***DATABASE PROJECT***

**Project Name: Burger Shop Management System**

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**■ Introduction:**

The database is a collection of organized set of data that make it straightforward to access, manage, manipulate and update as well. In short, it makes the management of data easy. A (DBMS) Database Management System is not just one thing, it is a collection of programs that serve different purposes.

In our project (Burger Shop Management System) was created by the concept of DBMS.

■ Scenario:

'Khaidai Burgers Shop' is mainly a burger catering company that offers burger along with drinks delivery service. The burger shop has cs\_name, cs\_address and license. There is one owner of the burger shop. The system have save the owner\_name, owner\_NID, email, country, and city. Burger shop have many branches. The system have stored the b\_id, b\_address, and b\_name. Every branch have one manager. The system stored m\_ID, m\_phone\_no, salary, hiredate. Under every manager there are some chefs. The attributes for chefs are identified as c\_id, c\_name, c\_phone\_no, Salary and under every branch there are many employees. The system stored e\_id, city, country, e\_phone\_no, Salary, gender, role. The burger shop offer many items. The burger shop items are recognized by I\_id, I\_name, and unit price. Those items are made by the chefs. The attributes for customer are identified as cust\_id, cust\_name. A customer can order more than one items. Order details are o\_id, o\_date, o\_time. After receiving the order have to pay the bill includes the bill\_id, i\_id, o\_id, time.

■ Normalization:

Owner……1…HAS………1……………Burger\_SHOP

**UNF:**

▪ Has ( o\_name, o\_NID, email, country, city, licence, cs\_name, cs\_address)

**1NF:**

▪ there is no multivalued attribute

▪ o\_name, o\_NID, email, country, city, licence, cs\_name, cs\_address

**2NF:**

▪ o\_name, o\_NID, email, country, city

▪ Licence, cs\_name, cs\_address

**3NF:**

▪ o\_name, o\_NID, email

▪ city, country

▪ Licence, cs\_name, cs\_address

**Table Creation**:

▪ o\_name, o\_NID, email, **a\_id**

▪ a\_id, city, country

▪ licence, cs\_name, cs\_address, **o.NID**

**Burger Shop…………1……………………..HAS…………………\*……………………Branch**

**UNF:**

▪ Has (licence, cs\_name, cs\_address, b\_name, b\_id, b\_address)

**1NF:**

▪ there is no multivalued attribute

▪ licence, cs\_name, cs\_address, b\_name, b\_id, b\_address

**2NF:**

▪ licence, cs\_name, cs\_address

▪ b\_name, b\_id, b\_address

**3NF:**

▪ licence, cs\_name, cs\_address

▪ b\_name, b\_id, b\_address

**Table Creation:**

▪ licence, cs\_name, cs\_address

▪ b\_name, b\_id, b\_address, license

**Branch……1……Work………\*………Employee**

**UNF:**

▪ Work (b\_name, b\_id, b\_address, gender, role, e\_id, city, country, e\_phone\_no, salary)

**1NF:**

▪ e\_phone\_no is a multivalued attribute

▪ b\_name, b\_id, b\_address, gender, role, e\_id, city, country, e\_phone\_no, salary

**2NF:**

▪ b\_name, b\_id, b\_address

▪ gender, role, e\_id, city, country, e\_phone\_no, salary

**3NF:**

▪ b\_name, b\_id, b\_address

▪ gender, role, e\_id, e\_phone\_no, salary

▪ city, country

**Table Creation:**

▪ b\_name, b\_id, b\_address

▪ gender, role, e\_id, e\_phone\_no, salary, a\_id, b\_id

▪ a\_id, city, country

**Branch…………\*……………………..Work…………………1……………………Manager**

**UNF:**

▪ manage (b\_name, b\_id, b\_address, m\_id, m\_phone\_no, salary, haredate)

