 **AMERICAN INTERNATIONAL UNIVERSITY- BANGLADESH**

**PROJECT**

**Section: I**

**INTRODUCTION TO DATABASE**

**Submitted to:**

**Rezwan Ahmed**

**Department of CS**

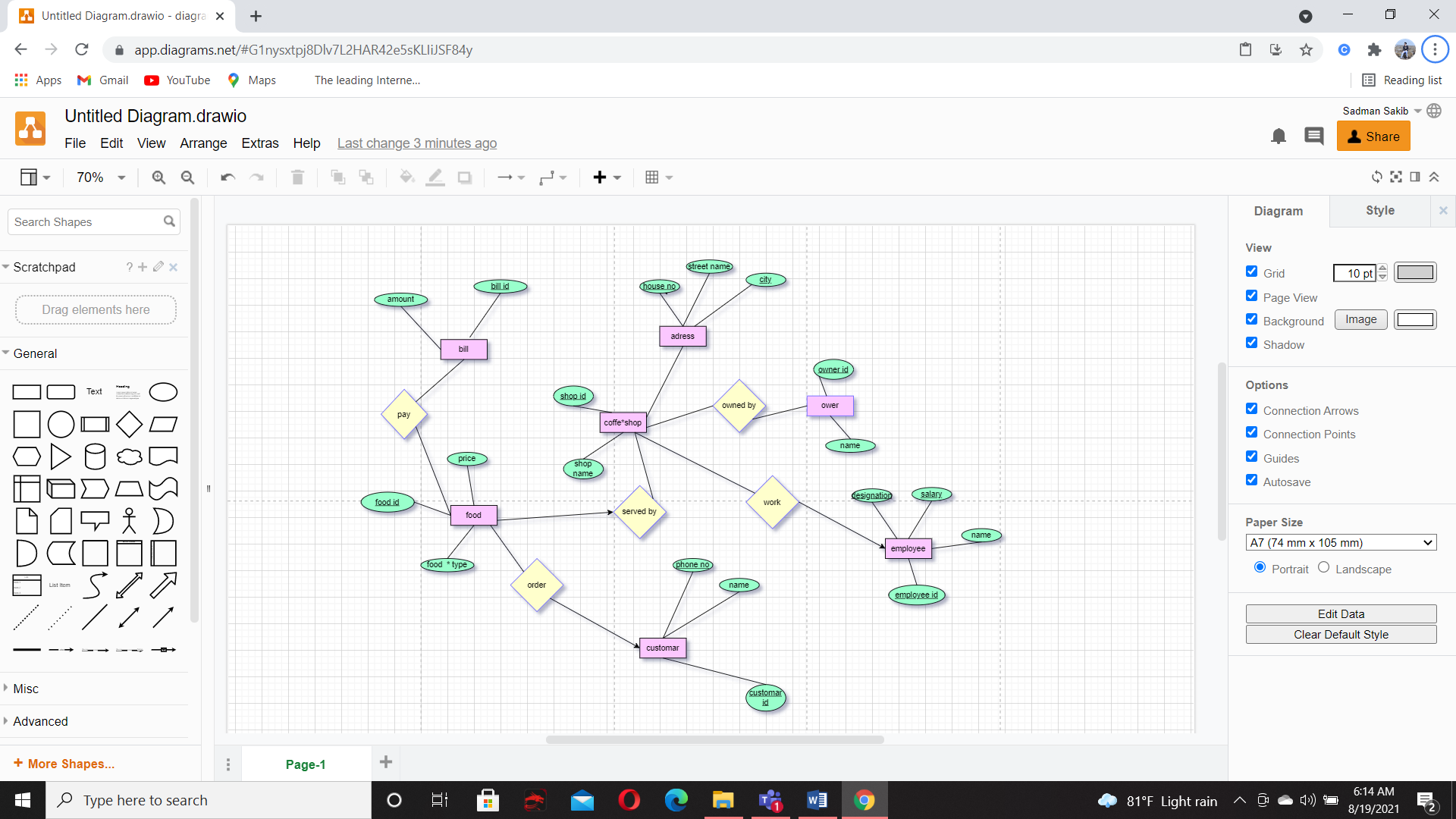
**AMERICAN INTERNATIONAL UNIVERSITY- BANGLADESH**

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**DESCRIPTION:** A coffee shop has always been more than a place to have a beverage. It is a place to socialize, ideate, have fun and meet new people. As Starbucks puts it, it’s the third place, a home away from home or office. Also, due to the competitive and busy lifestyle that people lead today, a coffee house near their work or home has become a major point of relaxation Coffee-Shop-Management-system is general software developed particularly for the Coffeeshop transaction. This is a desktop application. This software collects the details of Products, Costs, Admin & Workers information and their transaction. This software becomes useful for all the users in the coffee shops so that their transaction and details become up to date, since it is developed only for coffee shop so it is developed by using LAN concepts where multi-users can access single server at a same time using LAN and improve their business.

**ER Diagram:**

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**Normalization:**

**Served by**

**UNF**

Served by (customer\_ id, customer\_ name, phone no, shop\_ id, shop\_ name, house\_ no, street\_ name, city)

**1NF**

phone no is a multi-value attribute

1. customer\_ id, customer\_ name, phone no, shop\_ id, shop\_ name, house\_ no, street\_ name, city

**2NF**

1. customer\_ id, customer\_ name, phone no

2. shop\_ id, shop\_ name, house\_ no, street\_ name, city

**3NF**

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

1. customer\_ id, customer\_ name, phone no

2. shop\_ id, shop\_ name, house\_ no, street\_ name, city

**Table Creation**

1. customer\_ id, customer\_ name, phone no, **shop\_ id**

2. shop\_ id, shop\_ name, house\_ no, street\_ name, city

**Order**

**UNF**

Order (food\_ id, food\_ type, price, customer\_ id, customer\_ name, phone no)

**1NF**

phone no is a multi-value attribute

1. Food\_ id, food\_ type, price, customer\_ id, customer\_ name, phone no

**2NF**

1. food\_ id, food\_ type, price

2. customer\_ id, customer\_ name, phone no

**3NF**

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

1. food\_ id, food\_ type, price

2. customer\_ id, customer\_ name, phone no

**Table Creation**

1. food\_ id, food\_ type, price

2. customer\_ id, customer\_ name, phone no

3. **food\_ id, customer\_ id**

**Pay**

**UNF**

Pay (bill\_ id, amount, customer\_ id, customer\_ name, phone no)

**1NF**

phone no is a multi-value attribute

bill\_ id, amount, customer\_ id, customer\_ name, phone no

**2NF**

1. bill\_ id, amount

2. customer\_ id, customer\_ name, phone no

**3NF**

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

1. bill\_ id, amount

2. customer\_ id, customer\_ name, phone no

**Table Creation**

1. bill\_ id, amount

2. customer\_ id, customer\_ name, phone no

**3. bill\_ id, customer\_ id**

**work**

**UNF**

work (shop\_ id, shop\_ name, house\_ no, street\_ name, city, employee\_ id, employee\_ name, salary, designation)

**1NF**

There is no multi valued attribute.

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city, employee\_ id, employee\_ name, salary, designation

**2NF**

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city

2. employee\_ id, employee\_ name, salary, designation

**3NF**

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

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city

2. employee \_id, employee\_ name, salary, designation

**TABLE CREATION**

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city

**2.** employee\_ id, employee\_ name, salary, designation, **shop\_ id**

**Owned by**

**UNF**

Owned by (shop\_ id, shop\_ name, house\_ no, street\_ name, city, owner\_ id, owner\_ name)

**1NF**

There is no multi valued attribute.

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city, owner\_ id, owner\_ name

**2NF**

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city

**2.** owner\_ id, owner\_ name

**3NF**

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

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city

2. owner\_ id, owner\_ name

**TABLE CREATION**

1. shop\_ id, shop\_ name, house\_ no, street\_ name, city

**2.** owner\_ id, owner\_ name, **shop\_ id**

**Temporally Table**

1. customer\_ id, customer\_ name, phone no, **shop\_ id**

2. shop\_ id, shop\_ name, house\_ no, street\_ name, city

3. food\_ id, food\_ type, price

4. customer\_ id, customer\_ name, phone no

**5. food\_ id, customer\_ id**

6. bill\_ id, amount

7. customer\_ id, customer\_ name, phone no

**8. bill\_ id, customer\_ id**

9. shop\_ id, shop\_ name, house\_ no, street\_ name, city

10. employee\_ id, employee\_ name, salary, designation, **shop\_ id**

11. shop\_ id, shop\_ name, house\_ no, street\_ name, city

12. owner\_ id, owner\_ name, **shop\_ id**

**Final Table**

1. customer\_ id, customer\_ name, phone no1, phone no2, phone no3, ……... phone no n **shop\_ id**

2. shop\_ id, shop\_ name, house\_ no, street\_ name, city

3. food\_ id, food\_ type, price

**4. food\_ id, customer\_ id**

5. bill\_ id, amount

**6. bill\_ id, customer\_ id**

7. employee\_ id, employee\_ name, salary, designation, **shop\_ id**

8. owner\_ id, owner\_ name, **shop\_ id**

1: Shop Table

create table shop(

shop\_id number,

shop\_name varchar2(50) not null,

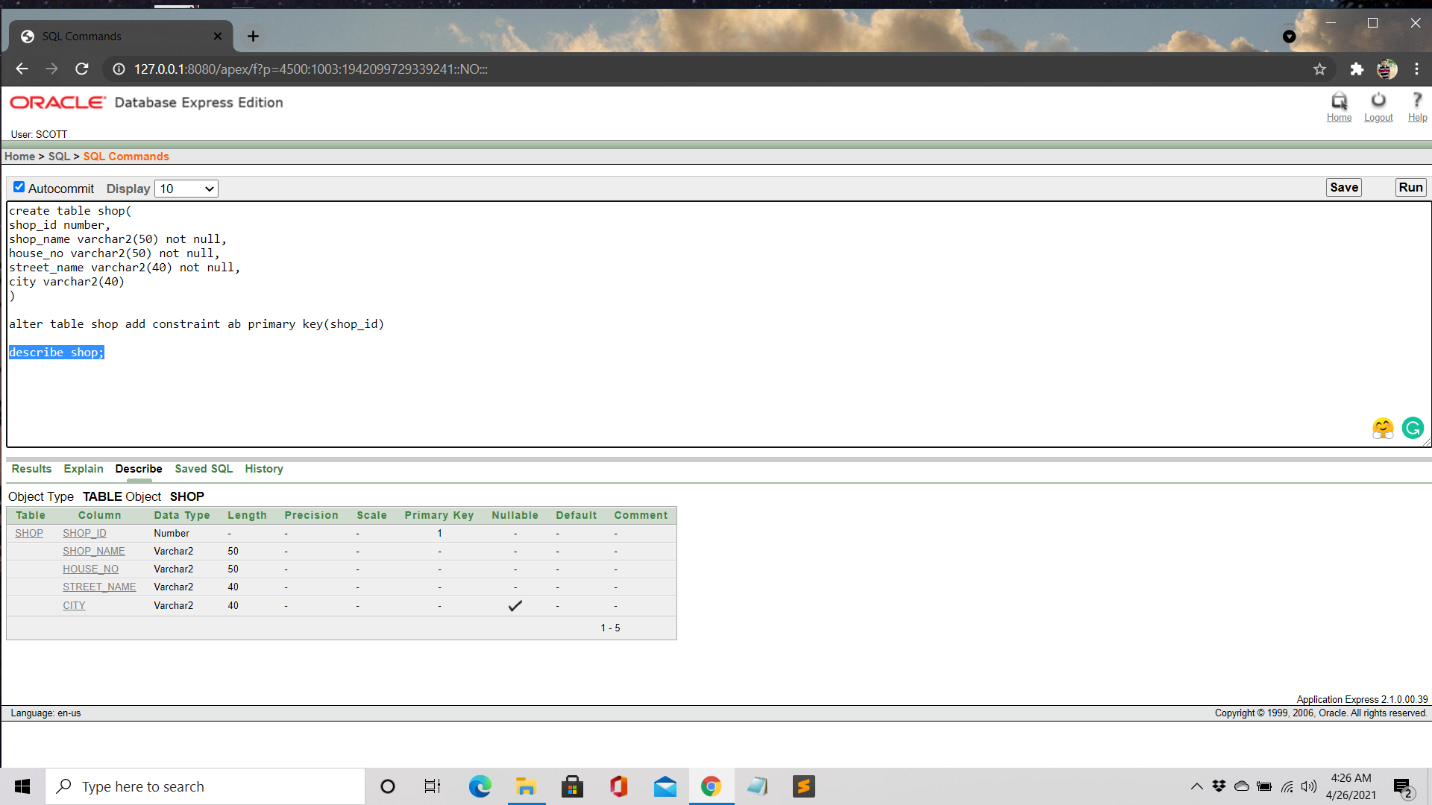
house\_no varchar2(50) not null,

street\_name varchar2(40) not null,

city varchar2(40)

