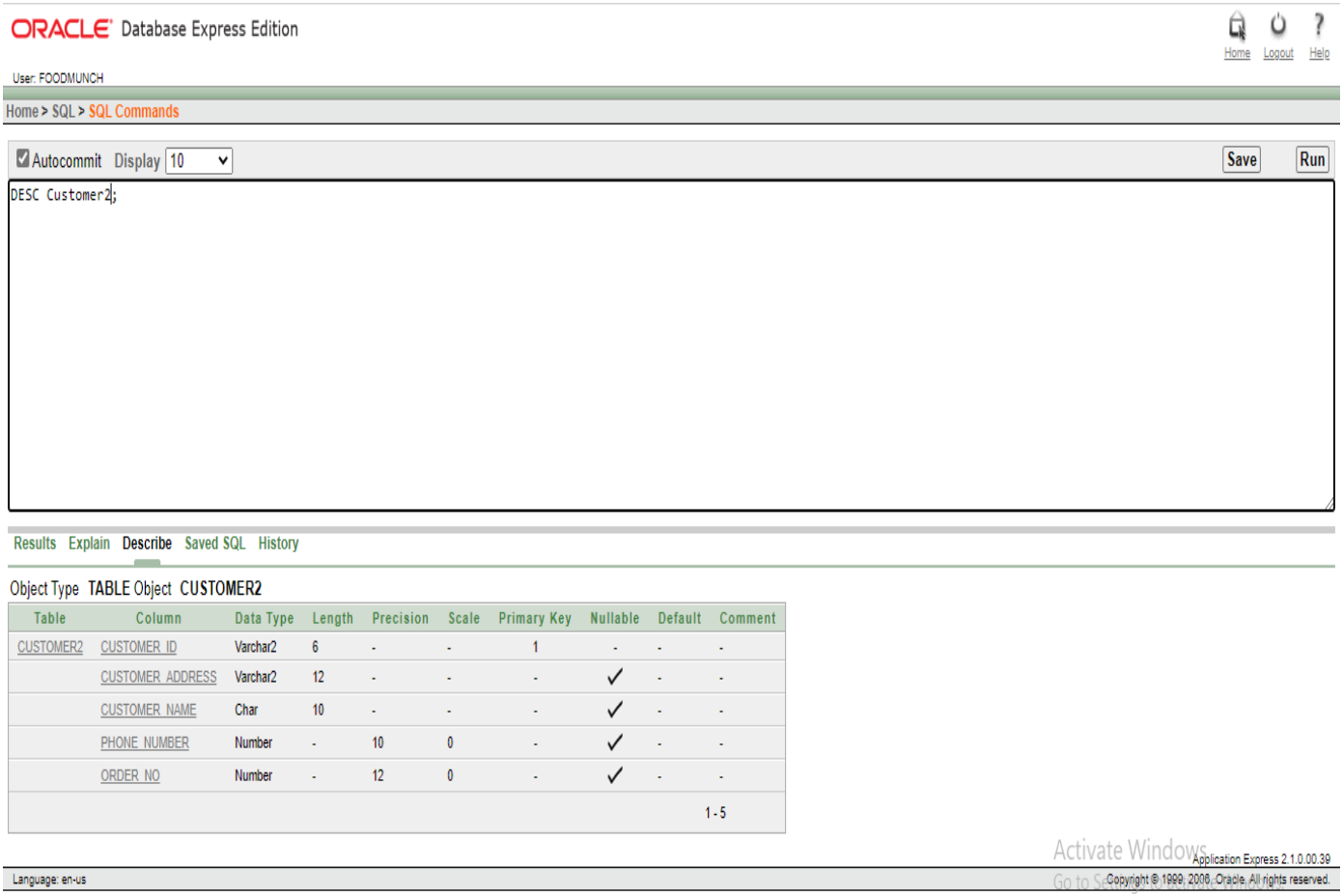
3. Create table resturant1(Resturant_reg number(10)primary key,Resturant_name varchar2(20),Location varchar2(20));



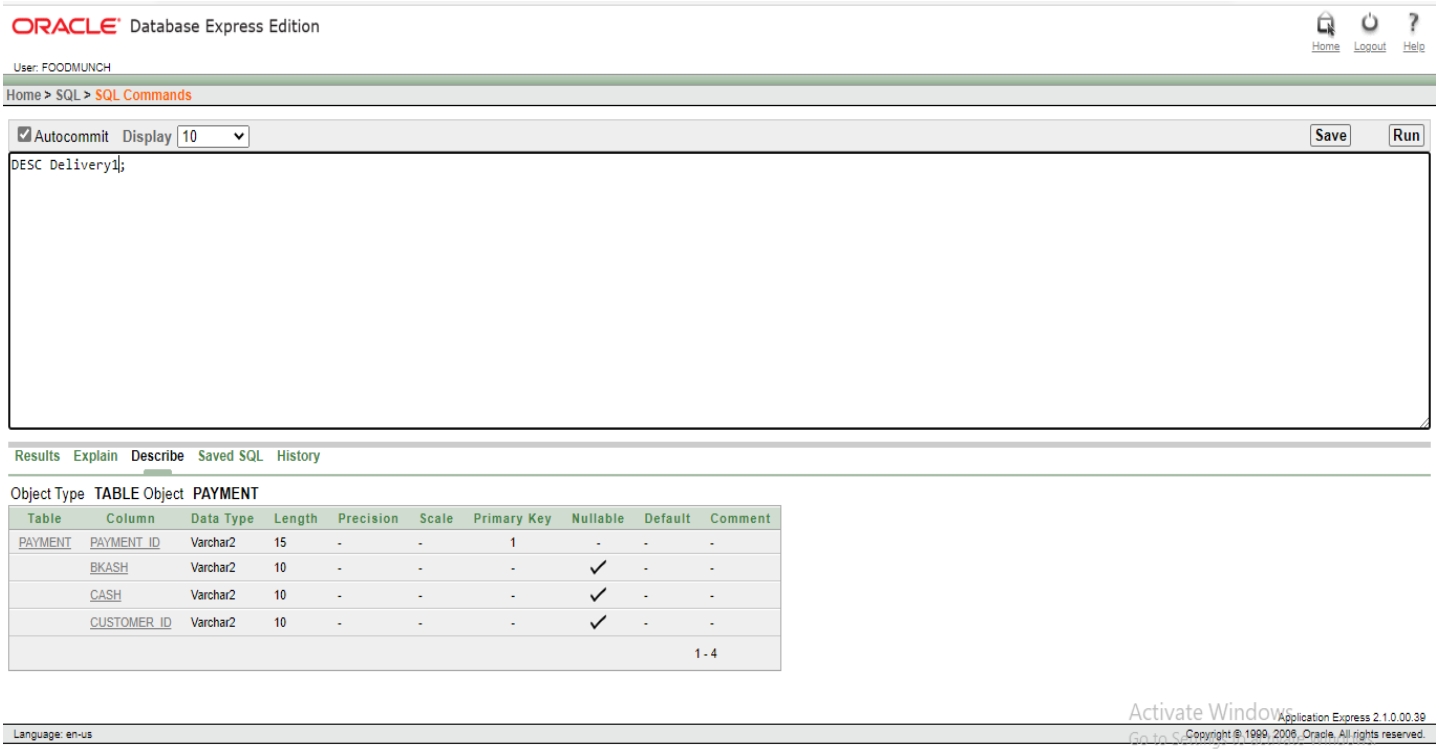
4. Create table Order1(Order_no number(12)primary key, Order_time varchar2(20),Order_Date varchar2(10),Resturant_reg number(10));
   alter table Order1 add constraint f3 foreign key (Resturant_reg) references resturant1 (Resturant_reg);



5. Create table Customer2 (Customer_id varchar (6)primary key , Customer_address varchar (12) , Customer_name char (10) , Phone_number number (10), Order_no number(12));
   Alter table Customer2 add constraint f4 foreign key (Order_no) references Order1 (Order_no);