**1NF:**

▪ m\_phone\_no is a multivalued attribute

**▪** b\_name, b\_id, b\_address, m\_id, m\_phone\_no, salary, haredate

**2NF:**

▪ b\_name, b\_id, b\_address

▪ m\_id, m\_phone\_no, salary, haredate

**3NF:**

▪ b\_name, b\_id, b\_address

▪ m\_id, m\_phone\_no, salary, haredate

**Table Creation:**

▪ b\_name, b\_id, b\_address , **m\_id**, **m\_phone\_no**

▪ m\_id, m\_phone\_no, salary, haredate

**Burger\_Shop…………1………Offer …………\*………Item**

**UNF:**

▪ offer (licence, cs\_name, cs\_address, unit price, I\_id, I\_name)

**1NF:**

▪ There is no multivalued attribute

▪ licence, cs\_name, cs\_address, unit price, I\_id, I\_name

**2NF:**

▪ licence, cs\_name, cs\_address

▪ unit price, I\_id, I\_name

**3NF:**

▪ licence, cs\_name, cs\_address

▪ unit price, I\_id, I\_name

**Table Creation:**

▪ licence, cs\_name, cs\_address

▪ unit price, I\_id, I\_name, licence

**Chef…………\*……………..Make………………\*…………………….Item**

**UNF:**

▪ make (c\_name, c\_id , c\_phone\_no, salary ,unit price, I\_id, I\_name)

**1NF:**

▪ c\_phone\_no is a multivalued attribute

▪ c\_name, c\_id, c\_phone\_no, salary ,unit price, I\_id, I\_name

**2NF:**

▪ c\_name, c\_id, c\_phone\_no, salary

▪ unit price, I\_id, I\_name

**3NF:**

▪ c\_name, c\_id, c\_phone\_no, salary

▪ unit price, I\_id, I\_name

**Table Creation:**

▪ c\_name, c\_id, , c\_phone\_no, salary

▪ unit price, I\_id, I\_name

▪ c\_id, c\_phone\_no ,I\_id

**Manager…………1…………………………..Work Under………….\*…………………………Chef**

**UNF:**

▪ work\_under( m\_id, m\_phone\_no, salary, haredate, c\_name, c\_id , c\_phone\_no, salary)

**1NF:**

▪ m\_phone\_no and c\_phone\_no are two multivalued attributes

▪ m\_id, m\_phone\_no, salary, haredate, c\_name, c\_id, c\_phone\_no, salary

**2NF:**

▪ m\_id, m\_phone\_no, salary, haredate

▪ c\_name, c\_id ,c\_phone\_no, salary

**3NF:**

▪ m\_id, m\_phone\_no, salary, haredate

▪ c\_name, c\_id , c\_phone\_no, salary

**Table Creation:**

▪ b\_name, b\_id, b\_address, m\_id, m\_phone\_no

▪ c\_name, c\_id , c\_phone\_no, salary, m\_id, m\_phone\_no

**Burger\_Shop…………1…………………Give\_Service………………\*…………………Customer**

**UNF:**

▪ give\_service (licence, cs\_name, cs\_address, cust\_id, cust\_name)

**1NF:**

▪ There is no multivalued attribute

▪ licence, cs\_name, cs\_address, cust\_id, cust\_name

**2NF:**

▪ licence, cs\_name, cs\_address

▪ cust\_id, cust\_name

**3NF:**

▪ licence, cs\_name, cs\_address

▪ cust\_id, cust\_name

**Table Creation:**

▪ licence, cs\_name, cs\_address

▪ cust\_id, cust\_name, licence

**Customer…………1…………………Give………………\*…………………Order**

**UNF:**

▪ give ( cust\_id, cust\_name, o\_id, o\_date, o\_time)