)

alter table shop add constraint ab primary key(shop\_id)



Data Insertion for Shop Table **:**

insert into shop (shop\_id,shop\_name ,house\_no,street\_name,city)

values (shop\_id\_seq.NEXTVAL,'Star Black','26/A','300 feet','Dhaka');

insert into shop (shop\_id,shop\_name ,house\_no,street\_name,city)

values (shop\_id\_seq.NEXTVAL,'creme de la creme','66/A','Gulshan-2','Dhaka');

insert into shop (shop\_id,shop\_name ,house\_no,street\_name,city)

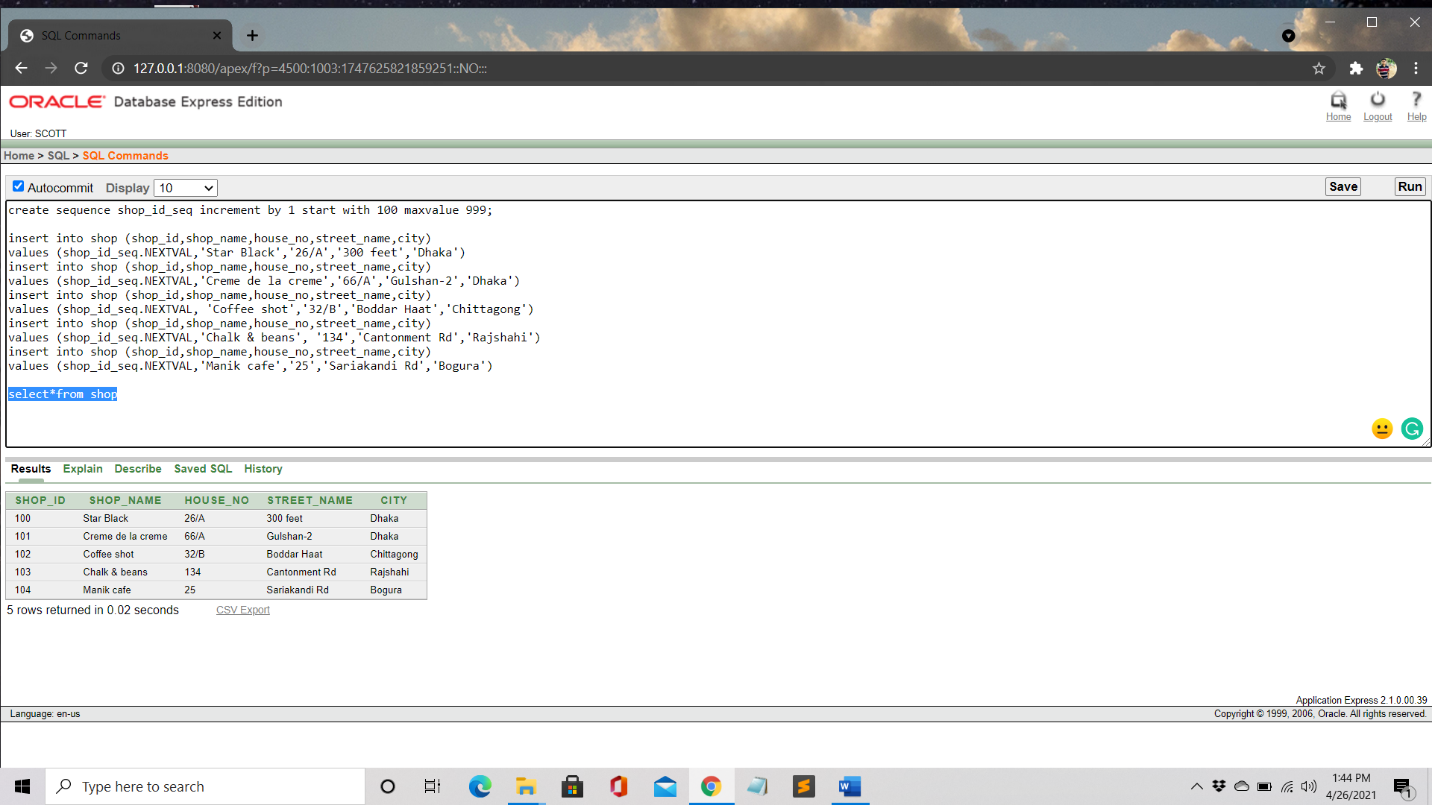
values (shop\_id\_seq.NEXTVAL,'Coffee shot','32/B','Boddar Haat','Chittagong');

insert into shop (shop\_id,shop\_name ,house\_no,street\_name,city)

values (shop\_id\_seq.NEXTVAL,'Chalk & beans','134','Cantonment Rd','Rajshahi');

insert into shop (shop\_id,shop\_name ,house\_no,street\_name,city)

values (shop\_id\_seq.NEXTVAL,'Manik cafe','25','Sariakandi Rd','Bogura');



2: Customer Table

create table customer (

customer\_id number(3),

customer\_name varchar2(50) not null,

phone\_no1 number(15) not null,

phone\_no2 number(15) not null,

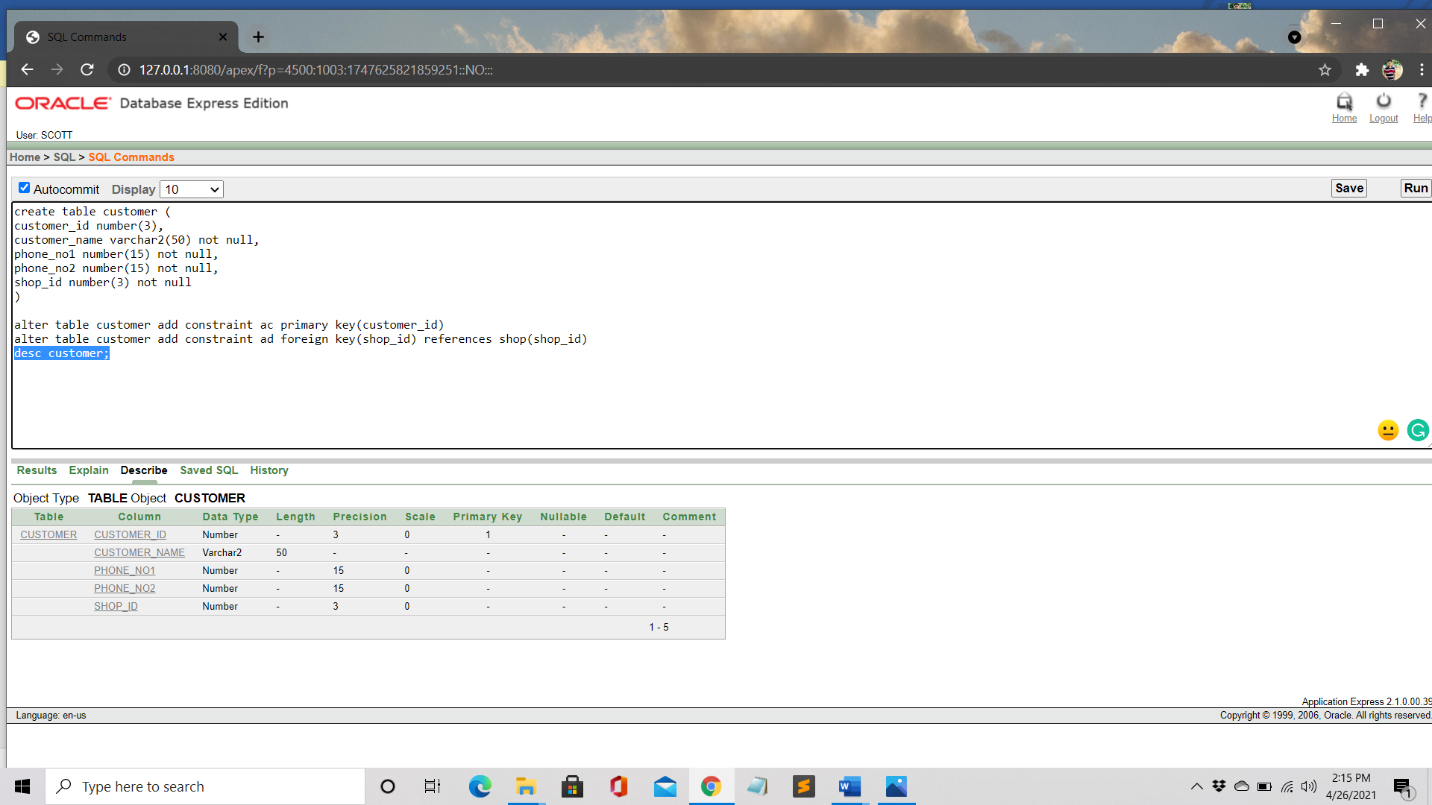
shop\_id number(3) not null

)

alter table customer add constraint ac primary key(customer\_id)

alter table customer add constraint ad foreign key(shop\_id) references shop(shop\_id)

desc customer;



Data Insertion for Customer Table:

insert into customer(customer\_id, customer\_name,phone\_no1,phone\_no2,shop\_id)

values(customer\_id\_seq.NEXTVAL,'Rafi','01736673545','01917275243','100')

insert into customer(customer\_id,customer\_name,phone\_no1,phone\_no2,shop\_id)

values(customer\_id\_seq.NEXTVAL,'Xahidul','01576238313','01962378122','101')

insert into customer(customer\_id,customer\_name,phone\_no1,phone\_no2,shop\_id)

values(customer\_id\_seq.NEXTVAL,'Afif','01817234232','01673247232','102')