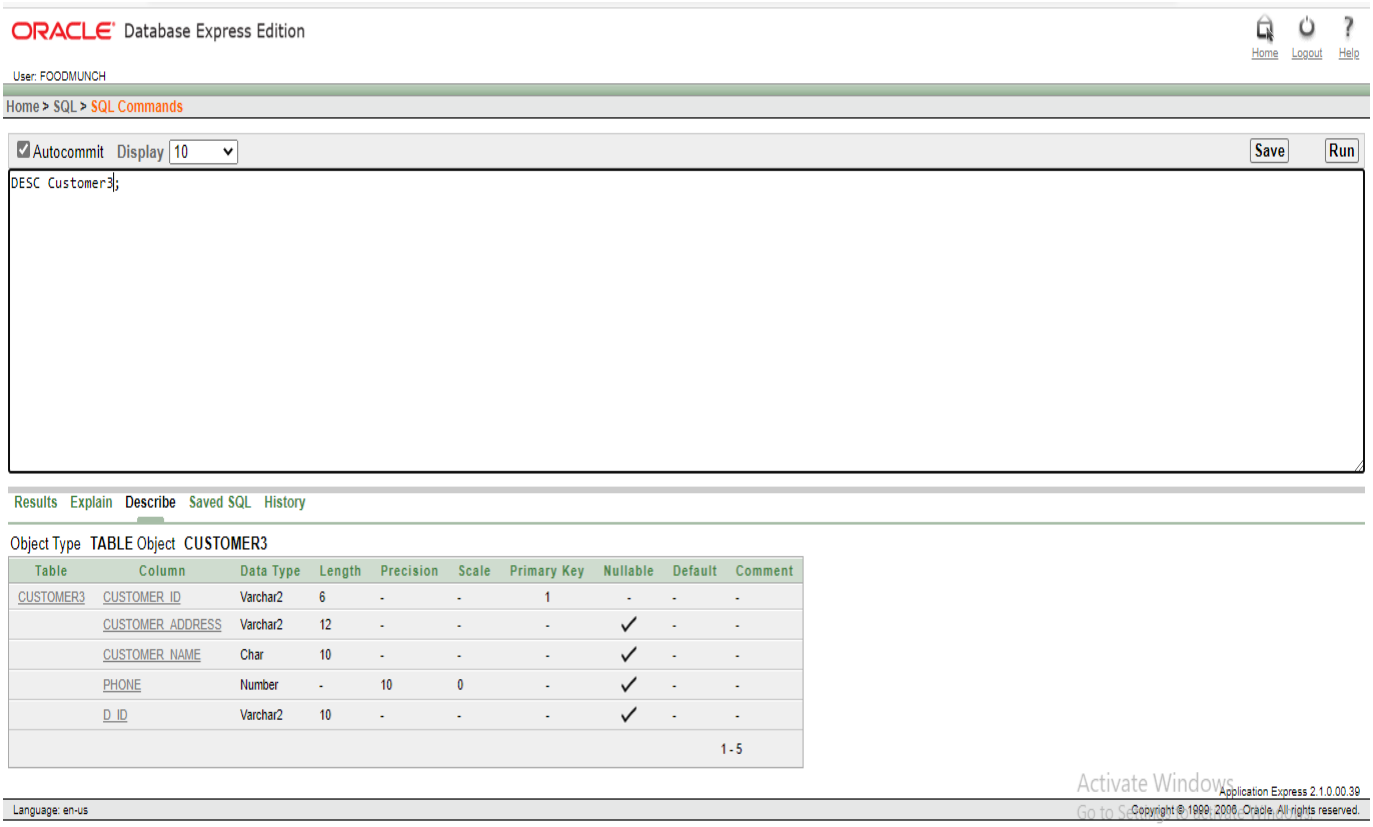


6. Create table Delivery1(D_id varchar (10)primary key, D_Name varchar2(20),Contract_no number(11));



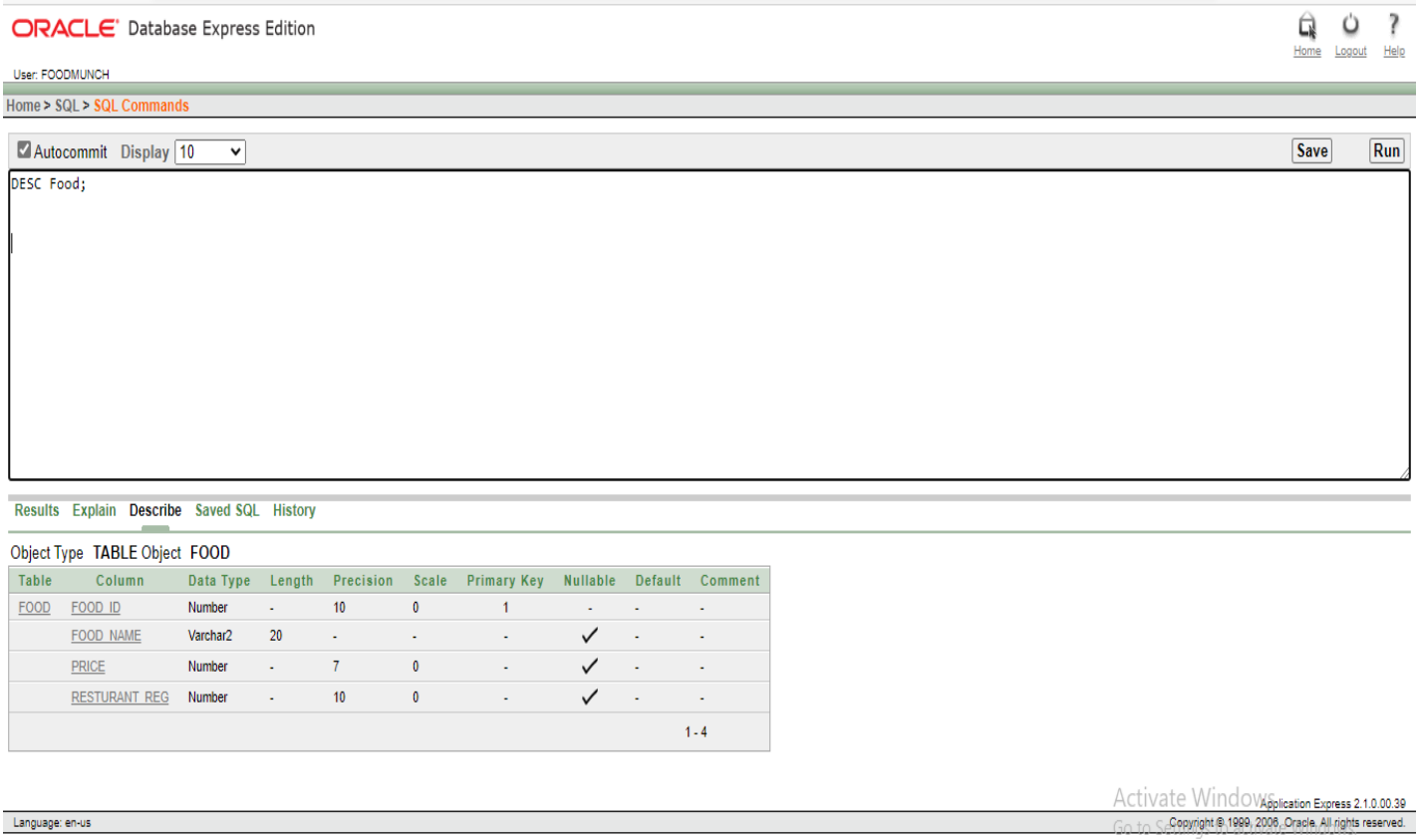
7.Create table Customer3 (Customer_id varchar (6)primary key , Customer_address varchar (12) , Customer_name char (10) , Phone number (10), D_id varchar2 (10)) ;

alter table Customer3 add constraint f1 foreign key (D_id) references Delivery1 (D_id);



8.Create table food(food_id number(10)primary key ,food_name varchar2(20),price number(7),Resturant_reg number(10));

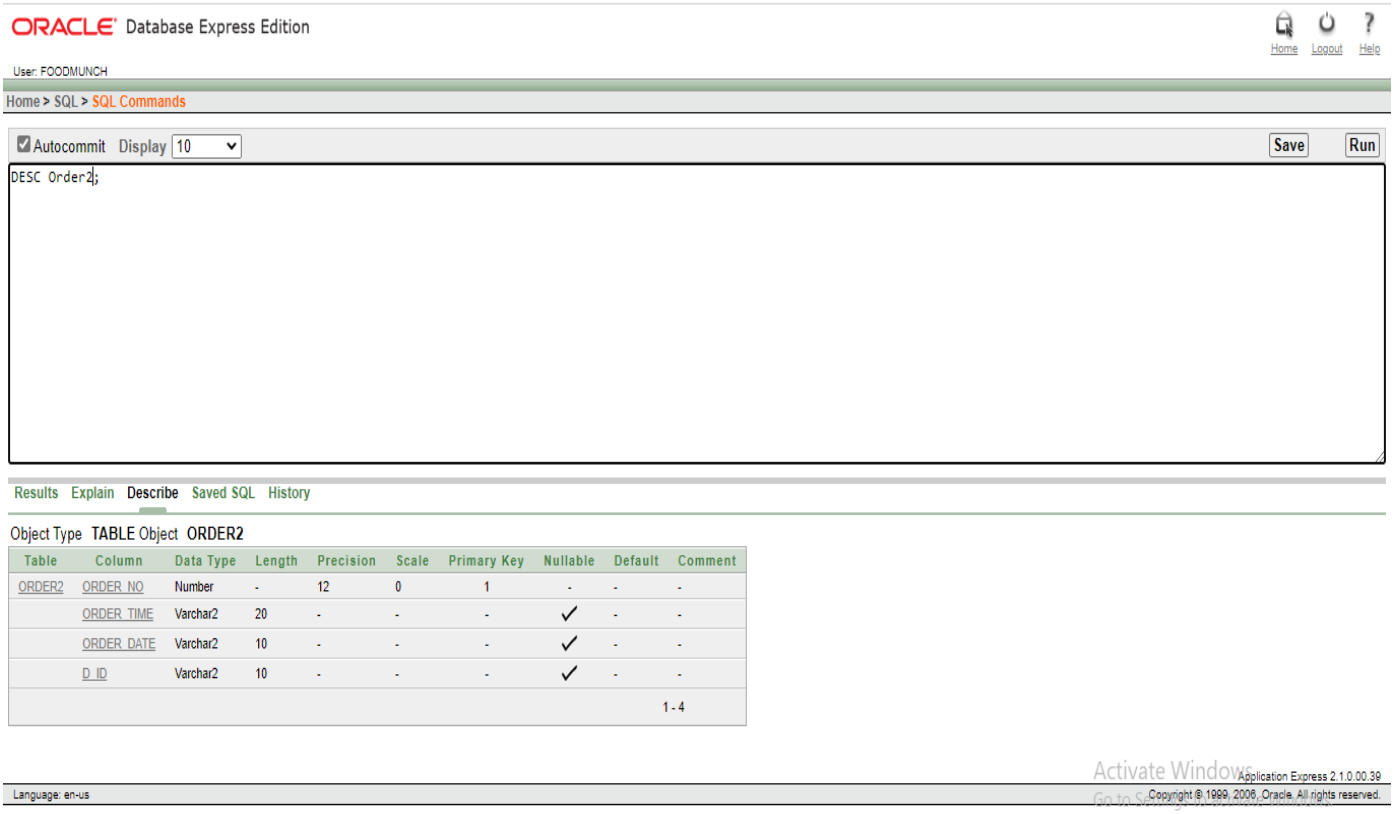
alter table food add constraint f2 foreign key (Resturant_reg) references resturant1 (Resturant_reg);



9.Create table Order2(Order_no number(12)primary key, Order_time varchar2(20),Order_Date varchar2(10),D_id varchar(10));

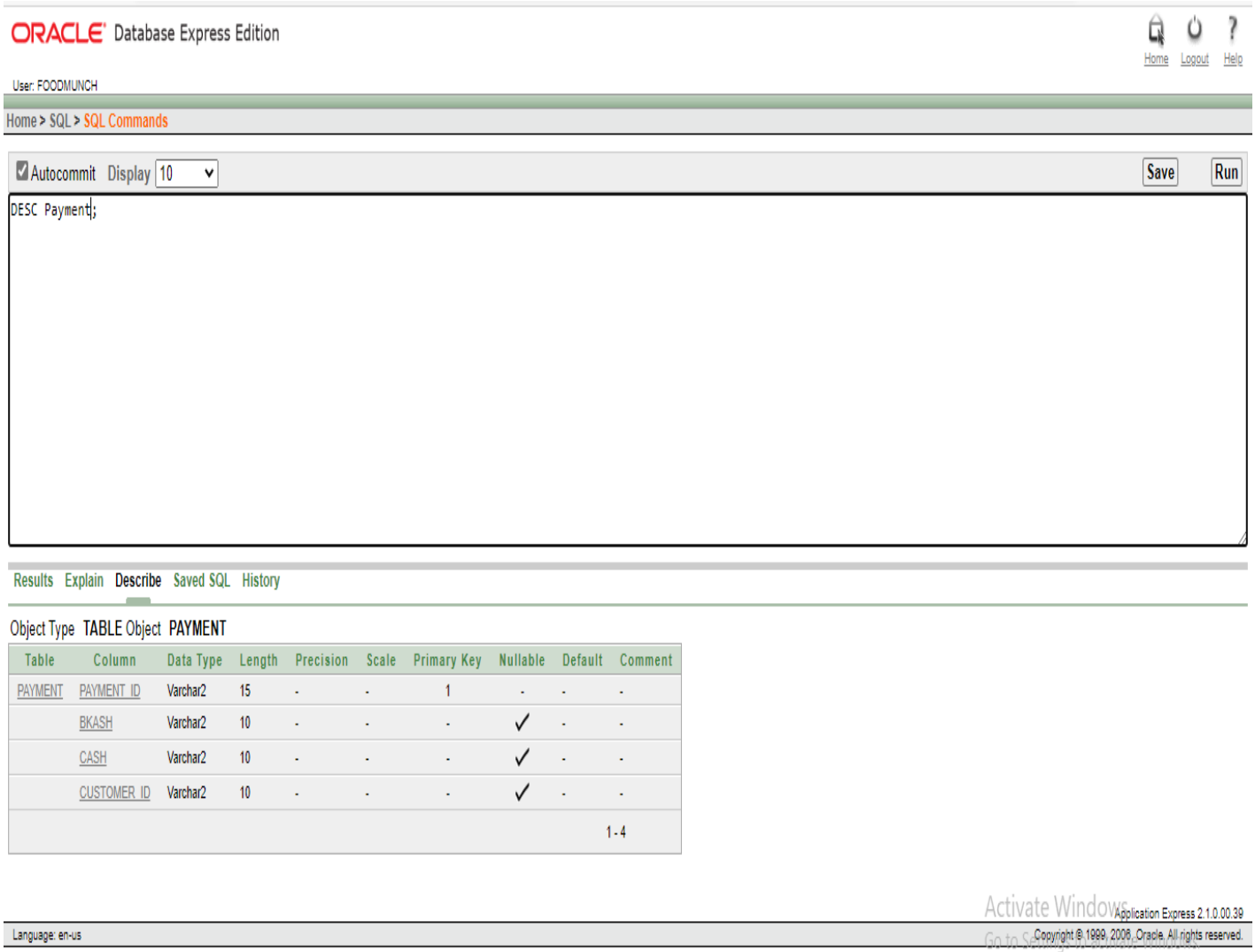
alter table Order2 add constraint f5 foreign key (Order_no) references Order1 (Order_no);

alter table Order2 add constraint f6 foreign key (D_id) references Delivery1 (D_id);