**1NF:**

▪ There is no multivalued attribute

▪ cust\_id, cust\_name, o\_id, o\_date, o\_time

**2NF:**

▪ cust\_id, cust\_name

▪ o\_id, o\_date, o\_time

**3NF:**

▪ cust\_id, cust\_name

▪ o\_id, o\_date, o\_time

**Table Creation:**

▪ cust\_id, cust\_name, o\_id

▪ o\_id, o\_date, o\_time

**Bill…………1………Payment……1………Order**

**UNF:**

▪ payment (I\_id, c\_id, b\_id, o\_id, o\_date, o\_time)

**1NF:**

▪ There is no multivalued attribute

▪ I\_id, c\_id, b\_id, o\_id, o\_date, o\_time

**2NF:**

▪ I\_id, c\_id, b\_id

▪ o\_id, o\_date, o\_time

**3NF:**

▪ I\_id, c\_id, b\_id

▪ o\_id, o\_date, o\_time

**Table Creation:**

▪ I\_id, c\_id, b\_id , o\_id

▪ o\_id, o\_date, o\_time

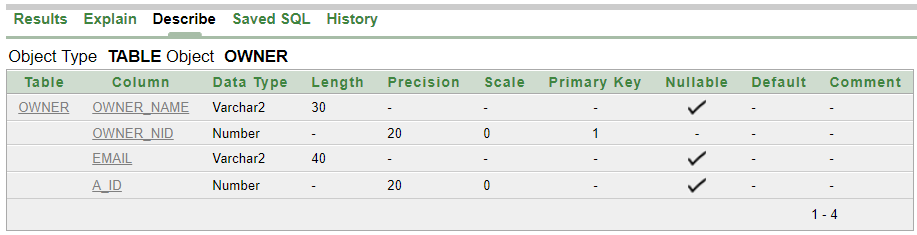
Rough Table:

1. owner\_name, owner\_NID, email, **a.id**
2. a.id, city, country
3. licence, cs.name,cs.address, **o.NID**
4. ~~licence, cs.name, cs.address~~
5. b.name, b.id, b.address, **licence**
6. ~~b.name, b.id, b.address~~
7. gender, role, e.ID, e.phone\_no, salary, **a.id, b.ID**
8. ~~a.ID, city, country~~
9. b.name, b.ID, b.address**, m.ID, m.phone\_no**
10. hiredate, salary, , m.Id, m.phone\_no
11. ~~hiredate, salary, m.Id, m.phone\_no~~
12. c.phone\_no, c.ID, c.name, salary, **m.ID, m.phone\_no**
13. ~~c.phone\_no, c.ID, c.name, salary~~
14. ~~i.ID, i.name, unit\_price~~
15. **c.phone\_no, c.ID, i.ID**
16. ~~licence, cs.name, cs.address~~
17. i.ID, i.name, unit\_price, **licence**
18. ~~licence, cs.name, cs.address~~
19. cust.ID, cust.name, **licence**
20. cust.name, cust.ID, **o.ID**
21. o.ID, o.date, o.time
22. i.ID, c.ID, bill.ID, **o.ID**
23. ~~o.ID, o.date, o.time~~

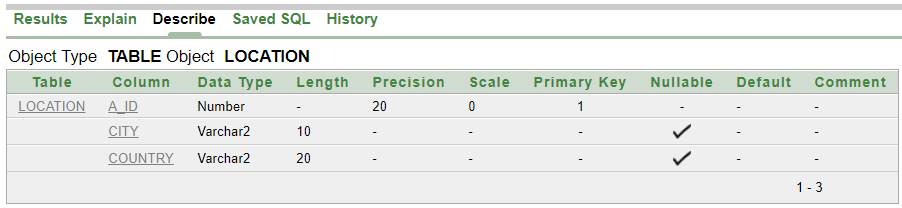
Final Table:

1. ower\_name, owner\_NID, email, **a.id**
2. a\_id, city, country
3. licence, cs\_name,cs\_address, **o\_NID**
4. b\_name, b\_id, b\_address, **licence**
5. gender, role, e.ID, e.phone\_no, salary, **a.id, b.ID**
6. b.name, b.ID, b.address**, m.ID, m.phone\_no**
7. hiredate, salary, m.Id, m.phone\_no
8. c.phone\_no, c.ID, c.name, salary, **m.ID, m.phone\_no**
9. **c.phone\_no, c.ID, i.ID**
10. i.ID, i.name, unit\_price, **licence**
11. cust.ID, cust.name, **licence**
12. cust.name, cust.ID, **o.ID**
13. o.ID, o.date, o.time
14. i.ID, c.ID, bill.ID, **o.ID**

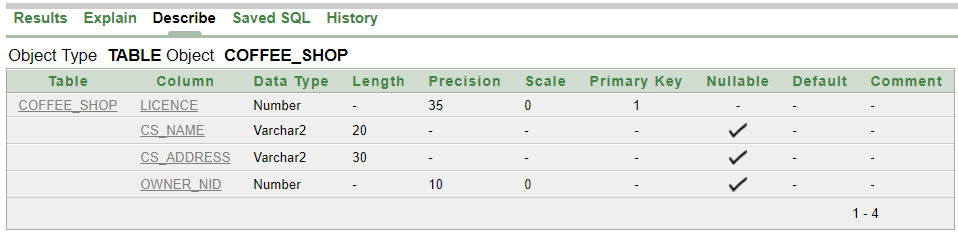
1. create table owner (owner\_name varchar2(30), owner\_NID number(20) primary key, email varchar2(40),a.id number(20));



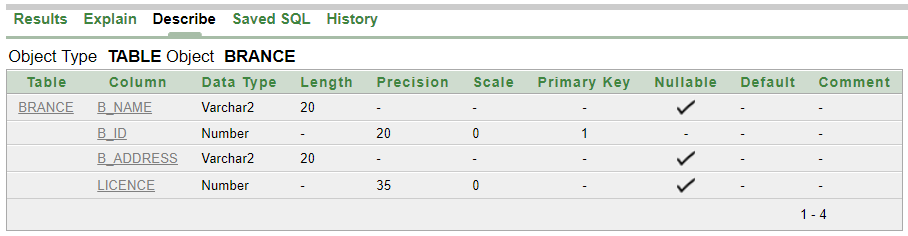
2. create table Location (a\_id number(20) primary key,city varchar2(10), country varchar2(20));



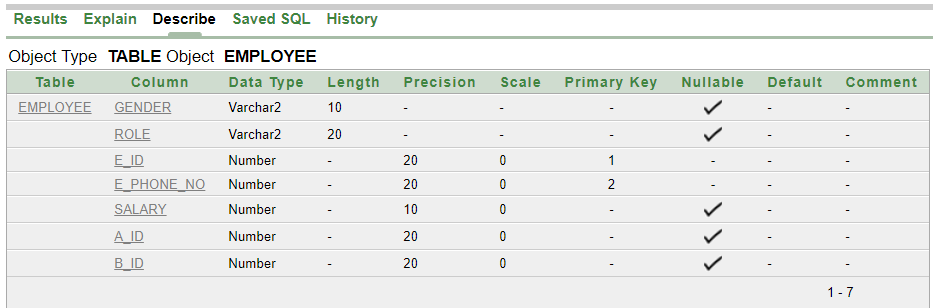
3. create table Coffee\_Shop (licence number(35) primary key, cs\_name varchar2(20),cs\_address varchar2(30), owner\_NID number(10));