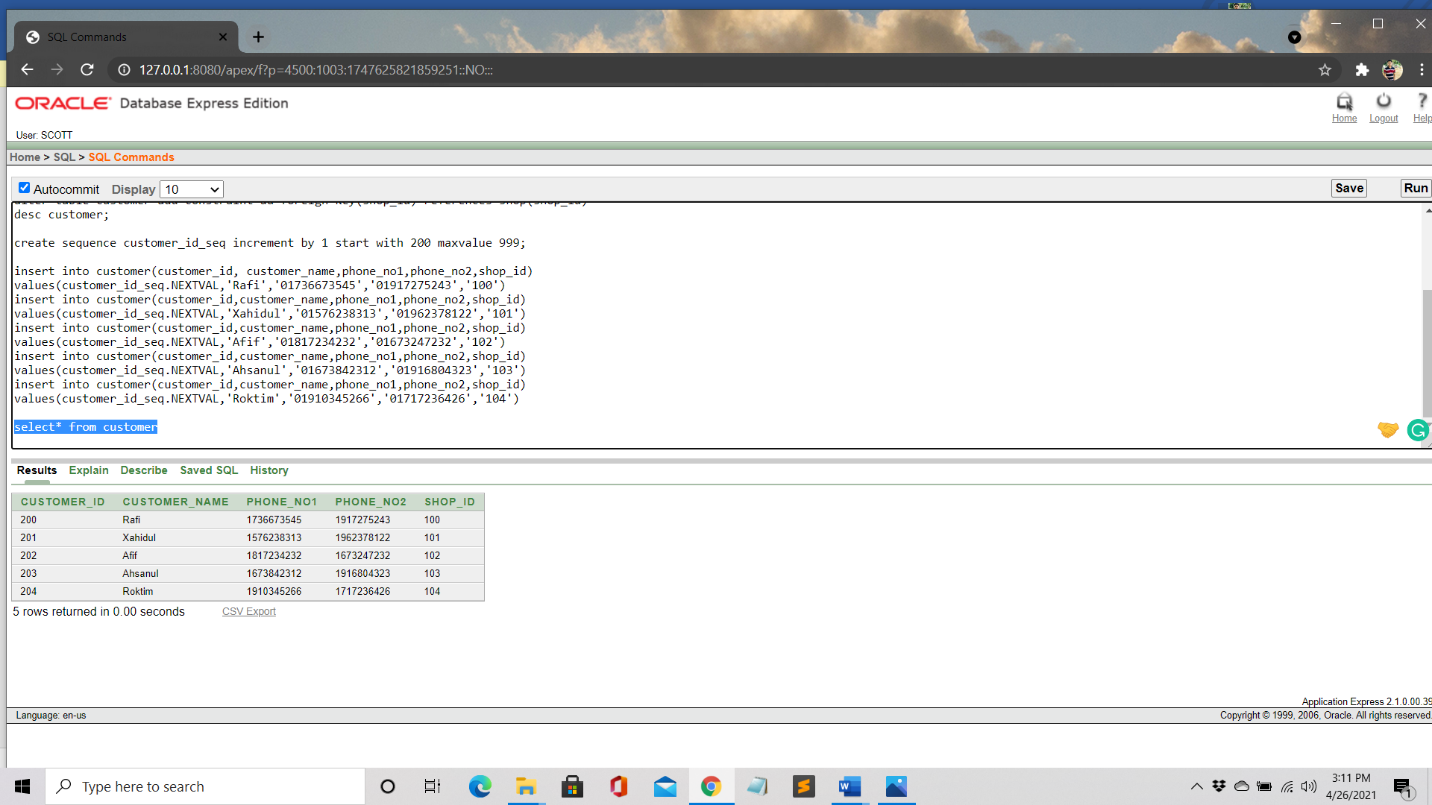
insert into customer(customer\_id,customer\_name,phone\_no1,phone\_no2,shop\_id)

values(customer\_id\_seq.NEXTVAL,'Ahsanul','01673842312','01916804323','103')

insert into customer(customer\_id,customer\_name,phone\_no1,phone\_no2,shop\_id)

values(customer\_id\_seq.NEXTVAL,'Roktim','01910345266','01717236426','104')

select\* from customer



3: Employee Table

create table employee (

employee\_id number (3),

employee\_name varchar2(50) not null,

salary number(20) not null,

designation varchar2(40) not null,

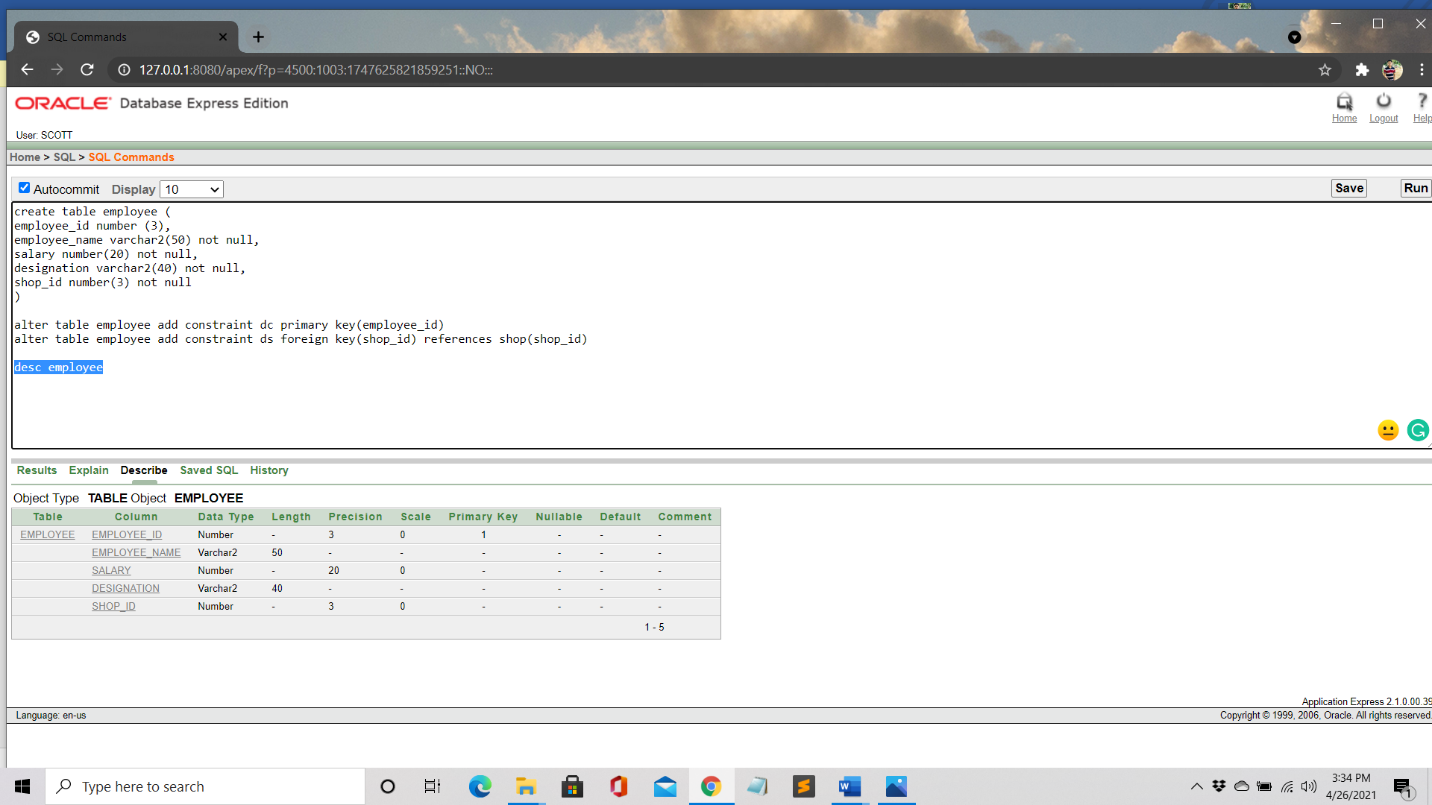
shop\_id number(3) not null

)

alter table employee add constraint dc primary key(employee\_id)

alter table employee add constraint ds foreign key(shop\_id) references shop(shop\_id)

desc employee;



Data Insertion for Employee Table:

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL, 'FARID', '10000', 'MANAGER', '100')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL, 'RANA', '6000', 'CHEF', '100')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL, 'RAJU', '5000', 'WAITER', '100')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL, 'NIPA', '5000', 'MANAGER', '100')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL, 'SAAD', '10000', 'MANAGER', '101')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq .NEXTVAL, 'KAMRUL', '6000', 'CHEF', '101')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL, 'MAFI','5000','WAITER','101')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL,'MOU','5000','WAITER','101')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL,'RONJU','10000','MANAGER','102')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL,'TOUHID','6000','CHEF','102')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL,'SHAFI','5000','WAITER','102')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL,'SHITHI',5000,'WAITER','102')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq.NEXTVAL,'RONY','10000','MANAGER','103')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL,'SIAM','6000','CHEF','103')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL,'ANGON','5000','WAITER','103')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL,'LAMIYA','5000','WAITER','103')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL,'SAHIL','10000','MANAGER','104')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL,'ROBIN','6000','CHEF','104')

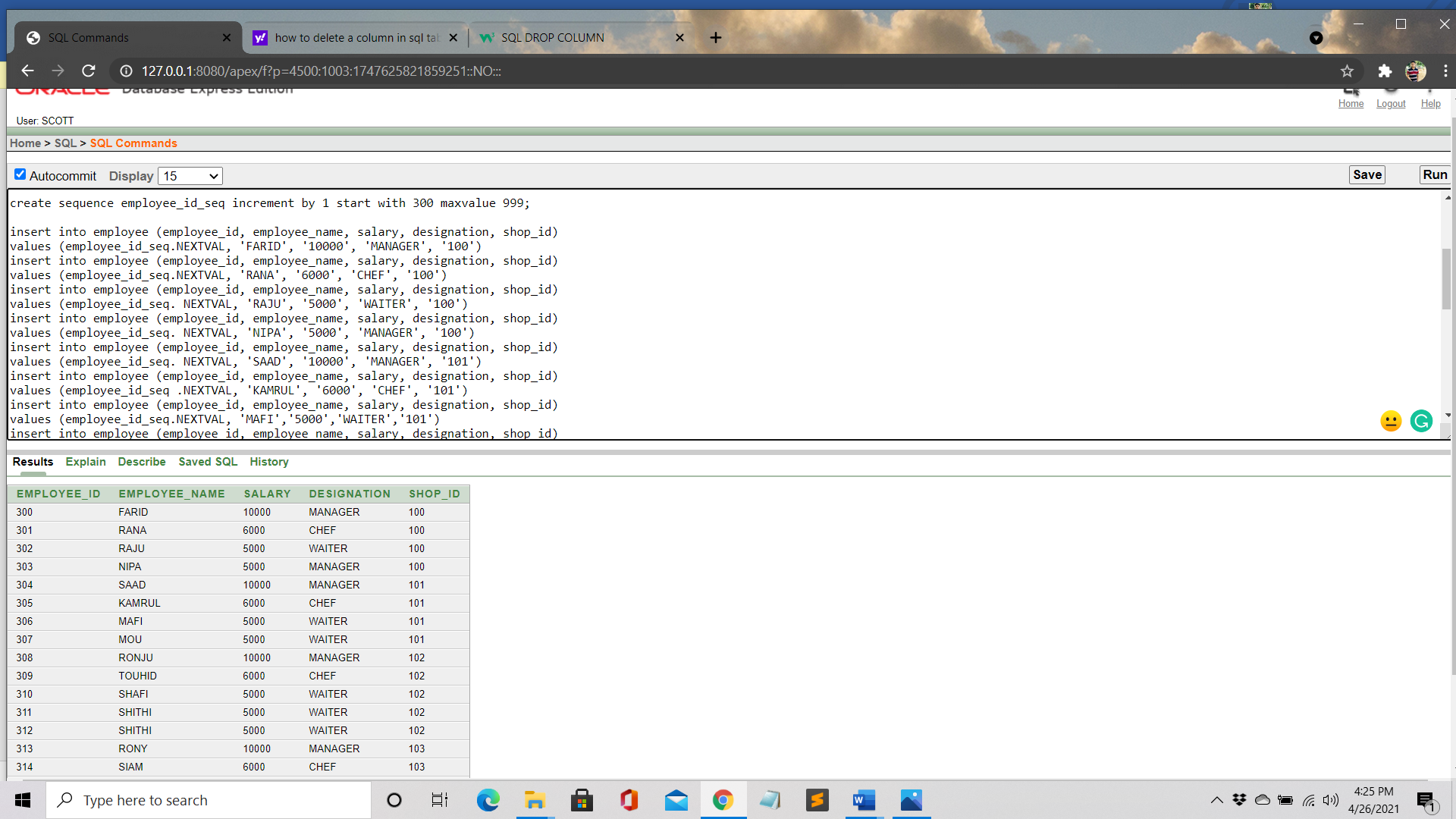
insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL,'TURJO','5000','WAITER','104')

insert into employee (employee\_id, employee\_name, salary, designation, shop\_id)