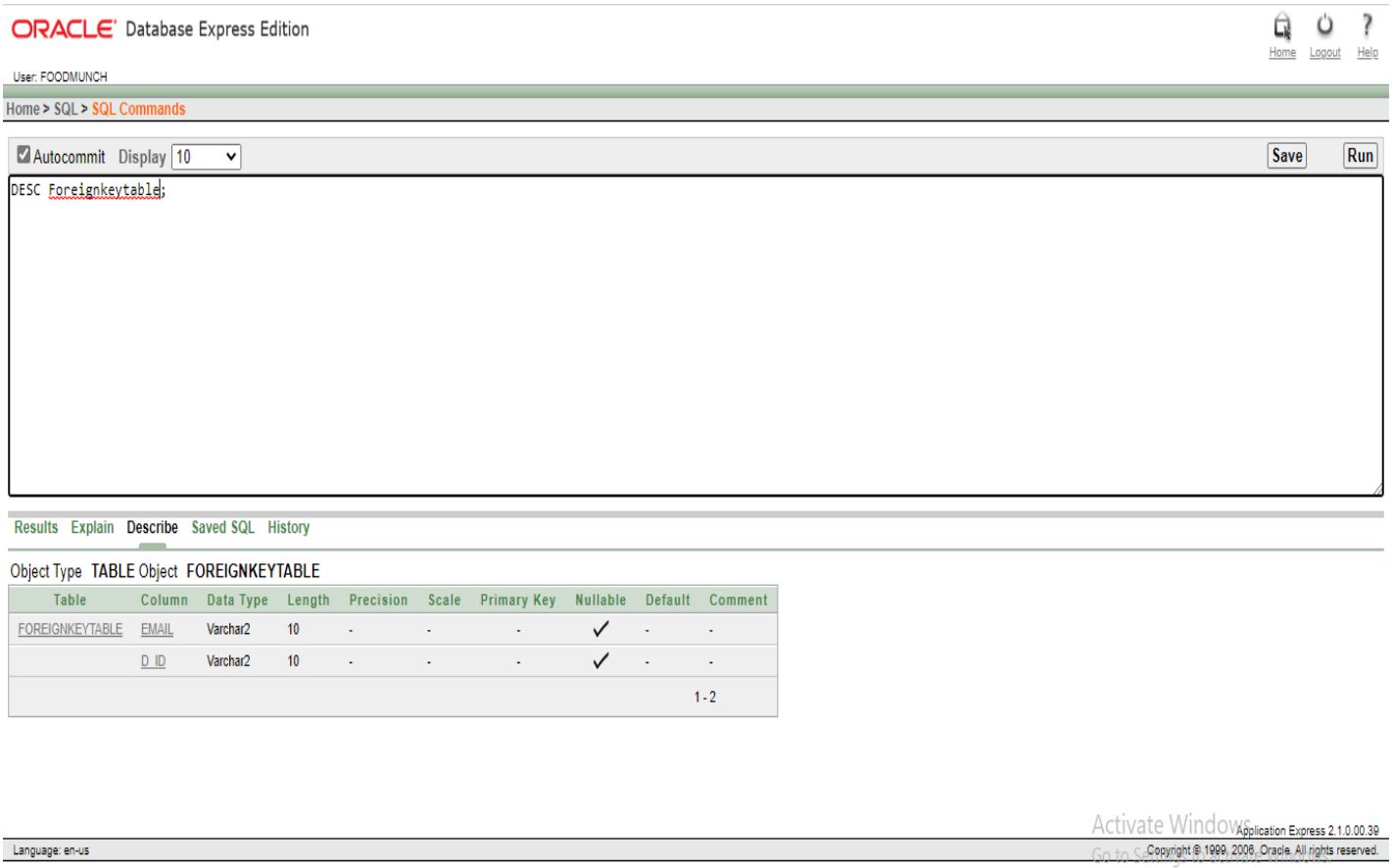
10.Create table Payment(Payment_id varchar2(15)primary key , Bkash varchar2(10),Cash varchar2(10), Customer_id varchar2(10));

alter table Payment add constraint ffg foreign key (Customer_id) references Customer1(Customer_id);



11.Create table Foreignkeytable(Email varchar (10) , D_id varchar (10));

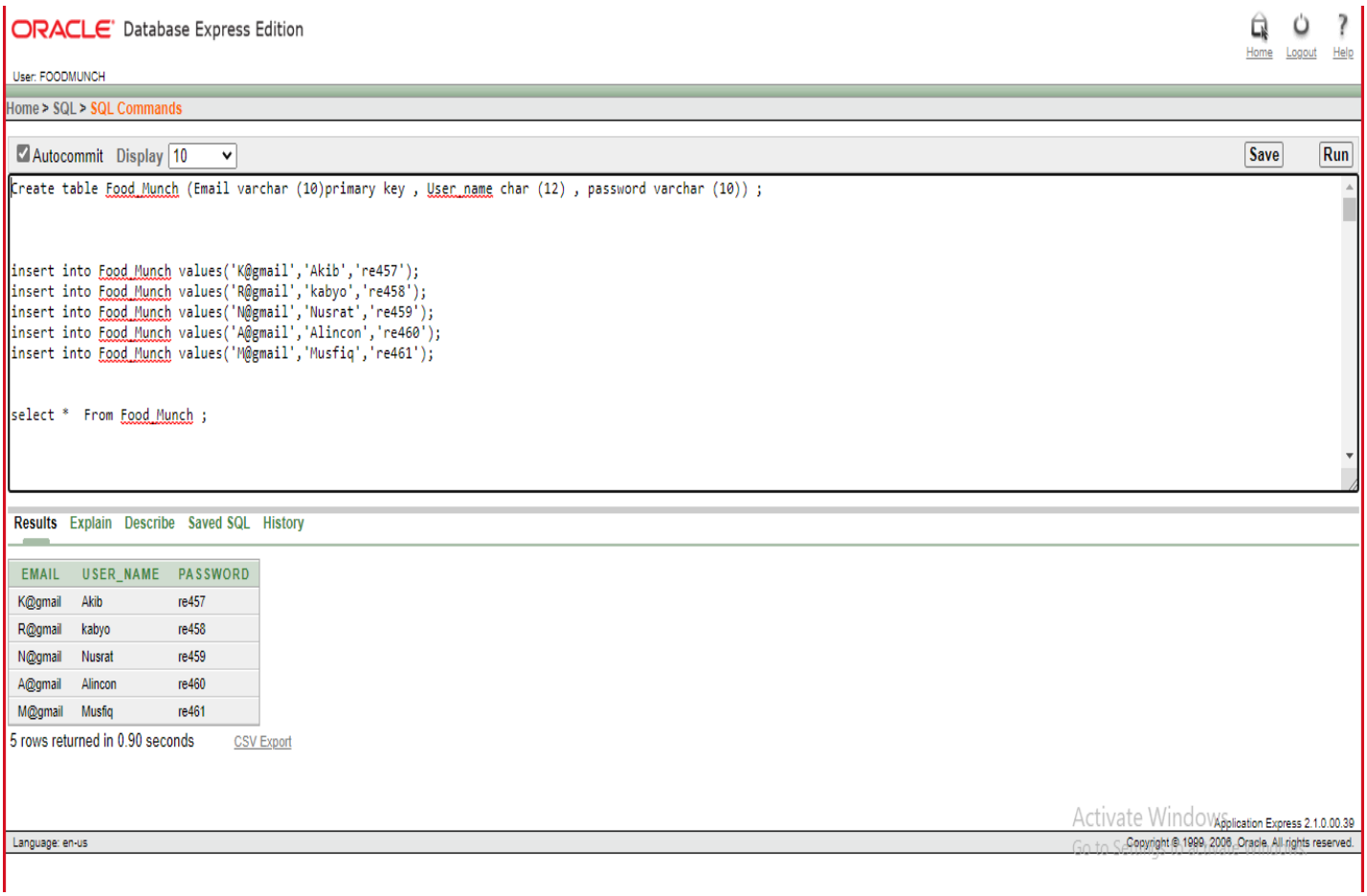
alter table Foreignkeytable add constraint f8 foreign key (Email) references Food_Munch (Email);



# Data Insertion

For table 1:

```
insert into Food_Munch values('K@gmail','Akib','re457');

insert into Food_Munch values('R@gmail','kabyo','re458');

insert into Food_Munch values('N@gmail','Nusrat','re459');

insert into Food_Munch values('A@gmail','Alincon','re460');

insert into Food_Munch values('M@gmail','Musfiq','re461');
```



## For table 2:

Create sequence Customer1_seqe increment by 2 start with 1 maxvalue 10 nocycle nocache;