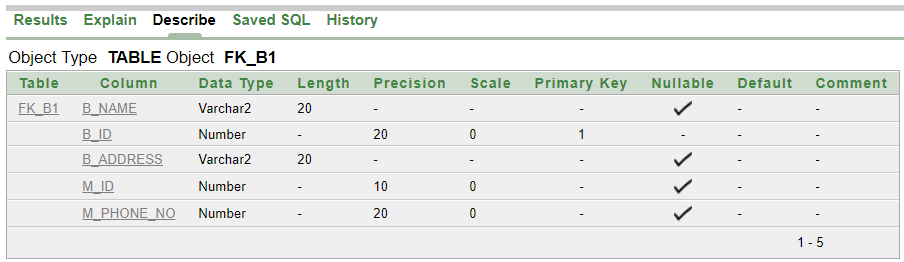
4. create table Brance (b\_name varchar2(20),b\_id number(20) primary key,b\_address varchar2(20),licence number(35));



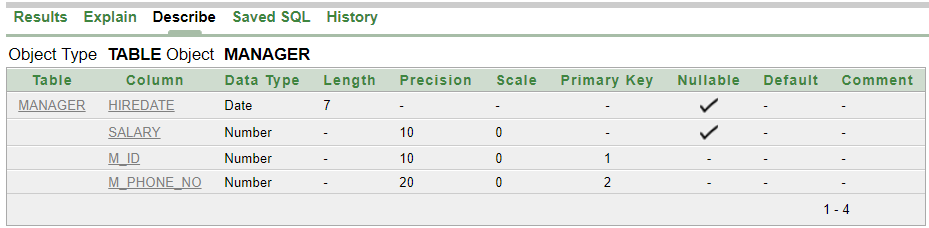
5. create table Employee(gender varchar2(10), role varchar2(20), e\_id number(20), e\_phone\_no number(20),salary number(10),a\_id number(20),b\_id number(20));



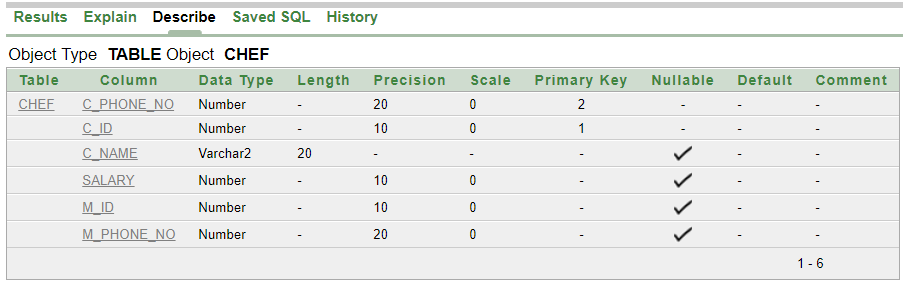
6. create table fk\_b1 (b\_name varchar2(20),b\_id number(20) primary key,b\_address varchar2(20),m\_id number(10),m\_phone\_no number(20));



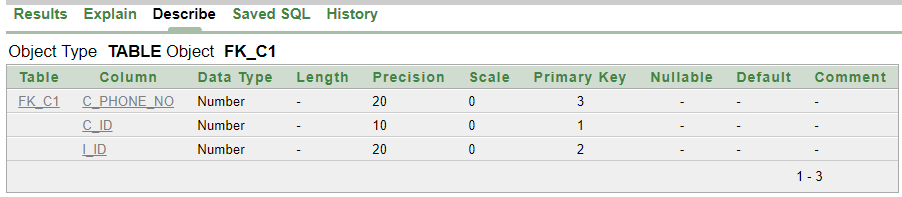
7. create table Manager(hiredate DATE,salary number(10),m\_id number(10), m\_phone\_no number(20));



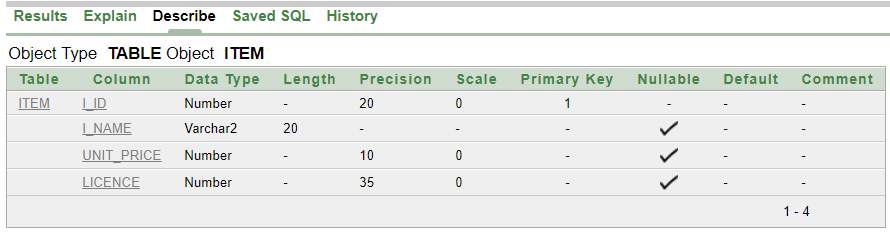
8. create table Chef (c\_phone\_no number(20),c\_id number(10), C\_name varchar2(20),salary number(10),m\_id number(10), m\_phone\_no number(20));