values (employee\_id\_seq. NEXTVAL,'NILA','5000','WAITER','104')

select\* from employee



4: Owner Table

create table owner (

owner\_id number (3),

owner\_name varchar2(50) not null,

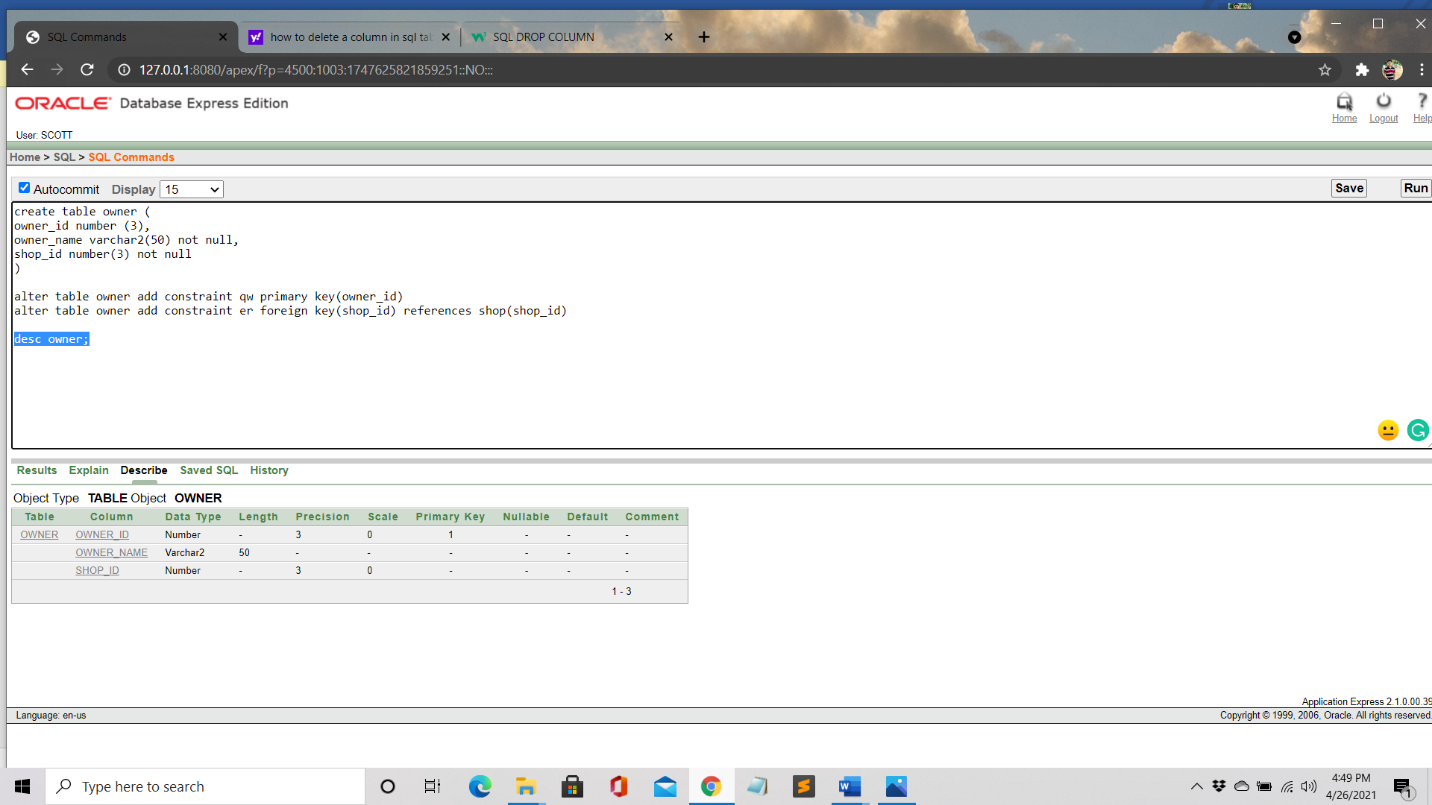
shop\_id number(3) not null

)

alter table owner add constraint qw primary key(owner\_id)

alter table owner add constraint er foreign key(shop\_id) references shop(shop\_id)

desc owner;



Date Insertion for Owner Table:

insert into owner (owner\_id, owner\_name, shop\_id)

values (owner\_id\_seq.NEXTVAL, 'HIMEL',100)

insert into owner (owner\_id, owner\_name, shop\_id)

values (owner\_id\_seq.NEXTVAL, 'SHITHIL',101)

insert into owner (owner\_id, owner\_name, shop\_id)

values (owner\_id\_seq.NEXTVAL, 'IMRAN',102)

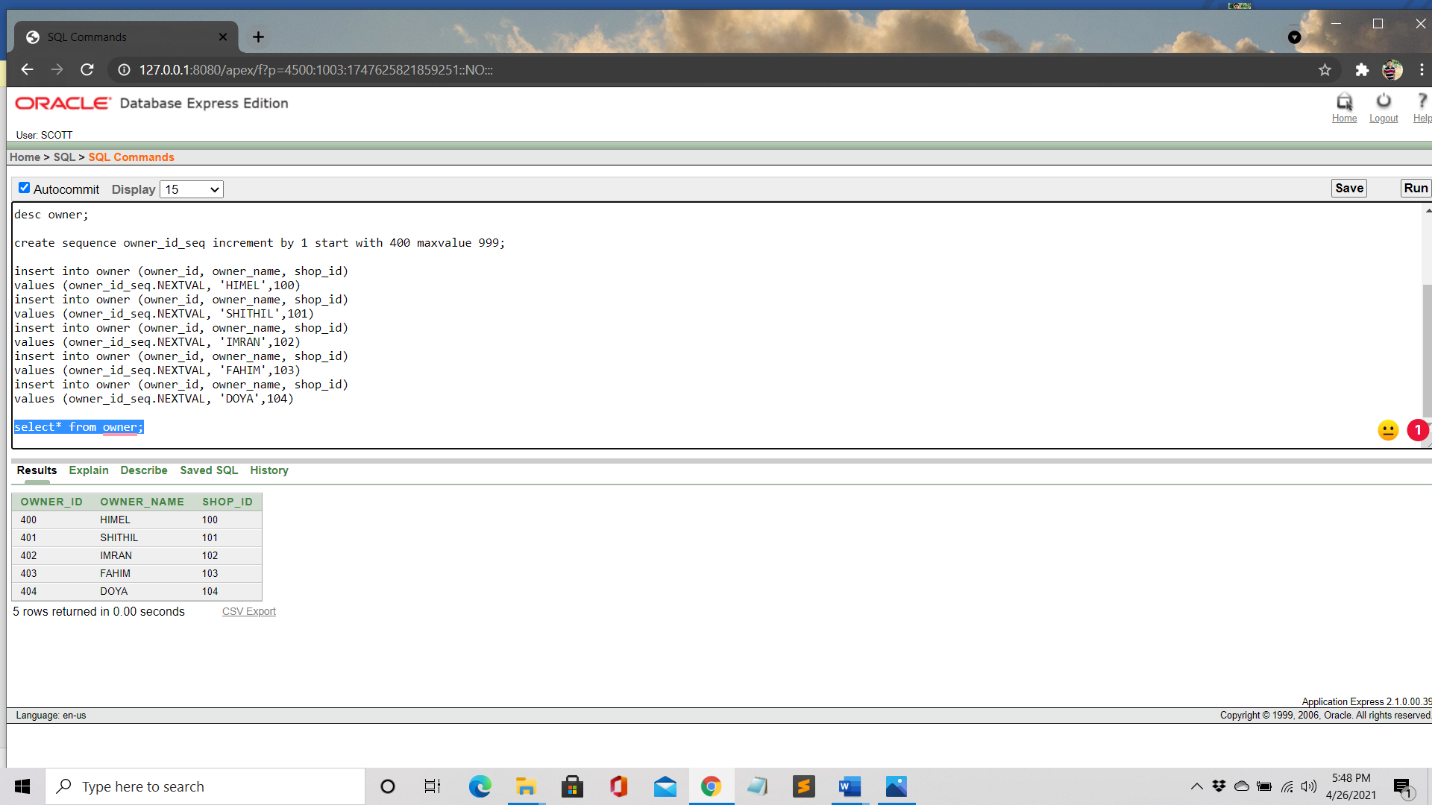
insert into owner (owner\_id, owner\_name, shop\_id)

values (owner\_id\_seq.NEXTVAL, 'FAHIM',103)

insert into owner (owner\_id, owner\_name, shop\_id)

values (owner\_id\_seq.NEXTVAL, 'DOYA',104)

select\* from owner;



5: Bill Table

create table bill (

bill\_id number (3),

amount varchar2(50) not null

)

alter table bill add constraint zx primary key(bill\_id)

desc bill;



Data Insertion for Bill Table:

insert into bill (bill\_id,amount)

values(bill\_id\_seq.NEXTVAL,'500')

insert into bill (bill\_id,amount)

values(bill\_id\_seq.NEXTVAL,'450')

insert into bill (bill\_id,amount)

values(bill\_id\_seq.NEXTVAL,'650')

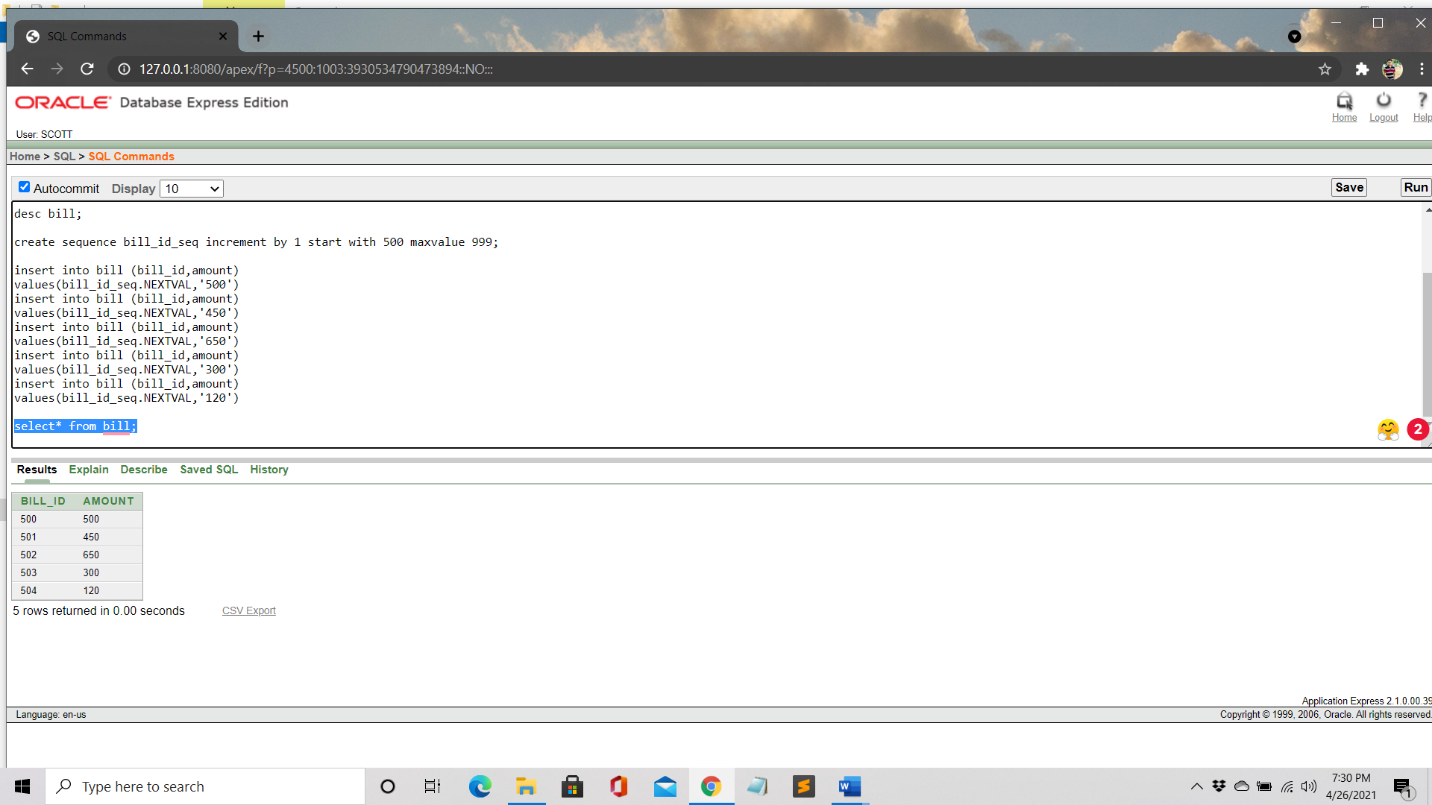
insert into bill (bill\_id,amount)

values(bill\_id\_seq.NEXTVAL,'300')

insert into bill (bill\_id,amount)

values(bill\_id\_seq.NEXTVAL,'120')

select\* from bill;