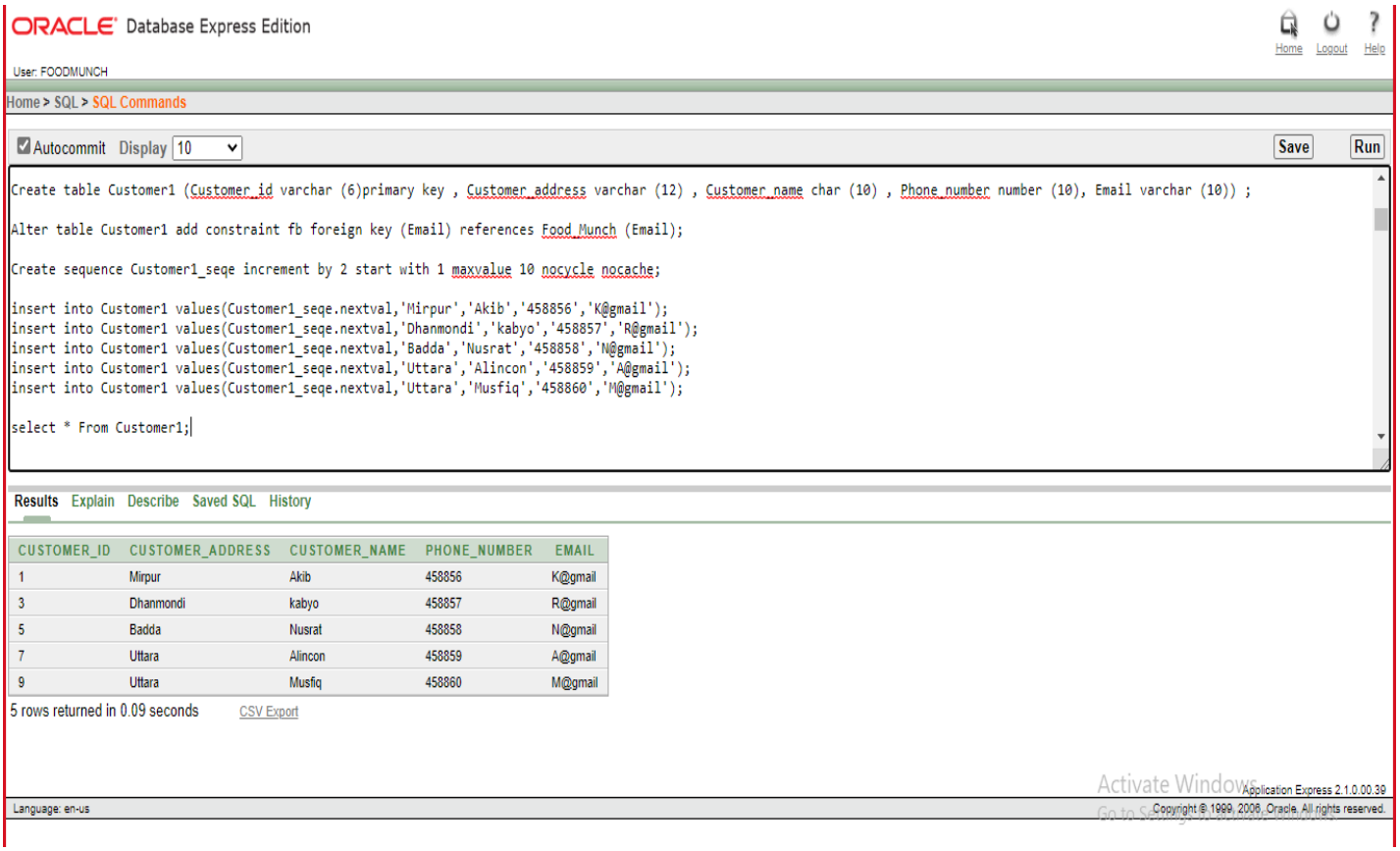
insert into Customer1 values(Customer1_seqe.nextval,'Mirpur','Akib','458856','K@gmail');

insert into Customer1
values(Customer1_seqe.nextval,'Dhanmondi','kabyo','458857','R@gmail');

insert into Customer1 values(Customer1_seqe.nextval,'Badda','Nusrat','458858','N@gmail');

insert into Customer1 values(Customer1_seqe.nextval,'Uttara','Alincon','458859','A@gmail');

insert into Customer1 values(Customer1_seqe.nextval,'Uttara','Musfiq','458860','M@gmail');



## For table 3:

Create sequence resturant1_seq increment by 2 start with 10 maxvalue 20 nocycle nocache;

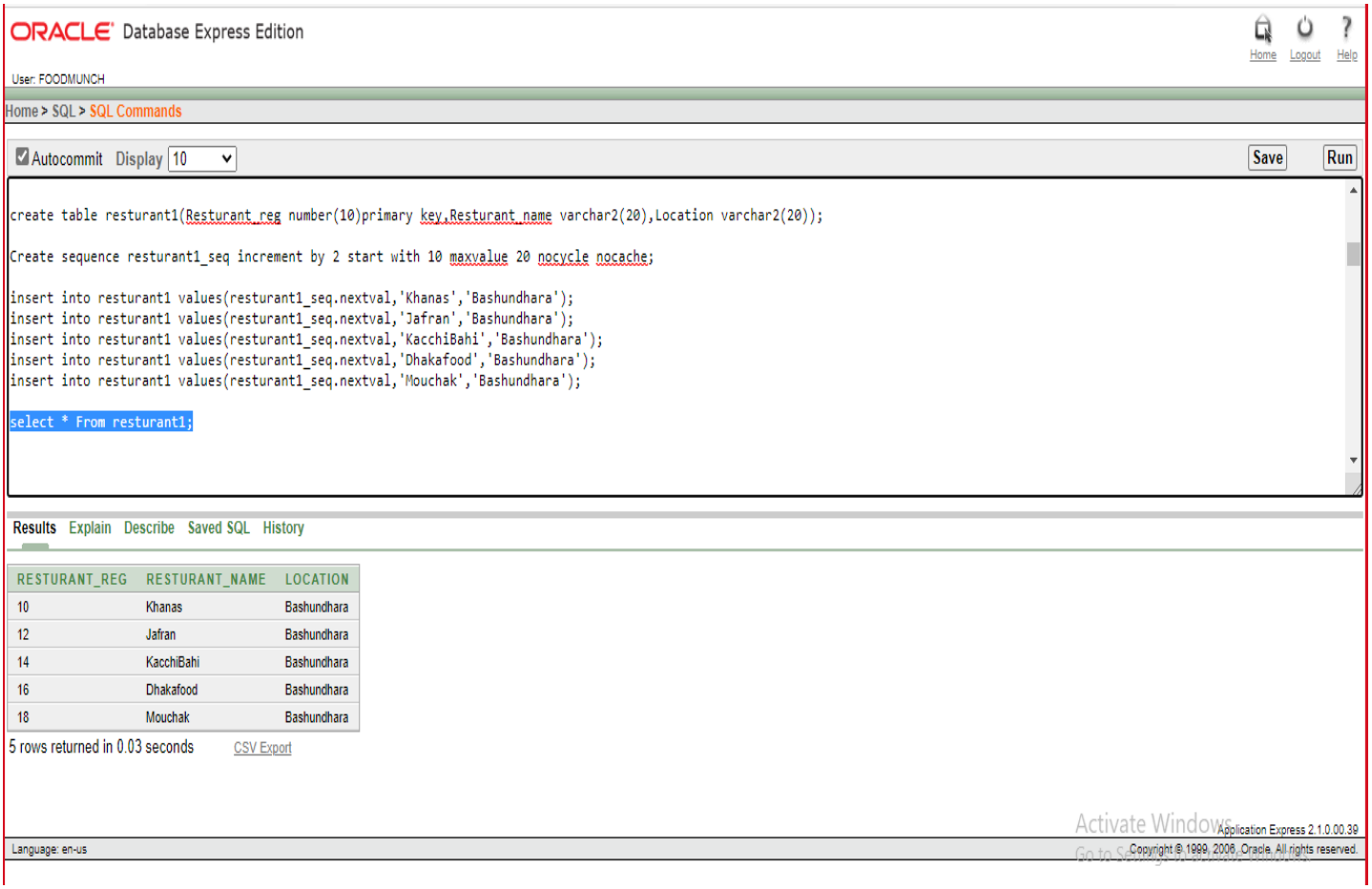
insert into resturant1 values(resturant1_seq.nextval,'Khanas','Bashundhara');

insert into resturant1 values(resturant1_seq.nextval,'Jafran','Bashundhara');

insert into resturant1 values(resturant1_seq.nextval,'KacchiBahi','Bashundhara');

insert into resturant1 values(resturant1_seq.nextval,'Dhakafood','Bashundhara');

insert into resturant1 values(resturant1_seq.nextval,'Mouchak','Bashundhara');



## For table 4:

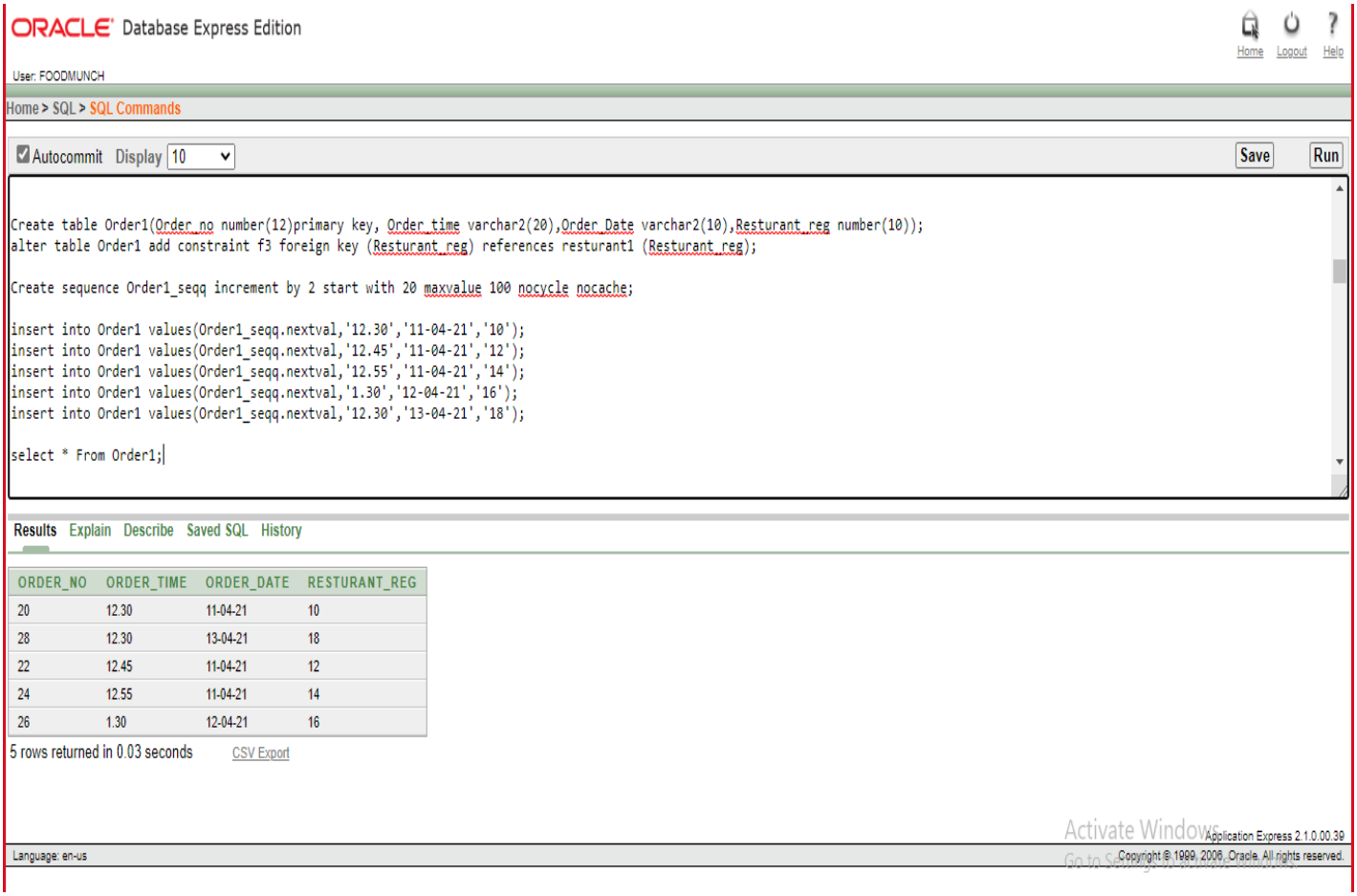
Create sequence Order1_seqq increment by 2 start with 20 maxvalue 100 nocycle nocache;

insert into Order1 values(Order1_seqq.nextval,'12.30','11-04-21','10');

insert into Order1 values(Order1_seqq.nextval,'12.45','11-04-21','12');

insert into Order1 values(Order1_seqq.nextval,'12.55','11-04-21','14');

insert into Order1 values(Order1_seqq.nextval,'1.30','12-04-21','16');