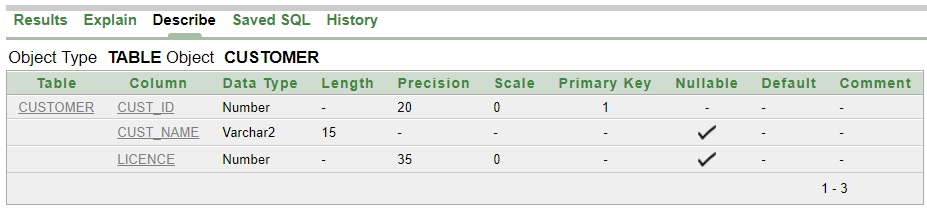
9. create table fk\_c1(c\_phone\_no number(20),c\_id number(10),i\_id number(20));



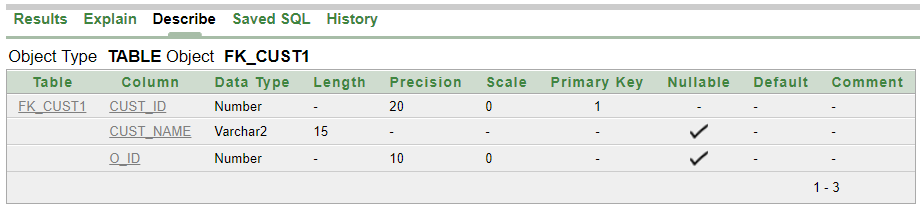
10. create table Item(i\_id number(20) primary key,i\_name varchar2(20),unit\_price number(10),licence number(35));



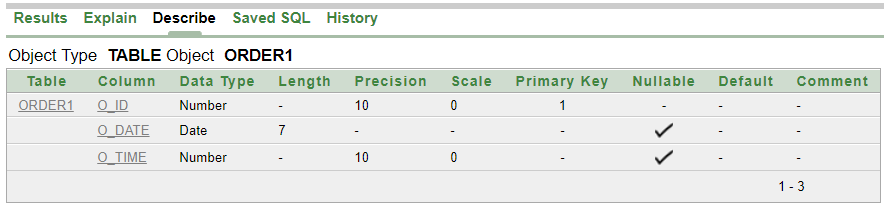
11. create table Customer(cust\_id number(20) primary key, cust\_name varchar2(15),licence number(35));



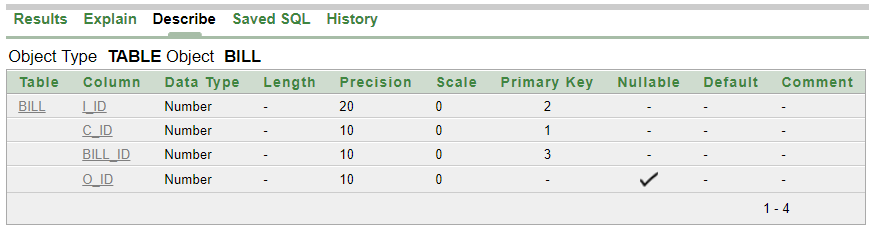
12. create table fk\_cust1(cust\_id number(20) primary key, cust\_name varchar2(15),o\_id number(10));



13. create table Order1(o\_id number(10) primary key,o\_date DATE, o\_time number(10));