6: Food Table:

create table food (

food\_id number (3),

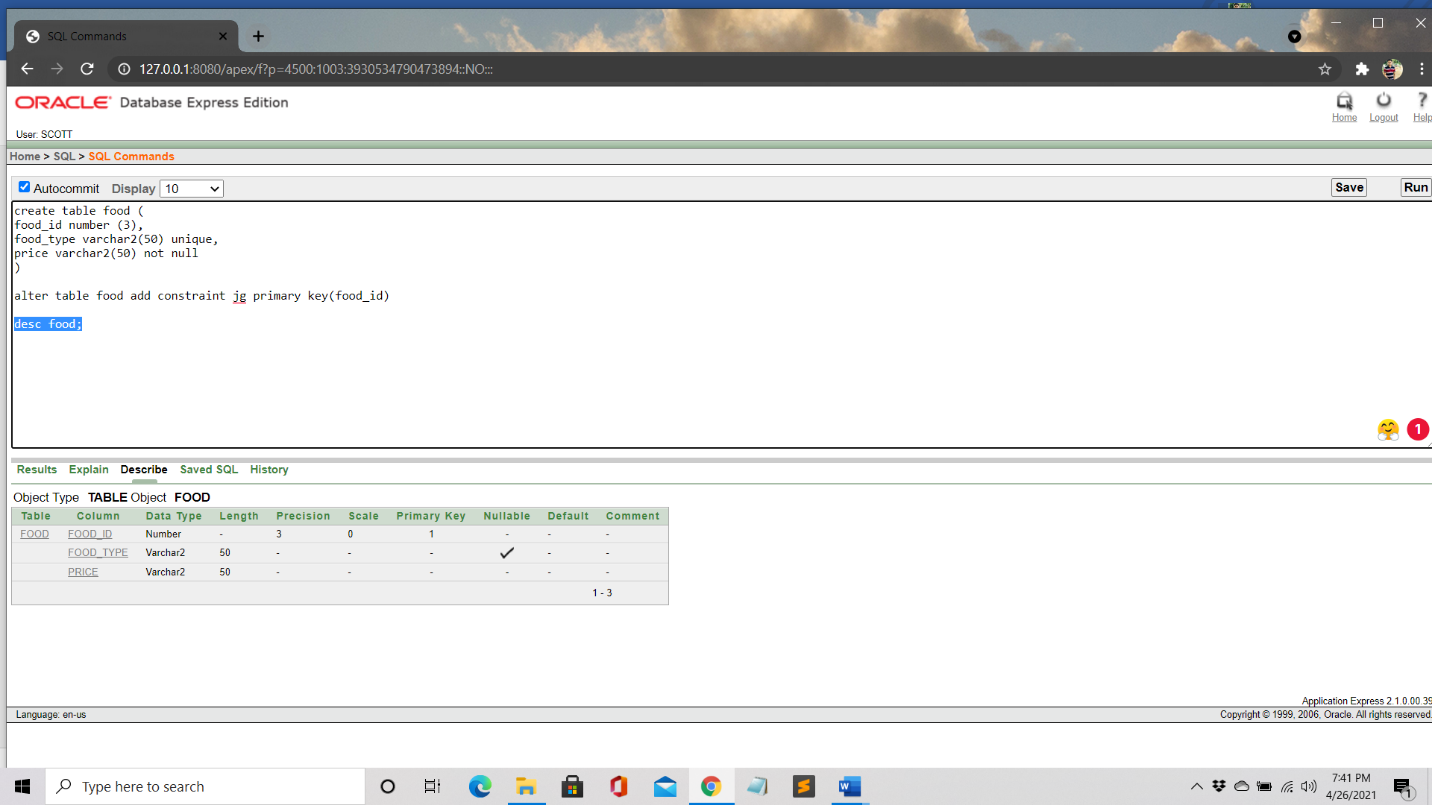
food\_type varchar2(50) unique,

price varchar2(50) not null

)

alter table food add constraint jg primary key(food\_id)

desc food;



Data insertion for Food Table:

insert into food (food\_id, food\_type, price)

values (food\_id\_seq.NEXTVAL, 'PASTRY', '300')

insert into food (food\_id,food\_type,price)

values (food\_id\_seq.NEXTVAL, 'SPECIAL LACCHI','350')

insert into food (food\_id, food\_type, price)

values (food\_id\_seq.NEXTVAL, 'COLD COFFEE', '150')

insert into food (food\_id, food\_type, price)

values (food\_id\_seq.NEXTVAL, 'RASMALAI CAKE', '550')

insert into food (food\_id,food\_type, price)

values (food\_id\_seq.NEXTVAL, 'COOKIES', '200')

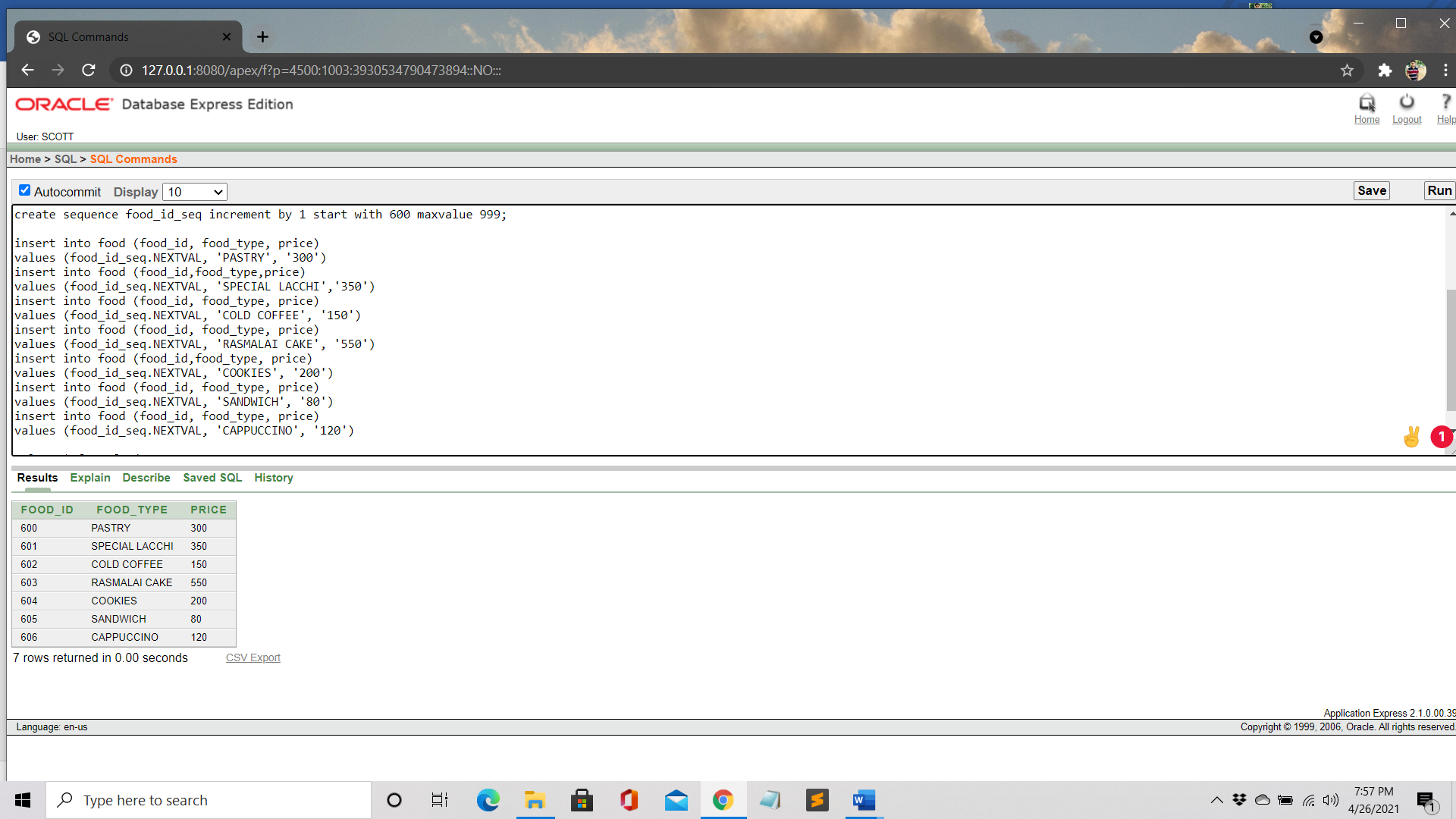
insert into food (food\_id, food\_type, price)

values (food\_id\_seq.NEXTVAL, 'SANDWICH', '80')

insert into food (food\_id, food\_type, price)

values (food\_id\_seq.NEXTVAL, 'CAPPUCCINO', '120')

select \* from food;



7: Food and Customer Table:

Create table food\_and\_customer\_table(

food\_id number(3)not null,

customer\_id number(3) not null

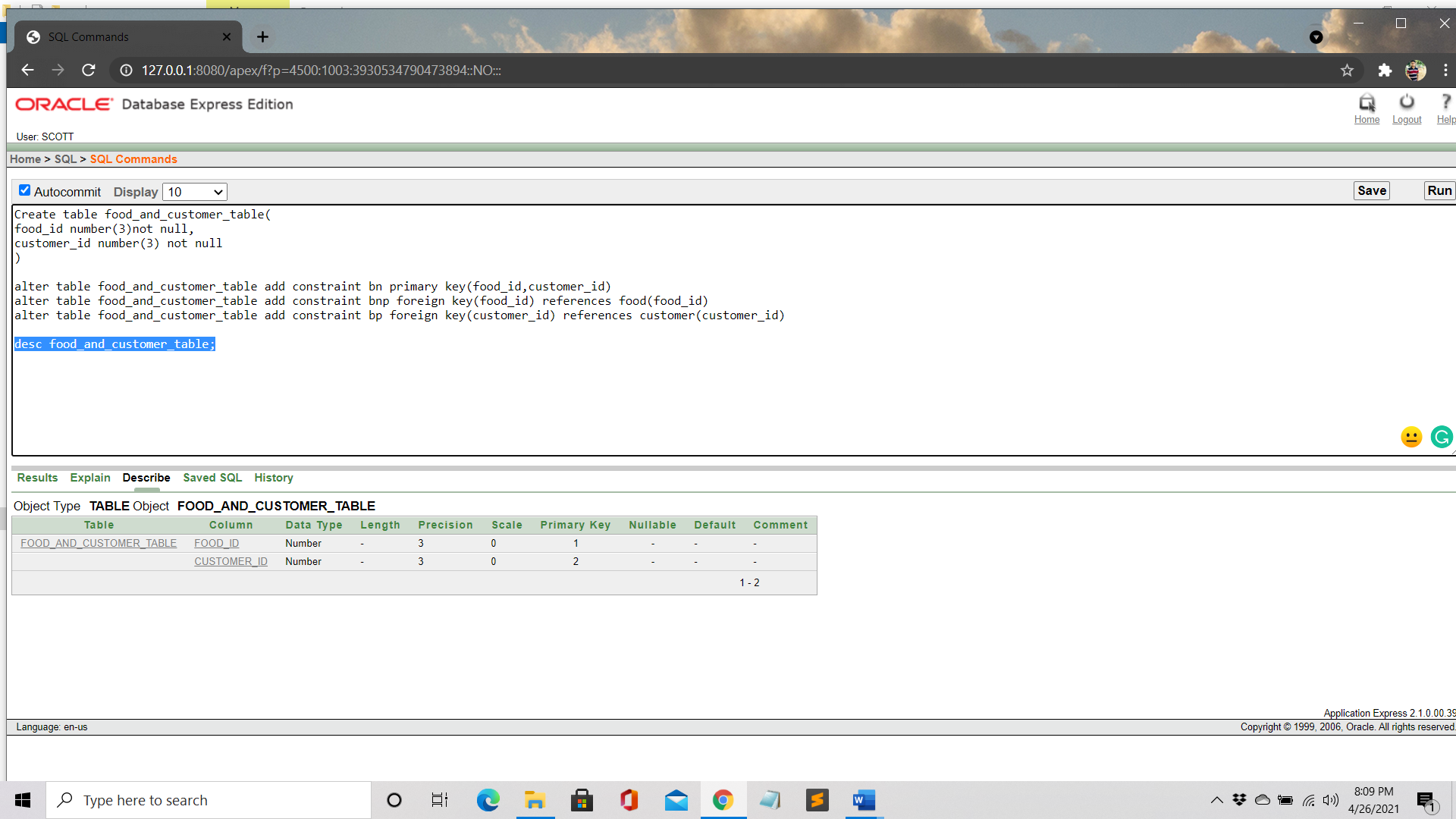
)

alter table food\_and\_customer\_table add constraint bn primary key(food\_id,customer\_id)

alter table food\_and\_customer\_table add constraint bnp foreign key(food\_id) references food(food\_id)

alter table food\_and\_customer\_table add constraint bp foreign key(customer\_id) references customer(customer\_id)

desc food\_and\_customer\_table;



Data Insertion for Food and Customer Table:

insert into food\_and\_customer\_table(food\_id ,customer\_id)

values('600','201')

insert into food\_and\_customer\_table(food\_id ,customer\_id)

values('604','204')

insert into food\_and\_customer\_table(food\_id ,customer\_id)

values('602','201')

insert into food\_and\_customer\_table(food\_id ,customer\_id)

values('605','204')

insert into food\_and\_customer\_table(food\_id ,customer\_id)

values('601','203')

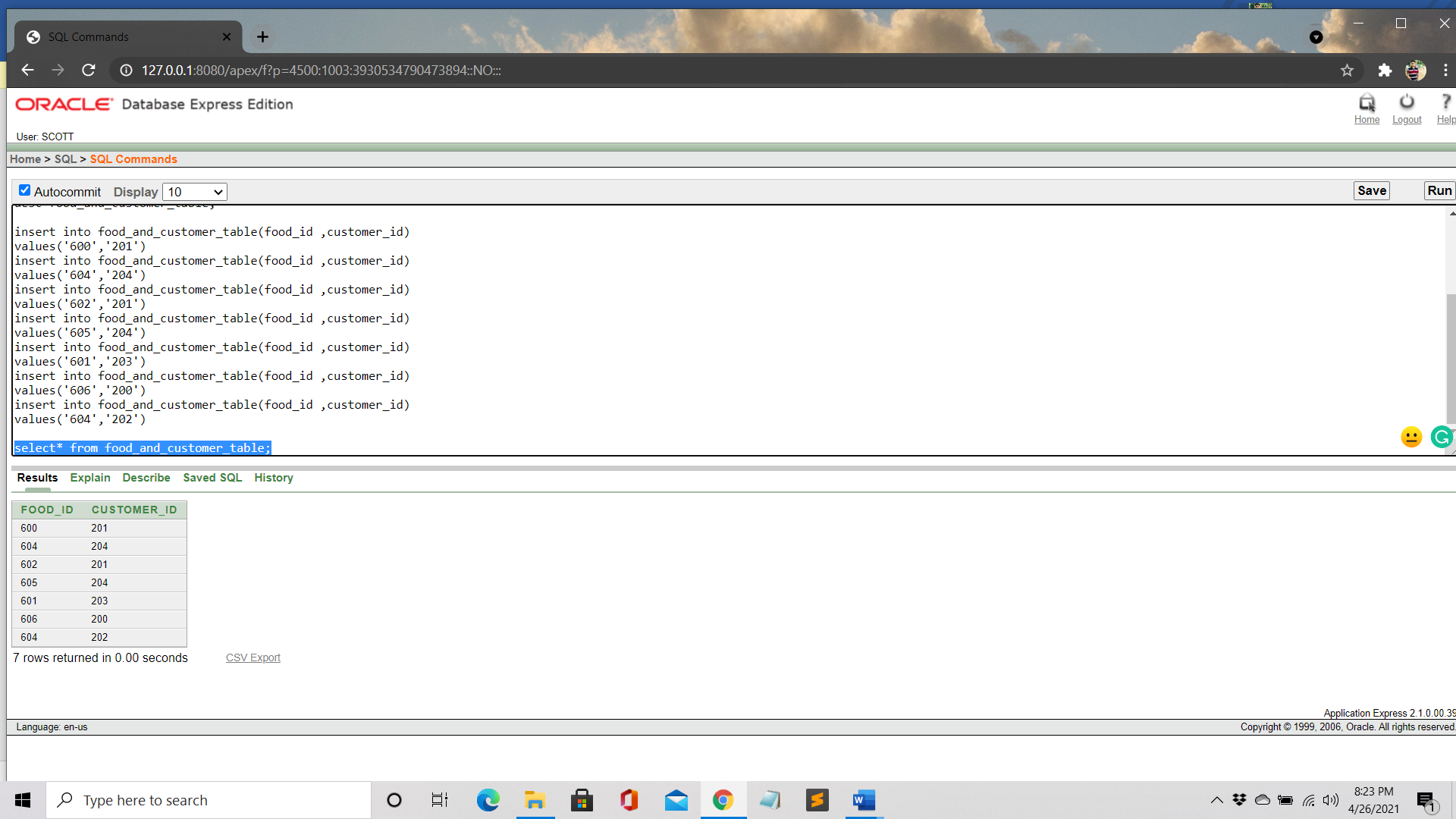
insert into food\_and\_customer\_table(food\_id ,customer\_id)

values('606','200')

insert into food\_and\_customer\_table(food\_id ,customer\_id)

values('604','202')

select\* from food\_and\_customer\_table;



8: Bill and Customer Table:

create table bill\_and\_customer\_table(

bill\_id number(3) not null,

customer\_id number(3) not null

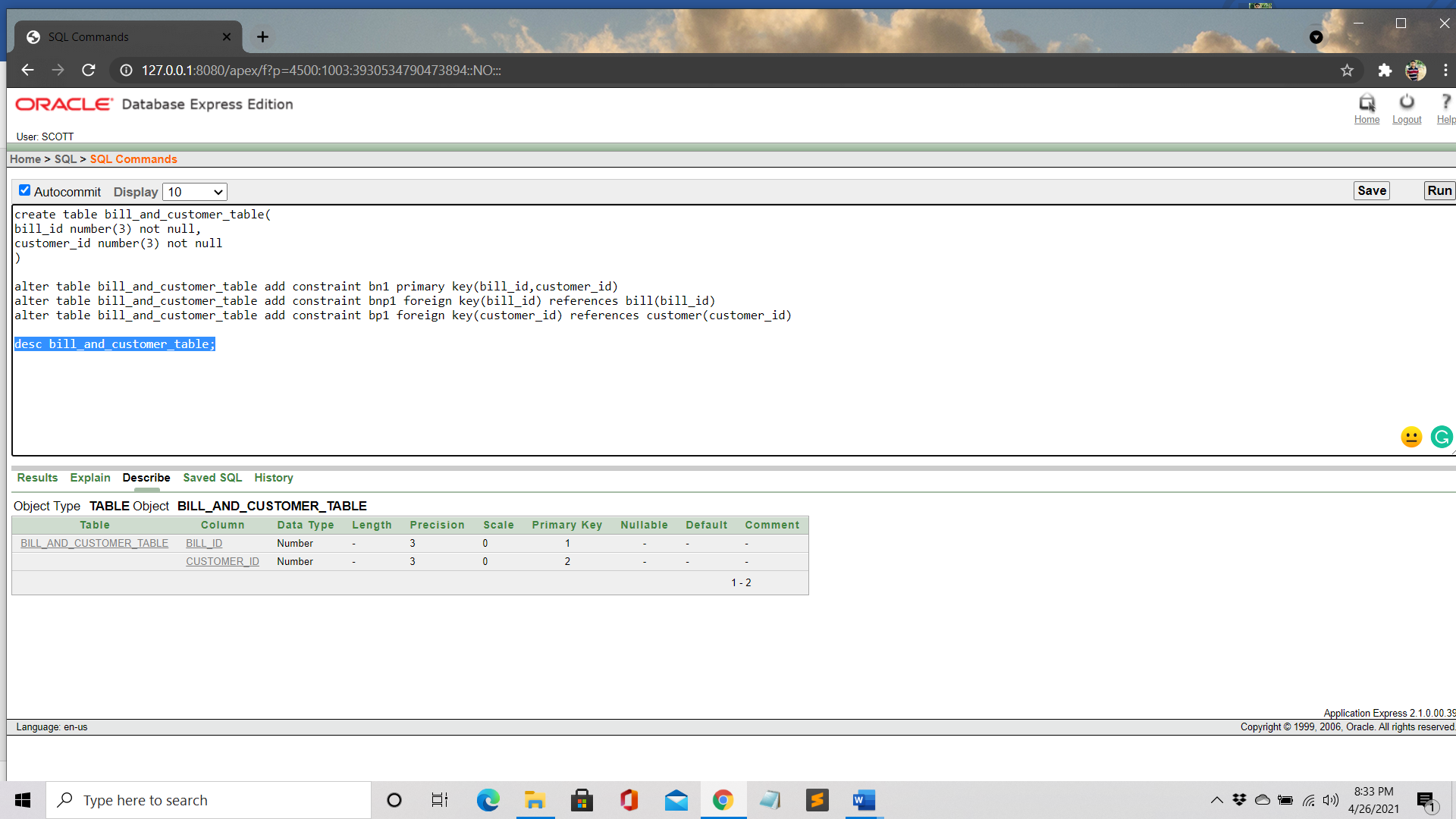
)

alter table bill\_and\_customer\_table add constraint bn1 primary key(bill\_id,customer\_id)

alter table bill\_and\_customer\_table add constraint bnp1 foreign key(bill\_id) references bill(bill\_id)

alter table bill\_and\_customer\_table add constraint bp1 foreign key(customer\_id) references customer(customer\_id)

desc bill\_and\_customer\_table;



Data Insertion for Bill and Customer Table:

insert into bill\_and\_customer\_table(bill\_id ,customer\_id)

values('500','201')

insert into bill\_and\_customer\_table(bill\_id ,customer\_id)

values('501','204')

insert into bill\_and\_customer\_table(bill\_id ,customer\_id)

values('503','202')