## For table 5:

Create sequence Customer2_seqq increment by 2 start with 30 maxvalue 200 nocycle nocache;

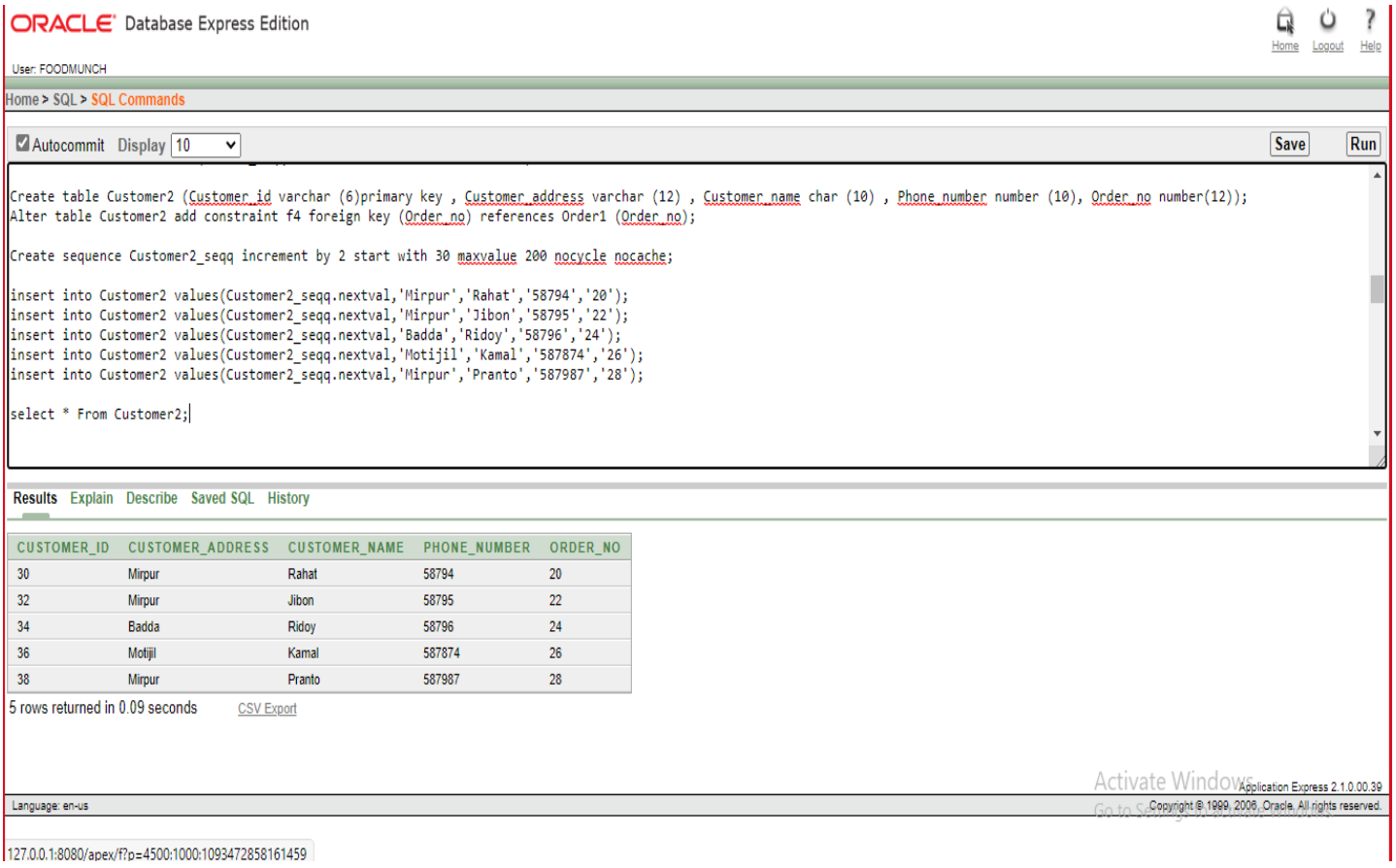
insert into Customer2 values(Customer2_seqq.nextval,'Mirpur','Rahat','58794','20');

insert into Customer2 values(Customer2_seqq.nextval,'Mirpur','Jibon','58795','22');

insert into Customer2 values(Customer2_seqq.nextval,'Badda','Ridoy','58796','24');

insert into Customer2 values(Customer2_seqq.nextval,'Motijil','Kamal','587874','26');

insert into Customer2 values(Customer2_seqq.nextval,'Mirpur','Pranto','587987','28');



## For table 6:

Create sequence Delivery1_seqq increment by 2 start with 40 maxvalue 200 nocycle nocache;

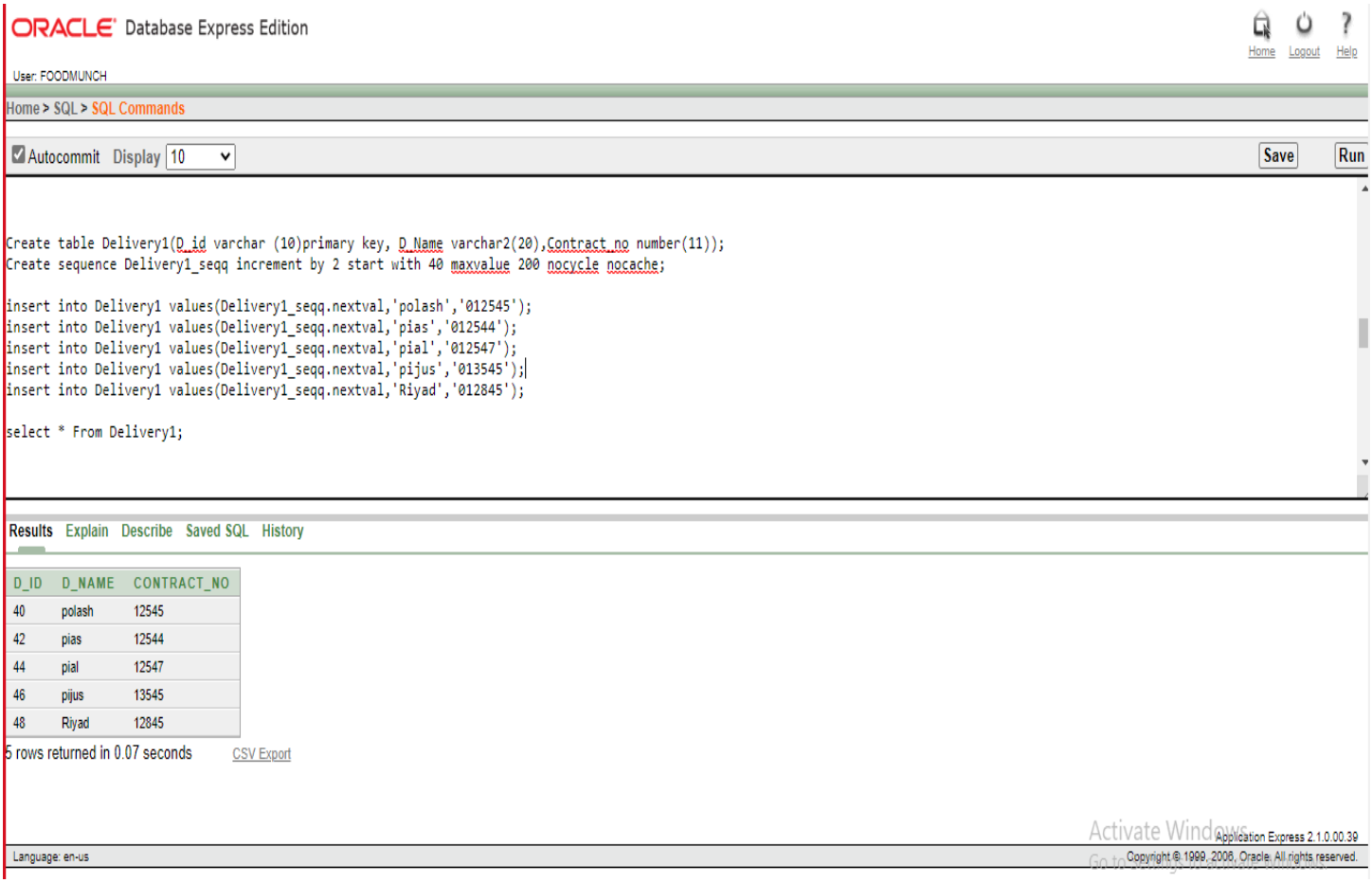
insert into Delivery1 values(Delivery1_seqq.nextval,'polash','012545');

insert into Delivery1 values(Delivery1_seqq.nextval,'pias','012544');

insert into Delivery1 values(Delivery1_seqq.nextval,'pial','012547');

insert into Delivery1 values(Delivery1_seqq.nextval,'pijus','013545');

insert into Delivery1 values(Delivery1_seqq.nextval,'Riyad','012845');



## For table 7:

Create sequence Customer3_seqq increment by 2 start with 50 maxvalue 200 nocycle nocache;

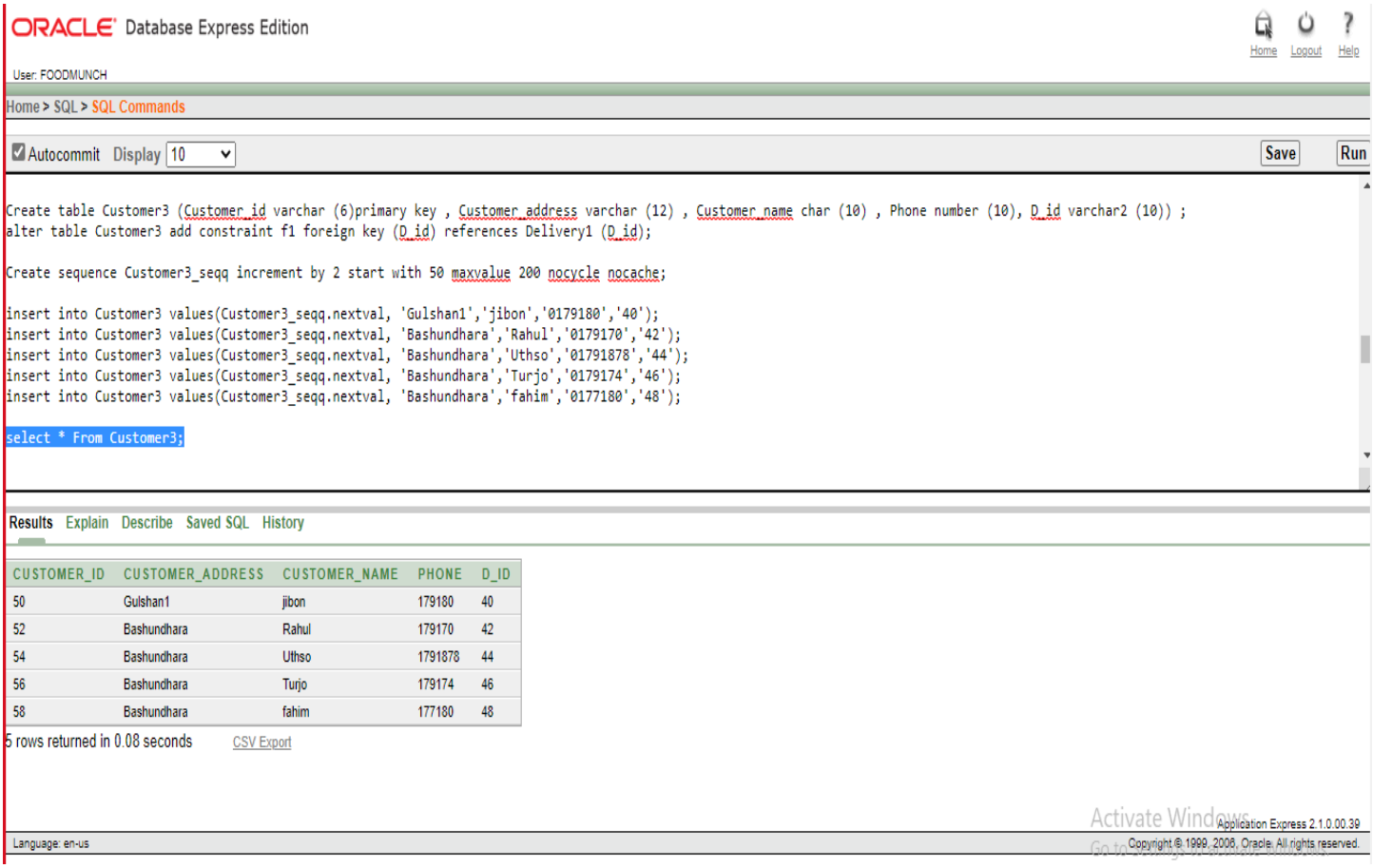
insert into Customer3 values(Customer3_seqq.nextval, 'Gulshan1','jibon','0179180','40');