14. create table Bill (i\_id number(20),c\_id number(10),bill\_id number(10),o\_id number(10));



alter table Employee add constraint ae primary key (e\_id, e\_phone\_no);

alter table Manager add constraint az primary key (m\_id, m\_phone\_no);

alter table Chef add constraint ai primary key (c\_id, c\_phone\_no);

alter table fk\_c1 add constraint ak primary key (c\_id,i\_id,c\_phone\_no);

alter table Bill add constraint ar primary key (c\_id,i\_id,bill\_id);

alter table Owner add constraint ab foreign key (a\_id) references Location (a\_id);

alter table Coffee\_Shop add constraint ac foreign key (owner\_NID) references Owner (owner\_NID);

alter table Brance add constraint ad foreign key (licence) references Coffee\_Shop (licence);

alter table Employee add constraint af foreign key (a\_id) references Location (a\_id);

alter table Employee add constraint ag foreign key (b\_id) references Brance (b\_id);

alter table fk\_b1 add constraint ah foreign key (m\_id,m\_phone\_no) references Manager (m\_id,m\_phone\_no);

alter table Chef add constraint aj foreign key (m\_id,m\_phone\_no) references Manager (m\_id,m\_phone\_no);

alter table fk\_c1 add constraint al foreign key (c\_id,c\_phone\_no) references Chef (c\_id,c\_phone\_no);

alter table fk\_c1 add constraint am foreign key (i\_id) references Item (i\_id);

alter table Item add constraint ao foreign key (licence) references Coffee\_Shop (licence);

alter table Customer add constraint ap foreign key (licence) references Coffee\_Shop (licence);

alter table fk\_cust1 add constraint aq foreign key (o\_id) references Order1 (o\_id);

alter table Bill add constraint au foreign key (o\_id) references Order1 (o\_id);

**DATA INSERTATION:**

**1. Owner:**

insert into owner values ('MD. RAHMAN',6245765237,'rahman@gmail.com',101);

**2. Location:**

insert into location values(101,'Rangpur','Bangladesh');

insert into location values(102,'Dhaka','Bangladesh');

insert into location values(104,'Tangail','Bangladesh');

insert into location values(107,'Khulna','Bangladesh');

**3. Coffee\_Shop:**

insert into Coffee\_Shop values(3489574923,'Apon Coffee Shop','Khilgaon',6245765237);

**4. Branch:**

insert into Brance values('Apon Coffee Shop',1221,'Khilgaon',3489574923);

insert into Brance values('Apon Coffee Shop',1222,'Gulshan',3489574923);

insert into Brance values('Apon Coffee Shop',1223,'Bashundhara r/a',3489574923);

insert into Brance values('Apon Coffee Shop',1224,'Uttara',3489574923);

insert into Brance values('Apon Coffee Shop',1225,'Kuratoli',3489574923);

**5. Employee:**

insert into Employee values('Male','Accountent',073,0173331273,8000,101,1221);

insert into Employee values('Female','Accountent',074,0197331273,8000,102,1224);

insert into Employee values('Male','Waiter',075,0178331273,5000,107,1221);

insert into Employee values('Male','Accountent',076,0189331273,8000,104,1223);

insert into Employee values('Male','Waiter',077,0172331273,5000,104,1224);

insert into Employee values('Female','Waiter',078,0179331273,5000,107,1222);

insert into Employee values('Female','Accountent',079,0173331073,8000,102,1225);

insert into Employee values('Male','Waiter',080,0173331272,5000,101,1223);

insert into Employee values('Female','Accountent',082,0163331273,8000,104,1222);

insert into Employee values('Male','Waiter',085,0153331273,5000,101,1225);

**6. fk\_b1:**

insert into fk\_b1 values('Apon Coffee Shop',1221,'Khilgaon',922,0182376599);

insert into fk\_b1 values('Apon Coffee Shop',1222,'Gulshan',923,0182376590);

insert into fk\_b1 values('Apon Coffee Shop',1223,'Bashundhara r/a',924,0162376587);

insert into fk\_b1 values('Apon Coffee Shop',1224,'Uttara',926,0197676599);

insert into fk\_b1 values('Apon Coffee Shop',1225,'Kuratoli',929,0182907599);