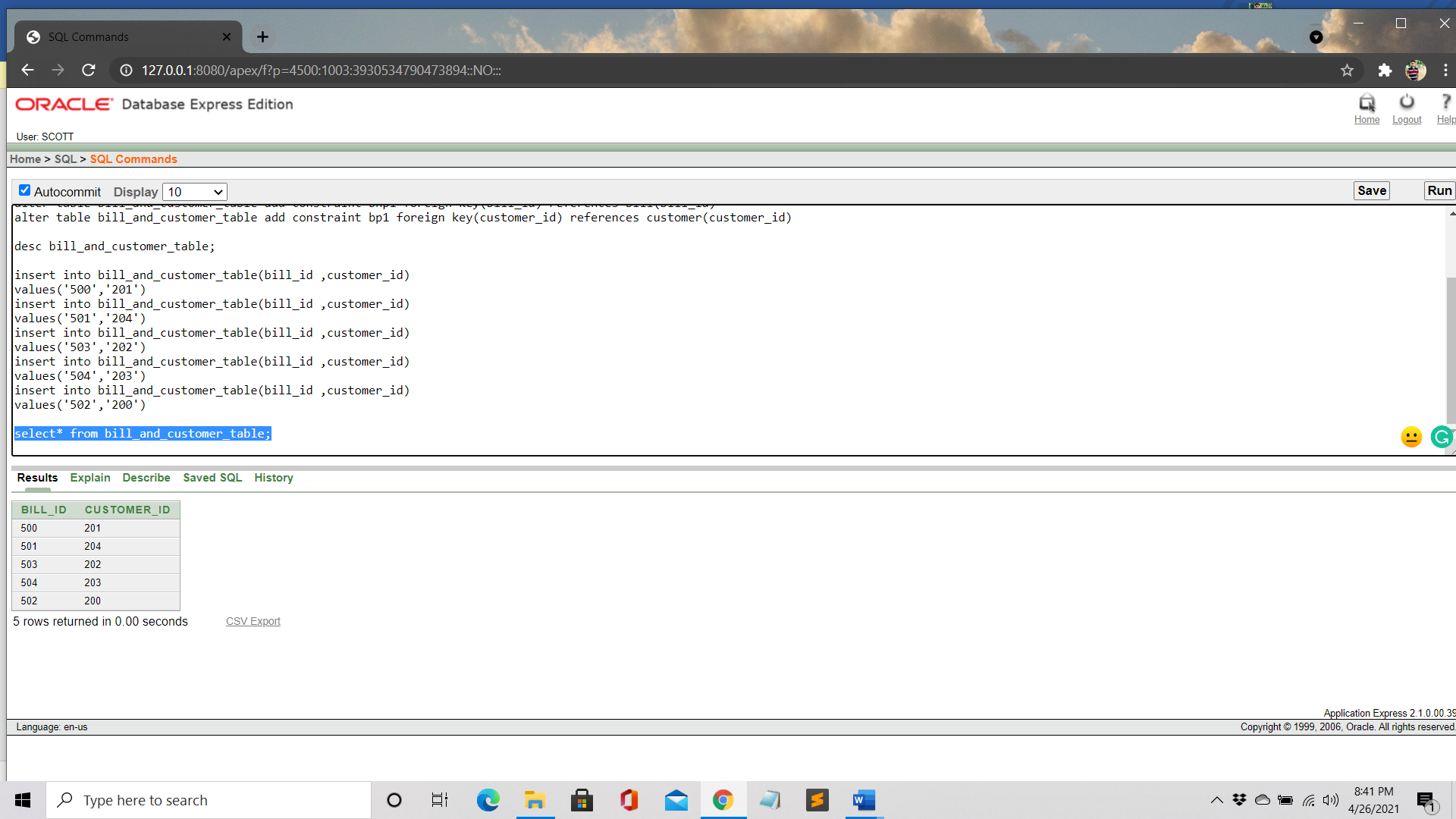
insert into bill\_and\_customer\_table(bill\_id ,customer\_id)

values('504','203')

insert into bill\_and\_customer\_table(bill\_id ,customer\_id)

values('502','200')

select\* from bill\_and\_customer\_table;



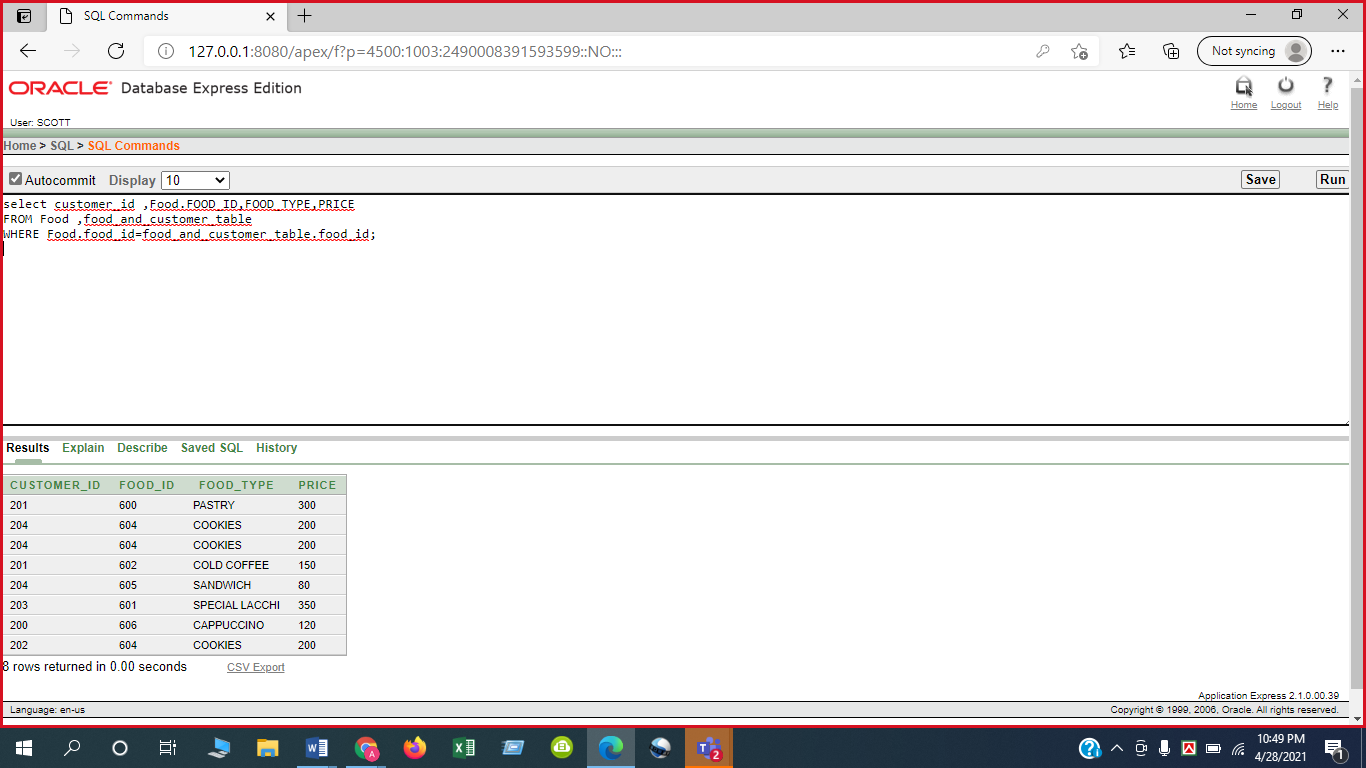
Joining :

**Equijoin**

1. select customer\_id ,Food.FOOD\_ID,FOOD\_TYPE,PRICE

FROM Food ,food\_and\_customer\_table

WHERE Food.food\_id=food\_and\_customer\_table.food\_id;



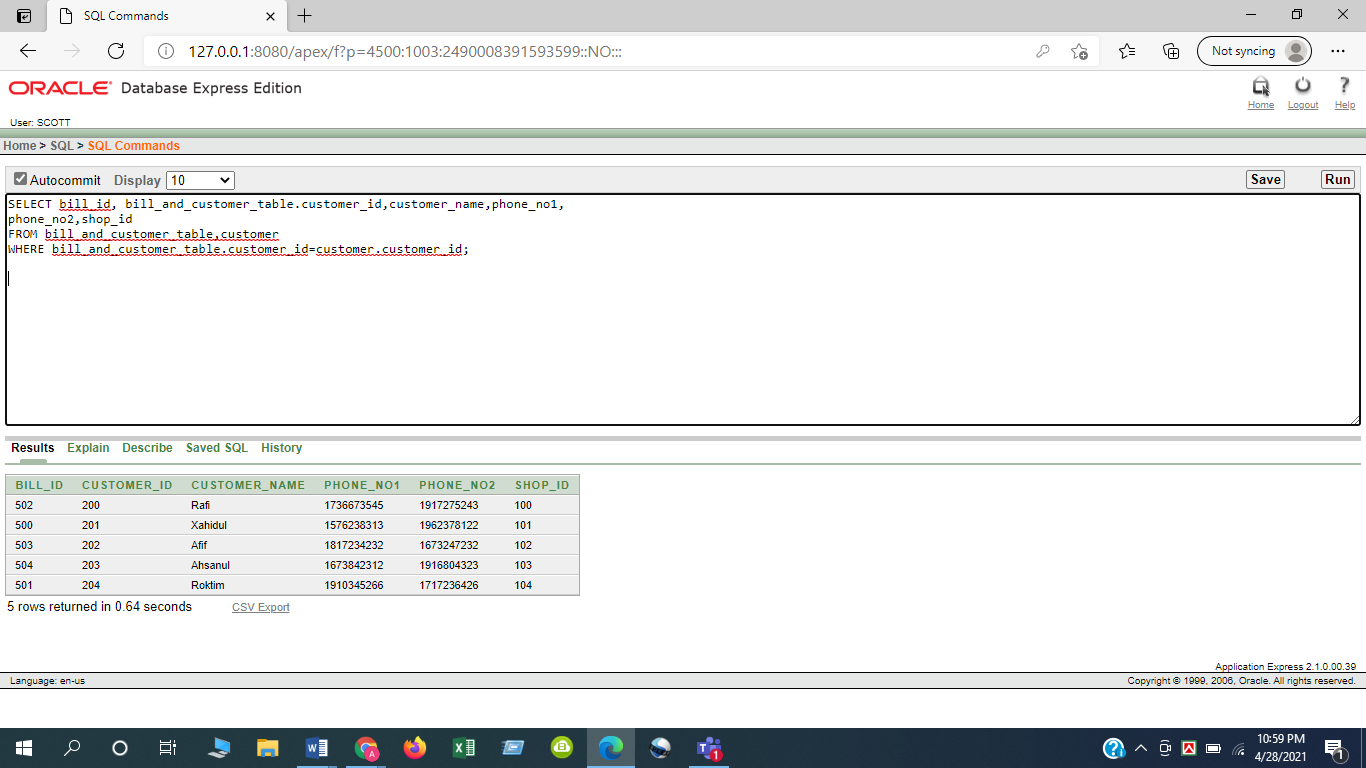
2 .