insert into Customer3 values(Customer3_seqq.nextval, 'Bashundhara','Rahul','0179170','42');

insert into Customer3 values(Customer3_seqq.nextval, 'Bashundhara','Uthso','01791878','44');

insert into Customer3 values(Customer3_seqq.nextval, 'Bashundhara','Turjo','0179174','46');

insert into Customer3 values(Customer3_seqq.nextval, 'Bashundhara','fahim','0177180','48');



## For table 8:

Create sequence food_seqq increment by 2 start with 60 maxvalue 200 nocycle nocache;

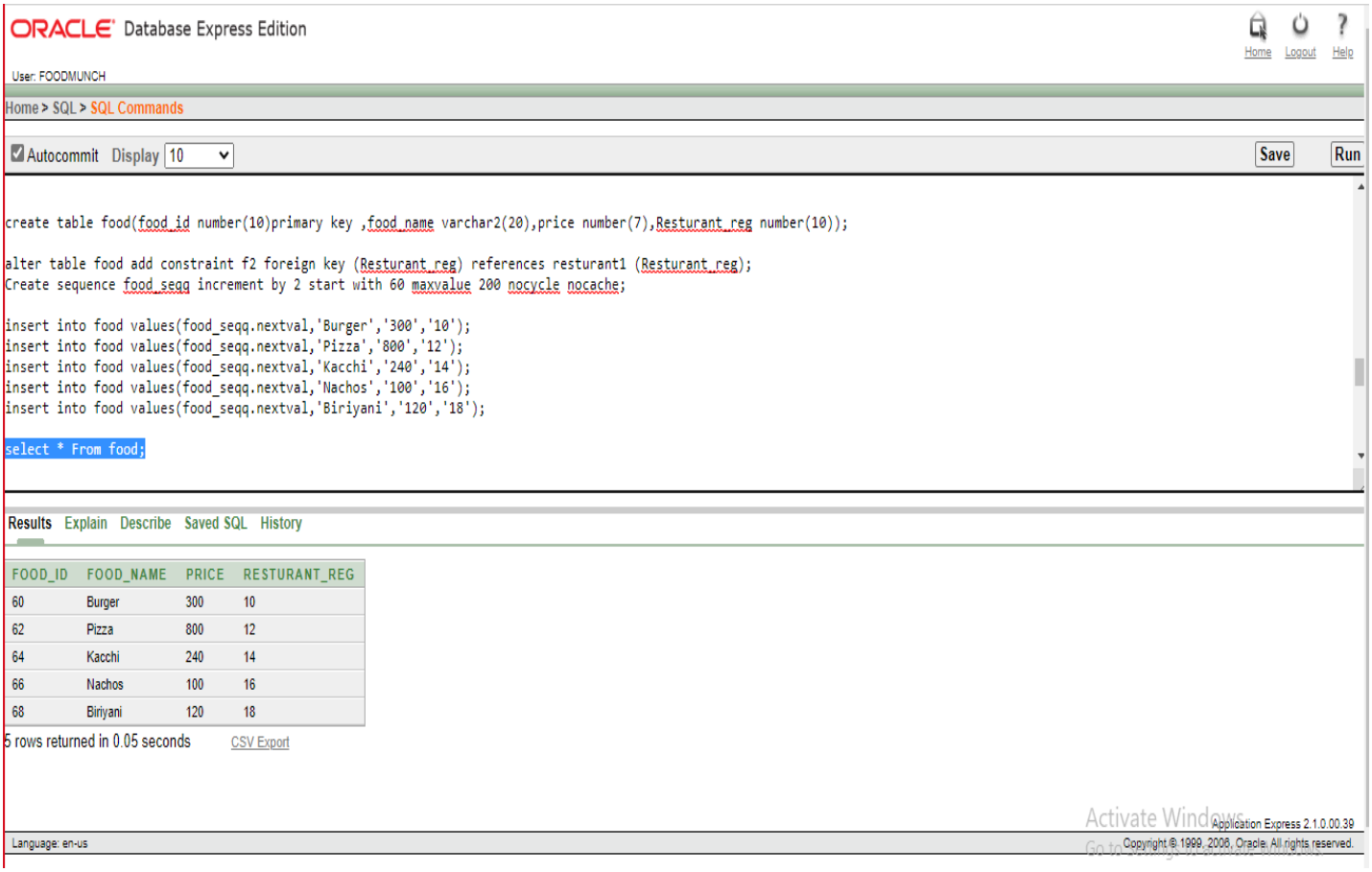
insert into food values(food_seqq.nextval,'Burger','300','10');

insert into food values(food_seqq.nextval,'Pizza','800','12');

insert into food values(food_seqq.nextval,'Kacchi','240','14');

insert into food values(food_seqq.nextval,'Nachos','100','16');

insert into food values(food_seqq.nextval,'Biriyani','120','18');



## For table 9:

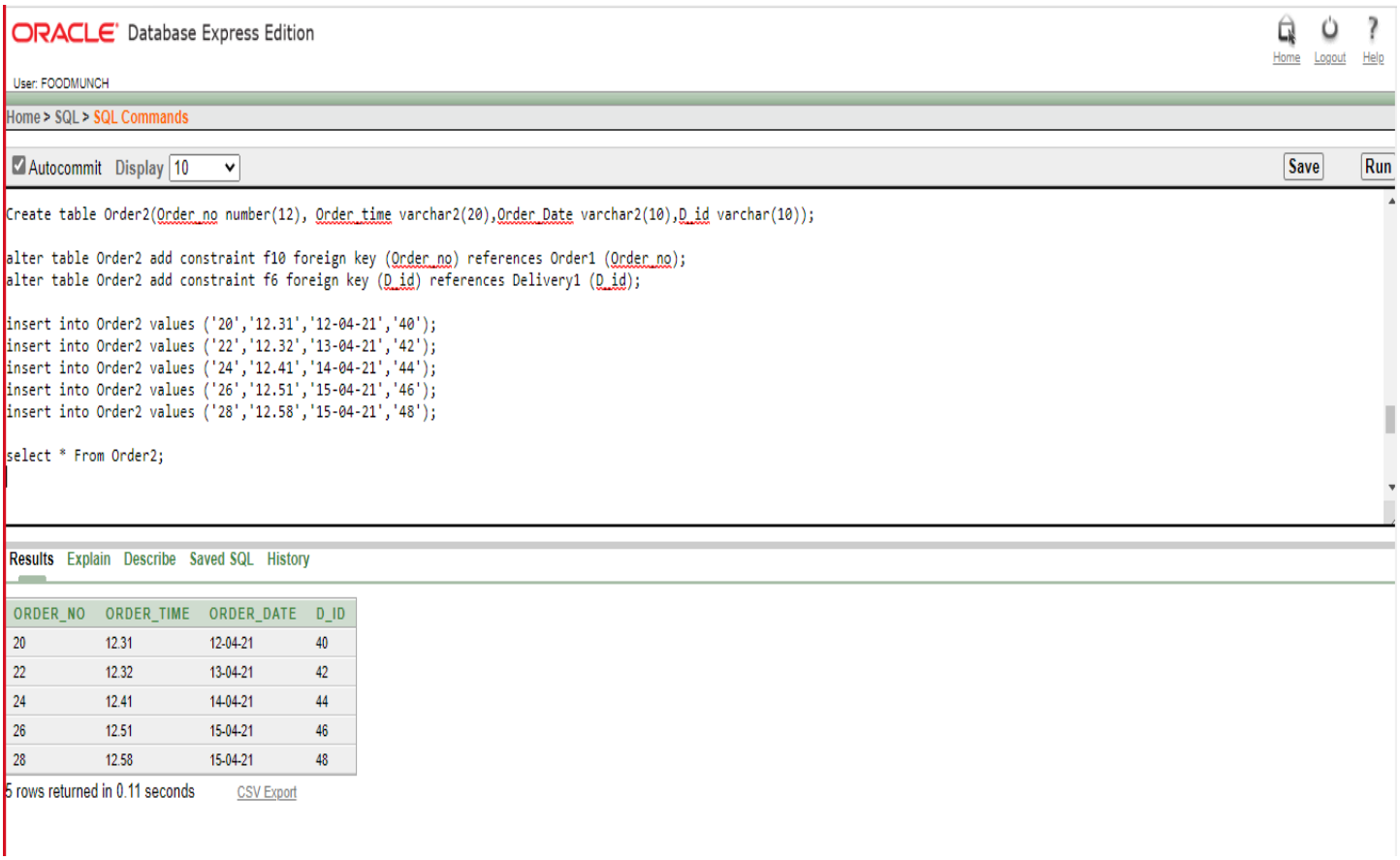
insert into Order2 values ('20','12.31','12-04-21','40');

insert into Order2 values ('22','12.32','13-04-21','42');

insert into Order2 values ('24','12.41','14-04-21','44');

insert into Order2 values ('26','12.51','15-04-21','46');

insert into Order2 values ('28','12.58','15-04-21','48');



## For table 10:

Create sequence Payment_seqw increment by 2 start with 70 maxvalue 300 nocycle nocache;

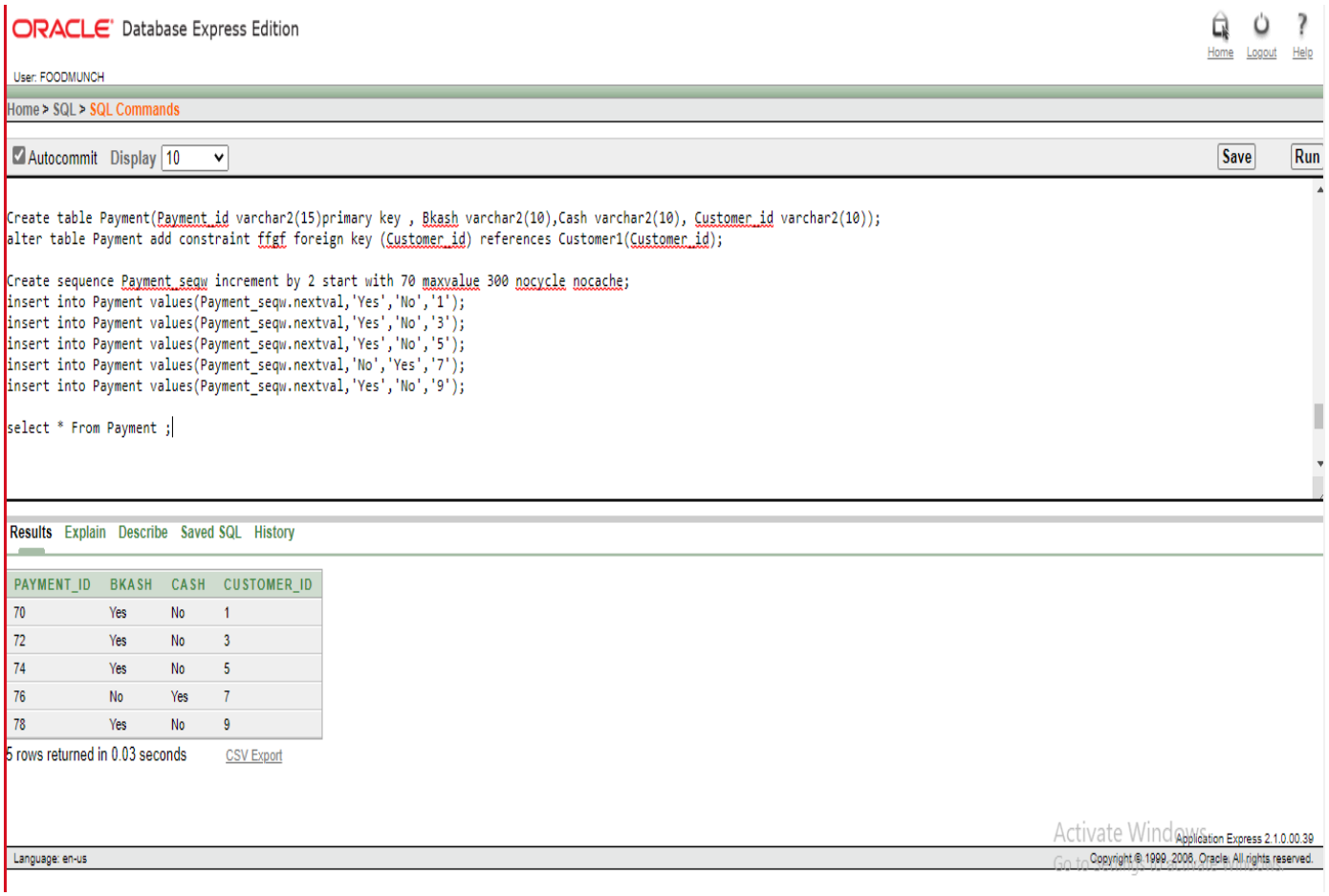
insert into Payment values(Payment_seqw.nextval,'Yes','No','1');

insert into Payment values(Payment_seq.nextval,'Yes','No','3');

insert into Payment values(Payment_seq.nextval,'Yes','No','5');

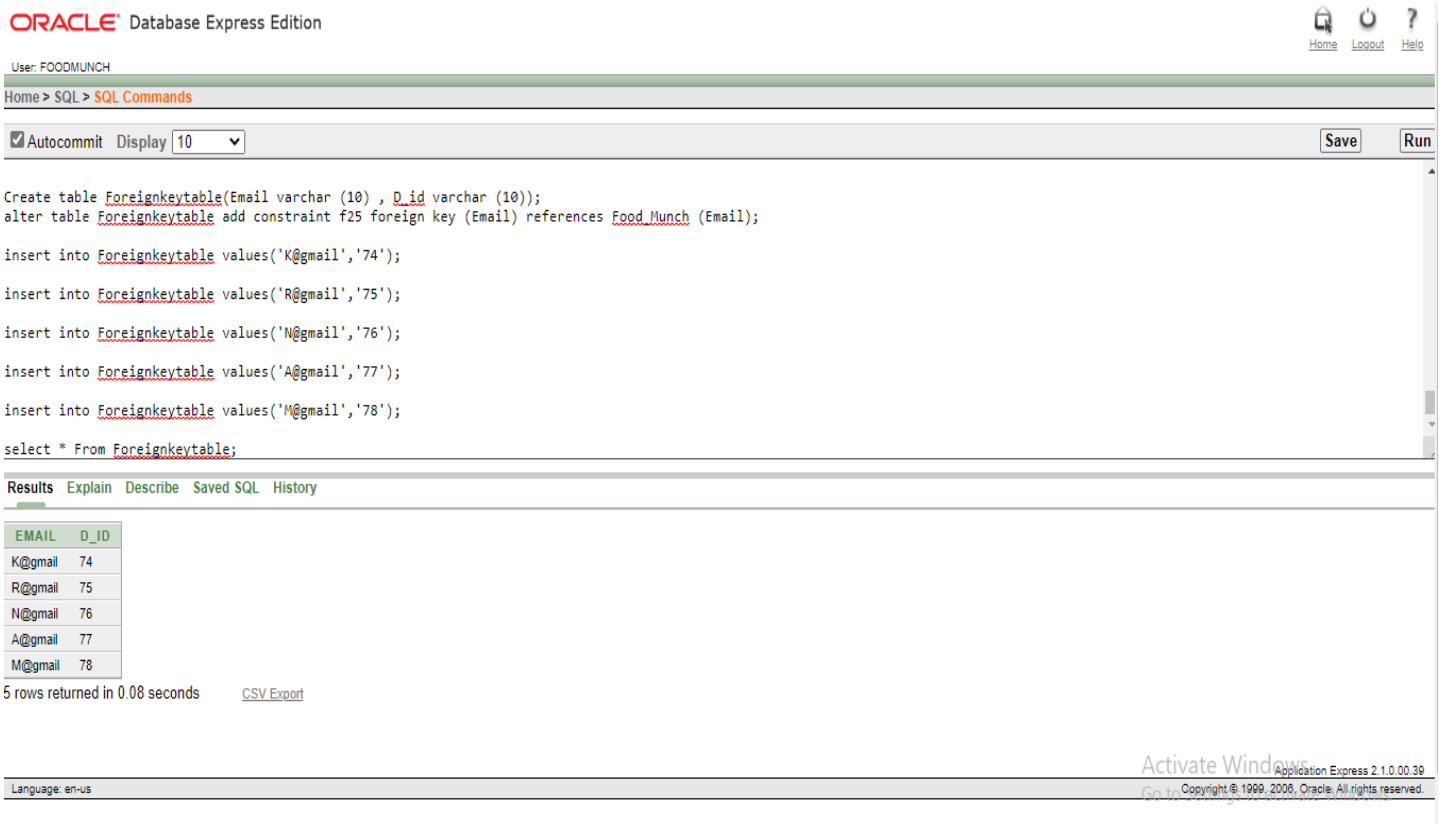
insert into Payment values(Payment_seq.nextval,'No','Yes','7');

insert into Payment values(Payment_seq.nextval,'Yes','No','9');



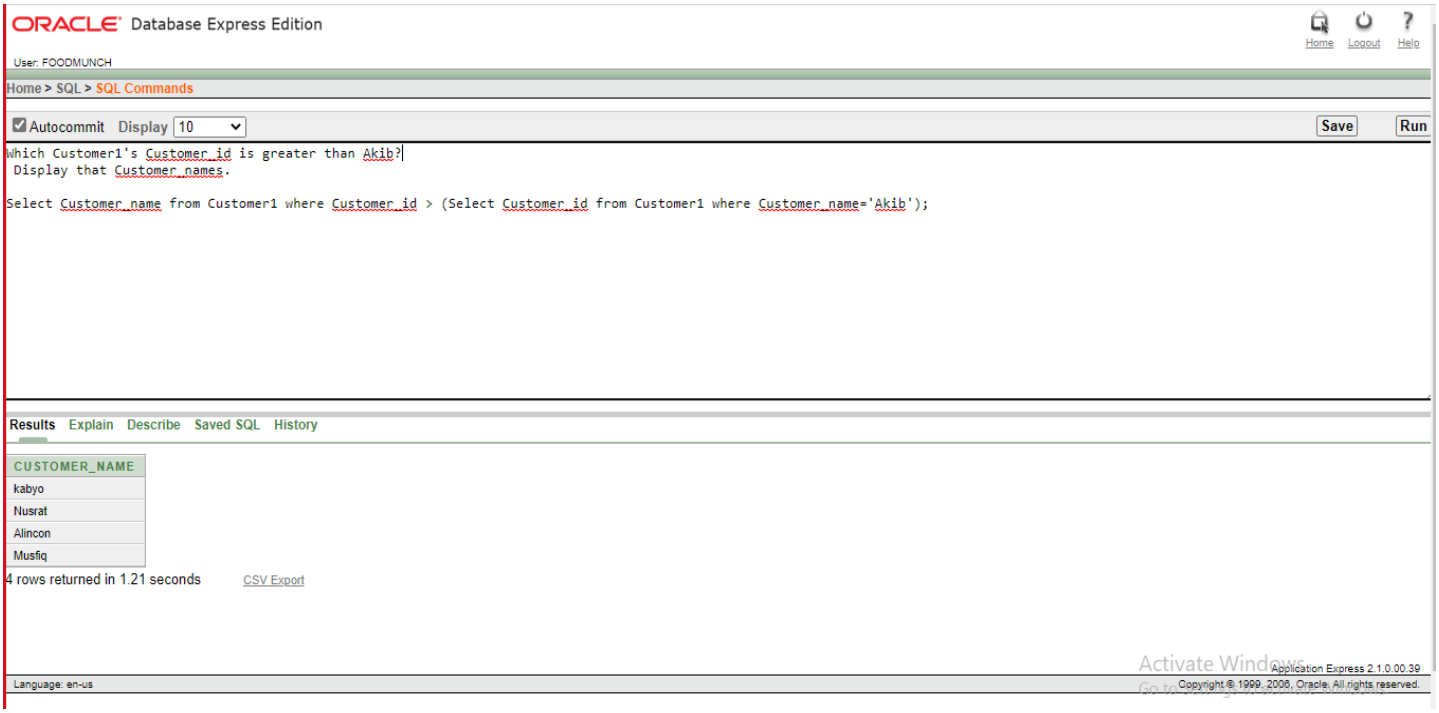
## For table 11:

```
insert into Foreignkeytable values('K@gmail','74');

insert into Foreignkeytable values('R@gmail','75');

insert into Foreignkeytable values('N@gmail','76');

insert into Foreignkeytable values('A@gmail','77');

insert into Foreignkeytable values('M@gmail','78');
```