SELECT bill\_id, bill\_and\_customer\_table.customer\_id,customer\_name,phone\_no1,

phone\_no2,shop\_id

FROM bill\_and\_customer\_table,customer

WHERE bill\_and\_customer\_table.customer\_id=customer.customer\_id;



**Outer join :**

SELECT BILL\_ID,a.customer\_id,CUSTOMER\_NAME,PHONE\_NO1,PHONE\_NO2,SHOP\_ID

FROM bill\_and\_customer\_table a,customer c

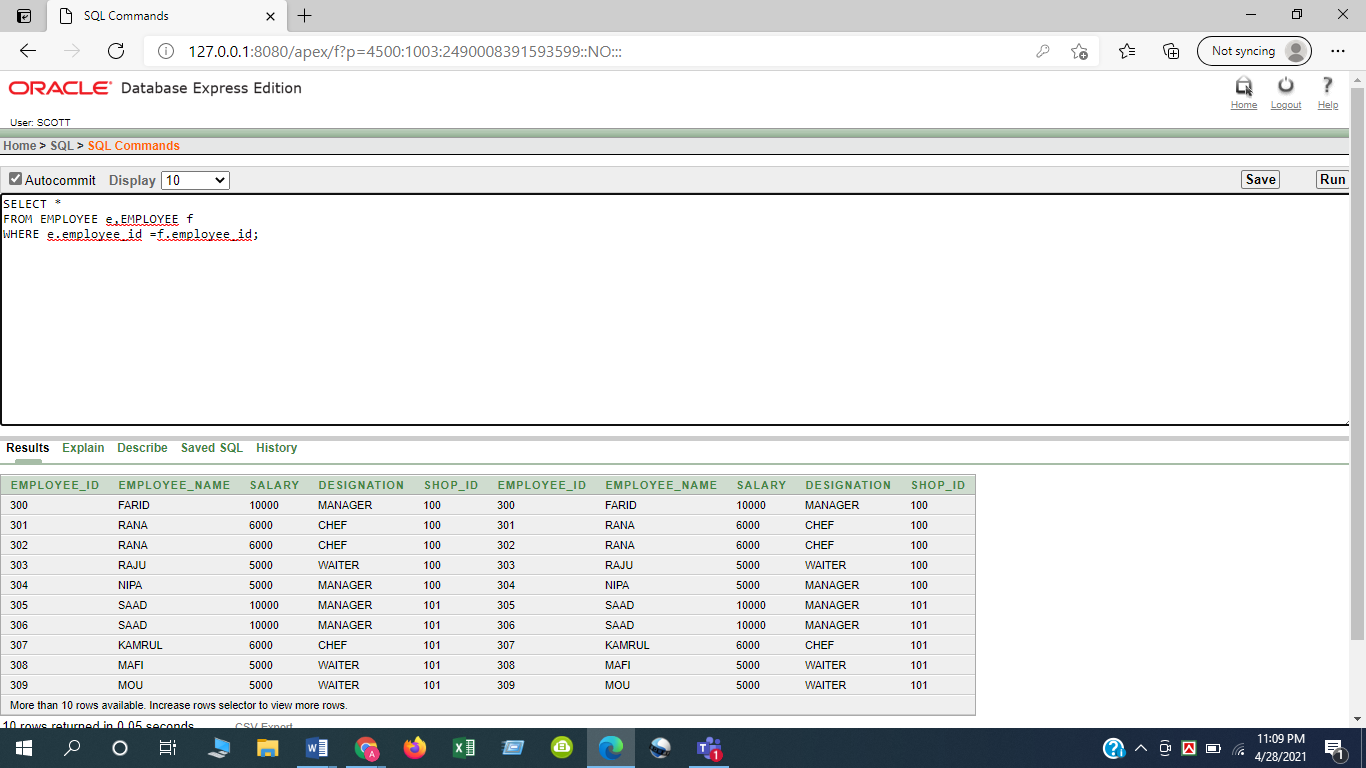
WHERE a.customer\_id =c.customer\_id(+);

**Self – Join :**

SELECT \*

FROM EMPLOYEE e,EMPLOYEE f

WHERE e.employee\_id =f.employee\_id;



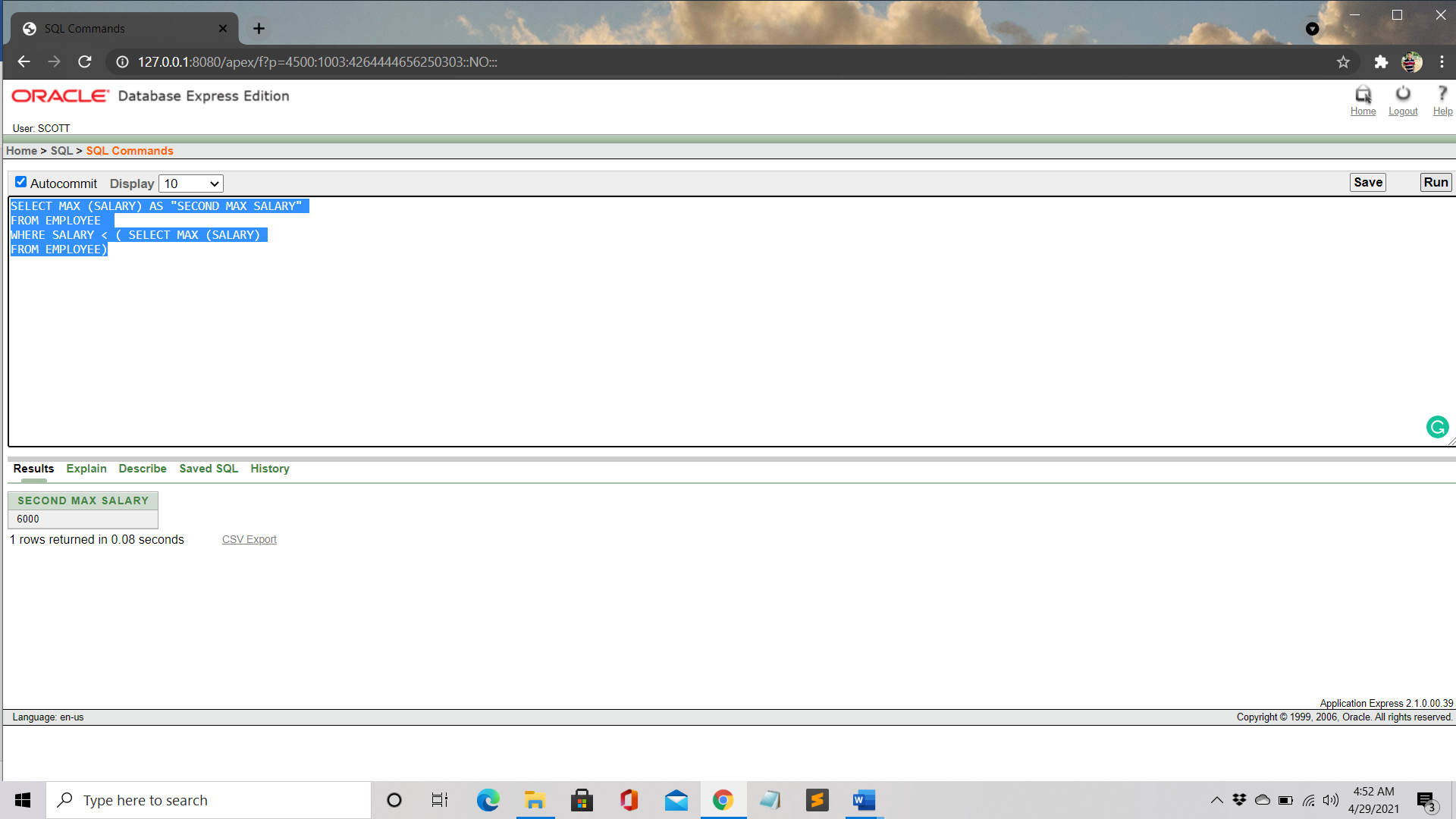
**Subquery:**

1: SELECT MAX (SALARY) AS "SECOND MAX SALARY"

FROM EMPLOYEE

WHERE SALARY < ( SELECT MAX (SALARY)

FROM EMPLOYEE)



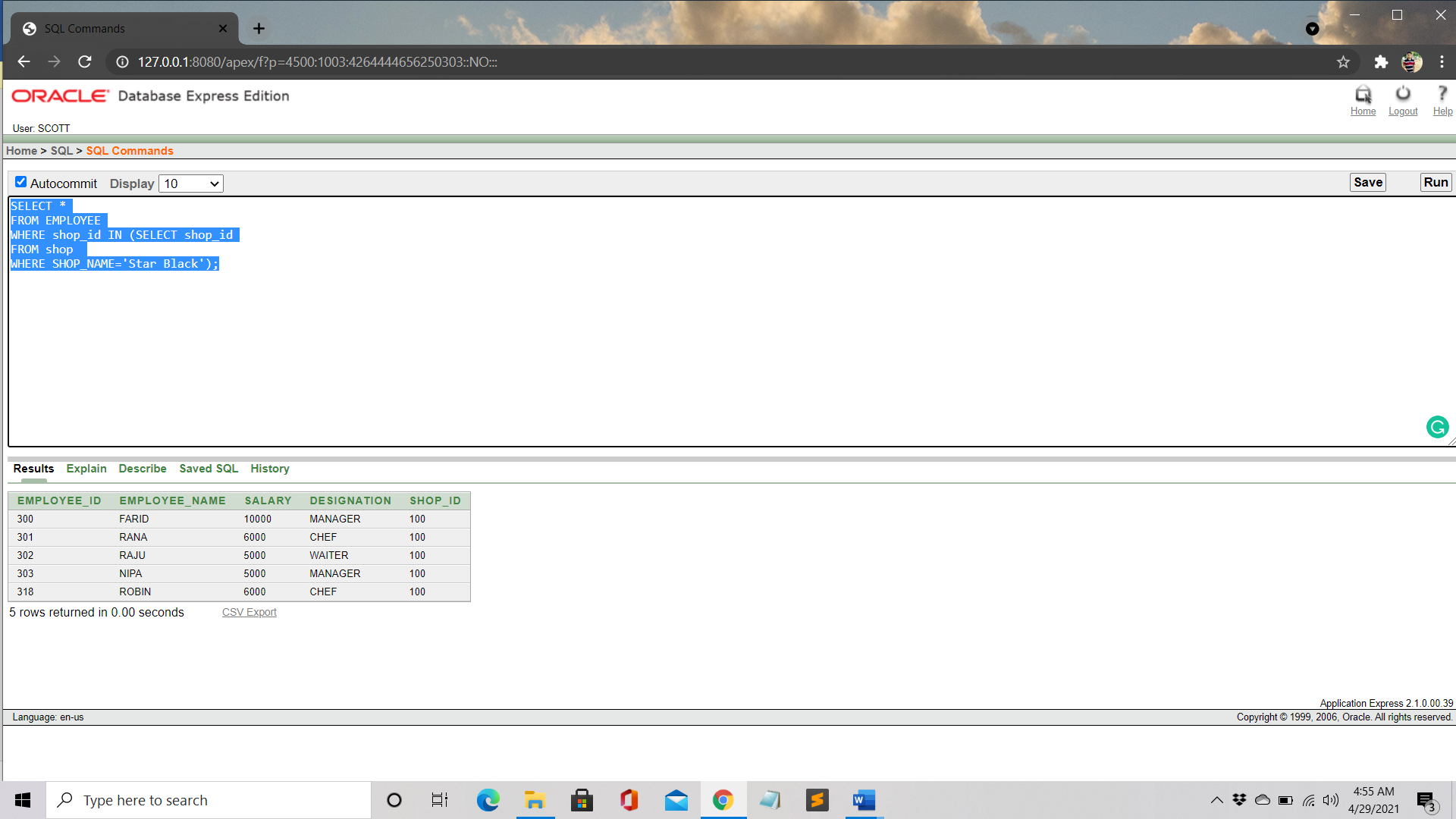
2: SELECT \*

FROM EMPLOYEE

WHERE shop\_id IN (SELECT shop\_id

FROM shop

WHERE SHOP\_NAME='Star Black');



**Conclusion :**

Our project deals with Coffee Shop Management System. We developed Coffee Shop Management system to maintain orders and management of a coffee shop. With selecting Menu Order the system displays the Available items of the list and with this the user can place order with item quantity. Our admin panel is responsible for receiving all processing orders from customers. In our system shop name and address is stored. We also stored employee name, salary, designation and also stored customer name and phone numbers.

At first, we have drawn ER diagram using DIA tool. Then we normalize the diagram for final table. Grant create table, create view and create sequence to accounts. We have created table following our final table which we have get from normalization and insert necessary data into table and also insert screenshot of all of these. Firstly in query writing, we have done sub-query for employee table then we have done joining in customer table and employee table. After that we have assign view in employee table and owner table. We have done query writing by creating some question and by answering them.

In future we will invent an app using java, java script and c#. It will be very helpful for our future business plan. By using the app owners/ users can actuate any update in the system. We can make sure best security for the system.