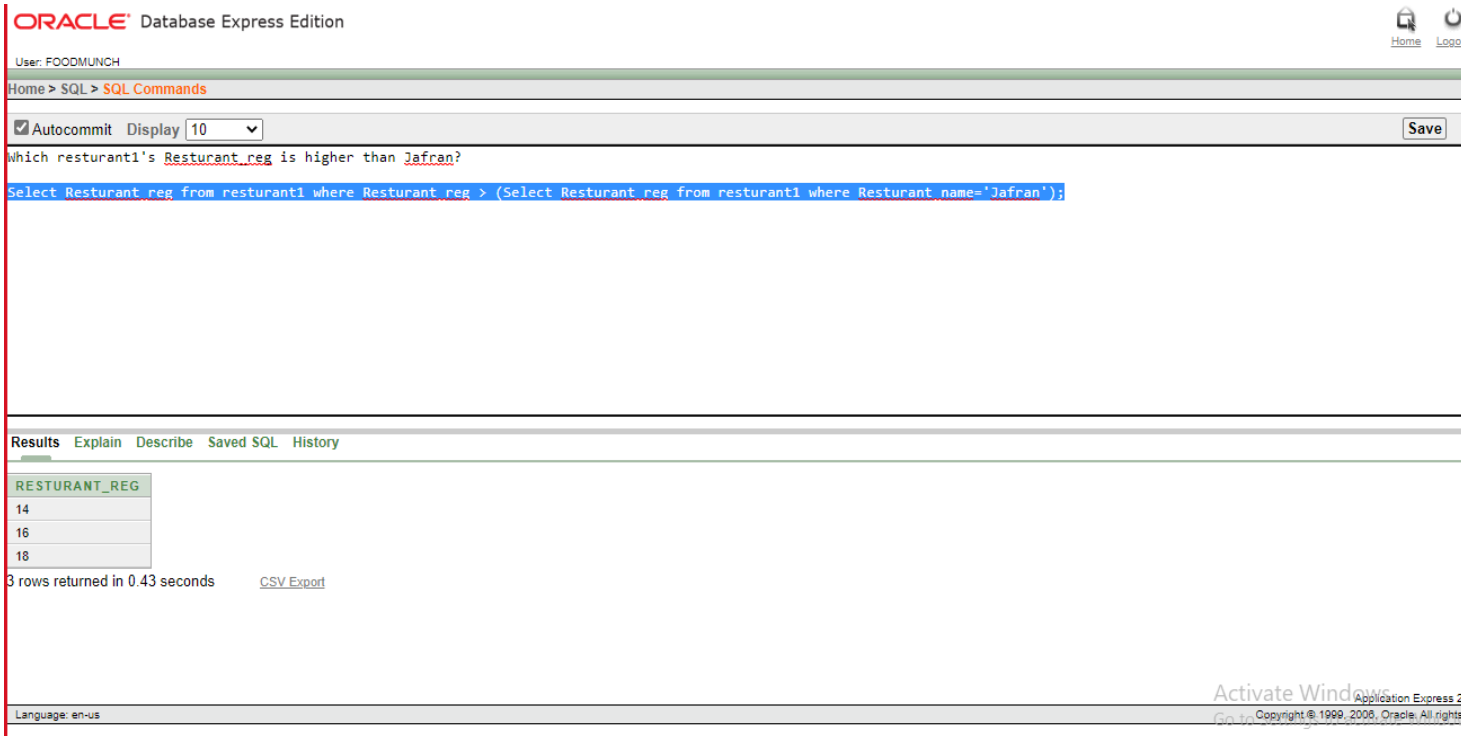


# Query Writing:

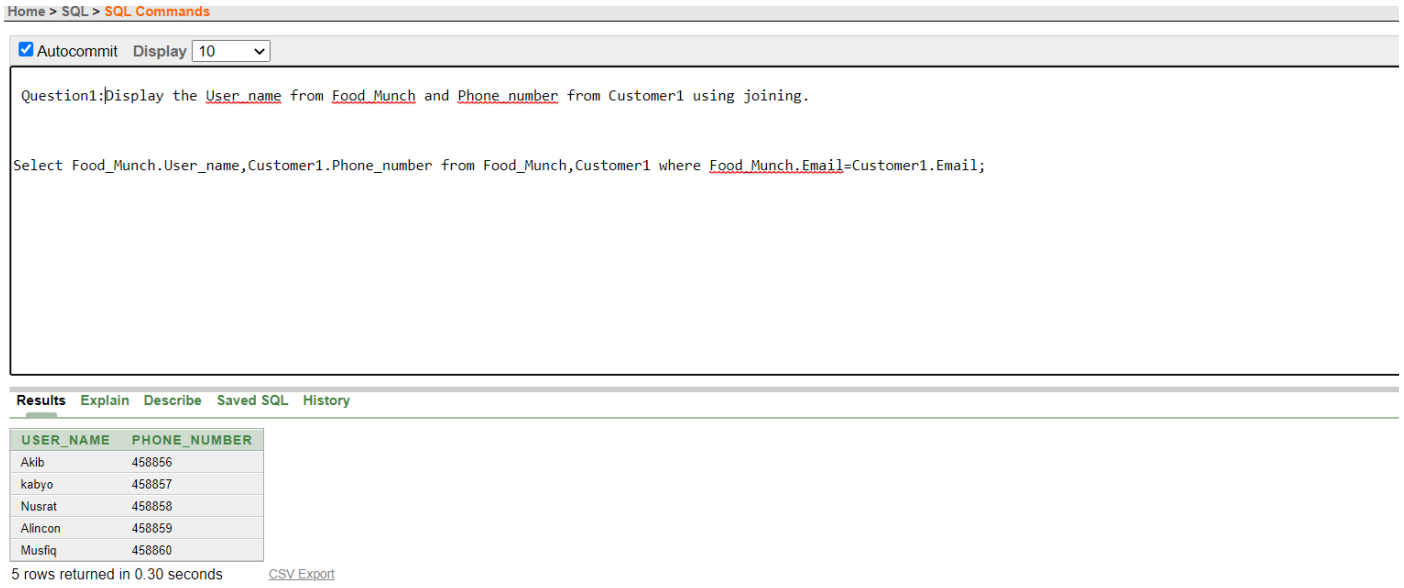
## Subquery 1:



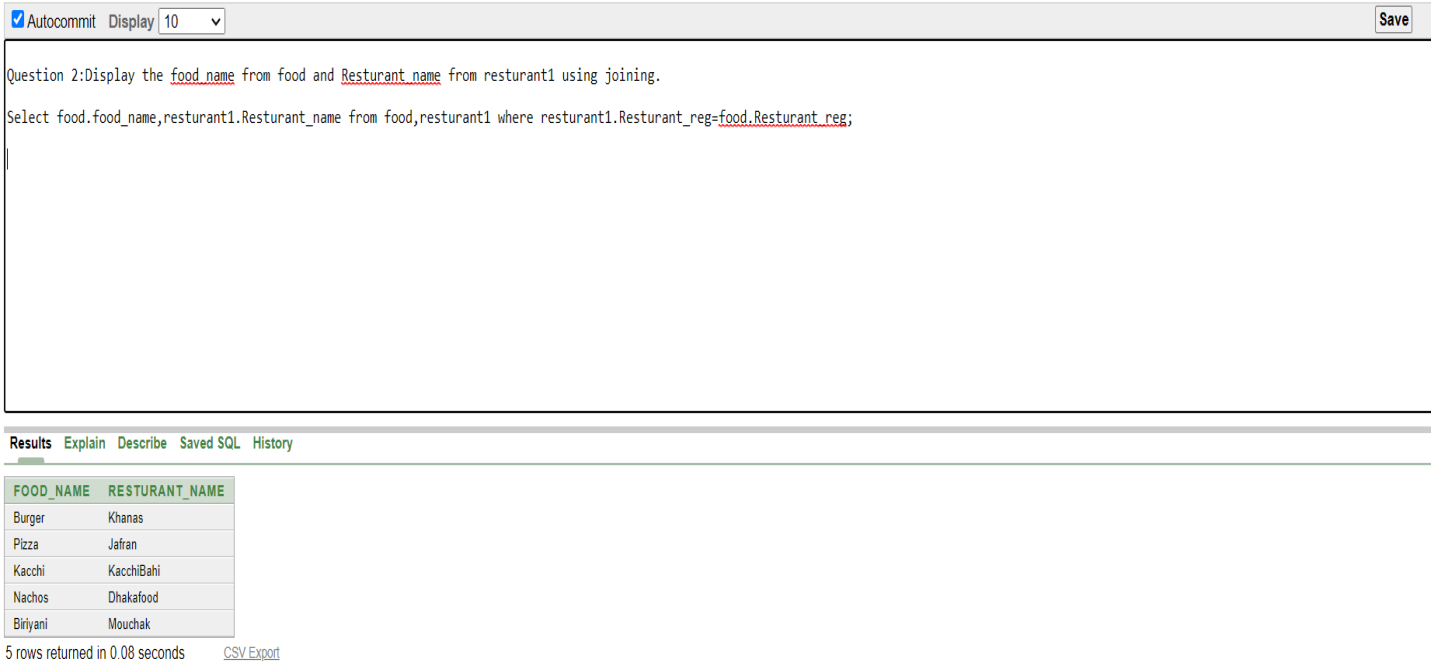

## Subquery 2:



## Joining 1:




## Joining 2:



## View 1:

Home > SQL > SQL Commands

Autocommit Display 10

```
Question :Create a view called FoodMunch101view  based on the User_name and Password from the FoodMunch table.

create view FoodMunch101view as select User_name ,Password from Food_Munch;

Question:Display the contents of the FoodMunch101view view.

select * from FoodMunch101view;
```

Results Explain Describe Saved SQL History

| USER_NAME | PASSWORD |
|---|---|
| Akib | re457 |
| kabyo | re458 |
| Nusrat | re459 |
| Alincon | re460 |
| Musfiq | re461 |

5 rows returned in 0.01 seconds CSV Export

Language: en-gb

## View 2:

Autocommit Display 10 Save

```
Question: Create a view called customer102view based on the customer_address and Phone_number  from the customer1 table.

 create view customer102view as select customer_address,Phone_number from customer1;


Question: Display the contents of the customer102view view.

select * from customer102view;
```

Results Explain Describe Saved SQL History

| CUSTOMER_ADDRESS | PHONE_NUMBER |
|---|---|
| Mirpur | 458856 |
| Dhanmondi | 458857 |
| Badda | 458858 |
| Uttara | 458859 |
| Uttara | 458860 |

5 rows returned in 0.00 seconds CSV Export

Application Express 2.1.0

## Relational Algebra:

1.Find out his email whose User_name is Akib

$\prod_{Email}(\sigma_{User\_name= \text{“Akib”}} (FoodMunch))$

2. Find out his phone_number whose User_name is Kabyo

$\prod_{phone\_number} (\sigma_{User\_name= \text{“kabyo”}} (FoodMunch))$

3.Find out the customer address whose phone_number is “458856”.

$\prod_{Cutomer\_address}(\sigma_{Phone\_number= \text{“458856”}} (Customer1))$

4.Find out the customer name whose customer_address is Mirpur.

$\prod_{Customer\_name}(\sigma_{Customer\_address= \text{“Mirpur”}} (\text{Customer2}))$

5.Find out the price of food which name is Burger.

$\prod_{Price}(\sigma_{food\_name= \text{“Burger”}} (\text{food}))$

# Conclusion:

Our foodMunch app deliver food in a flash whatever customer's want. It's our mission to bring food  customer's want right to their door. Our foodMunch app is crammed with the greatest food experience in Dhaka city. Our moto is always working hard to optimize our app with the latest technologies and best new features. As this is a database based project so we have stored all the needed information of our customers and delivery boys' and others' in the database. In future we will also add grocery and electronics items for our customer in the database. And for the convenience of our customers, all kinds of restaurants in each area will be added to our foodMunch app.