**7. Manager:**

insert into Manager values(to\_date('01-07-2017','dd-mm-yyyy'),15000,922,0182376599);

insert into Manager values(to\_date('01-12-2017','dd-mm-yyyy'),15000,923,0182376590);

insert into Manager values(to\_date('02-06-2017','dd-mm-yyyy'),15000,924,0162376587);

insert into Manager values(to\_date('01-03-2017','dd-mm-yyyy'),15000,926,0197676599);

insert into Manager values(to\_date('03-11-2017','dd-mm-yyyy'),15000,929,0182907599);

**8. Chef:**

insert into Chef values(01321763654,201,'Tanjib',7000,922,0182376599);

insert into Chef values(01321763659,202,'Tushar',7000,923,0182376590);

insert into Chef values(01421763654,203,'Shahriar',7000,924,0162376587);

insert into Chef values(01921763654,207,'Shamsu',7000,926,0197676599);

insert into Chef values(01321763666,208,'Alam',7000,929,0182907599);

**9. fk\_c1:**

insert into fk\_c1 values(01321763654,201,3002);

insert into fk\_c1 values(01321763659,202,3001);

insert into fk\_c1 values(01321763654,201,3003);

insert into fk\_c1 values(01321763659,202,3004);

insert into fk\_c1 values(01421763654,203,3007);

insert into fk\_c1 values(01921763654,207,3005);

insert into fk\_c1 values(01321763666,208,3006);

insert into fk\_c1 values(01421763654,203,3010);

insert into fk\_c1 values(01321763666,208,3008);

insert into fk\_c1 values(01921763654,207,3009);

**10. Item:**

insert into Item values(3001,'Cold Coffee',180,3489574923);

insert into Item values(3002,'Milk Shake',140,3489574923);

insert into Item values(3003,'Hot Coffee',120,3489574923);

insert into Item values(3004,'Oreo Shake',180,3489574923);

insert into Item values(3005,'Mars Shake',170,3489574923);

insert into Item values(3006,'Virgin Mojito',170,3489574923);

insert into Item values(3007,'Blue Lime',180,3489574923);

insert into Item values(3008,'Naga Burger',275,3489574923);

insert into Item values(3009,'Naga Wings',175,3489574923);

insert into Item values(3010,'Pizza',765,3489574923);

**11. Customer:**

insert into Customer values(2209,'Emon',3489574923);

insert into Customer values(2212,'Jeelan',3489574923);

insert into Customer values(2213,'Amit',3489574923);

insert into Customer values(2240,'Tushar',3489574923);

insert into Customer values(2258,'Samiul',3489574923);

insert into Customer values(2269,'Surobe',3489574923);

**12. fk\_cust1:**

insert into fk\_cust1 values(2209,'Emon',01);

insert into fk\_cust1 values(2212,'Jeelan',02);

insert into fk\_cust1 values(2258,'Samiul',05);

insert into fk\_cust1 values(2269,'Surobe',06);

**13. Order1:**

insert into Order1 values(01,to\_date('01-07-2019','dd-mm-yyyy'),0427);

insert into Order1 values(02,to\_date('11-07-2019','dd-mm-yyyy'),0652);

insert into Order1 values(05,to\_date('21-07-2019','dd-mm-yyyy'),0654);

insert into Order1 values(06,to\_date('24-07-2019','dd-mm-yyyy'),0702);

insert into Order1 values(07,to\_date('07-08-2019','dd-mm-yyyy'),0710);

insert into Order1 values(09,to\_date('24-08-2019','dd-mm-yyyy'),0800);

**14. Bill:**

insert into Bill values(3001,2209,01,01);

insert into Bill values(3002,2212,02,02);

insert into Bill values(3003,2213,05,05);

insert into Bill values(3004,2240,06,06);

insert into Bill values(3008,2258,07,07);

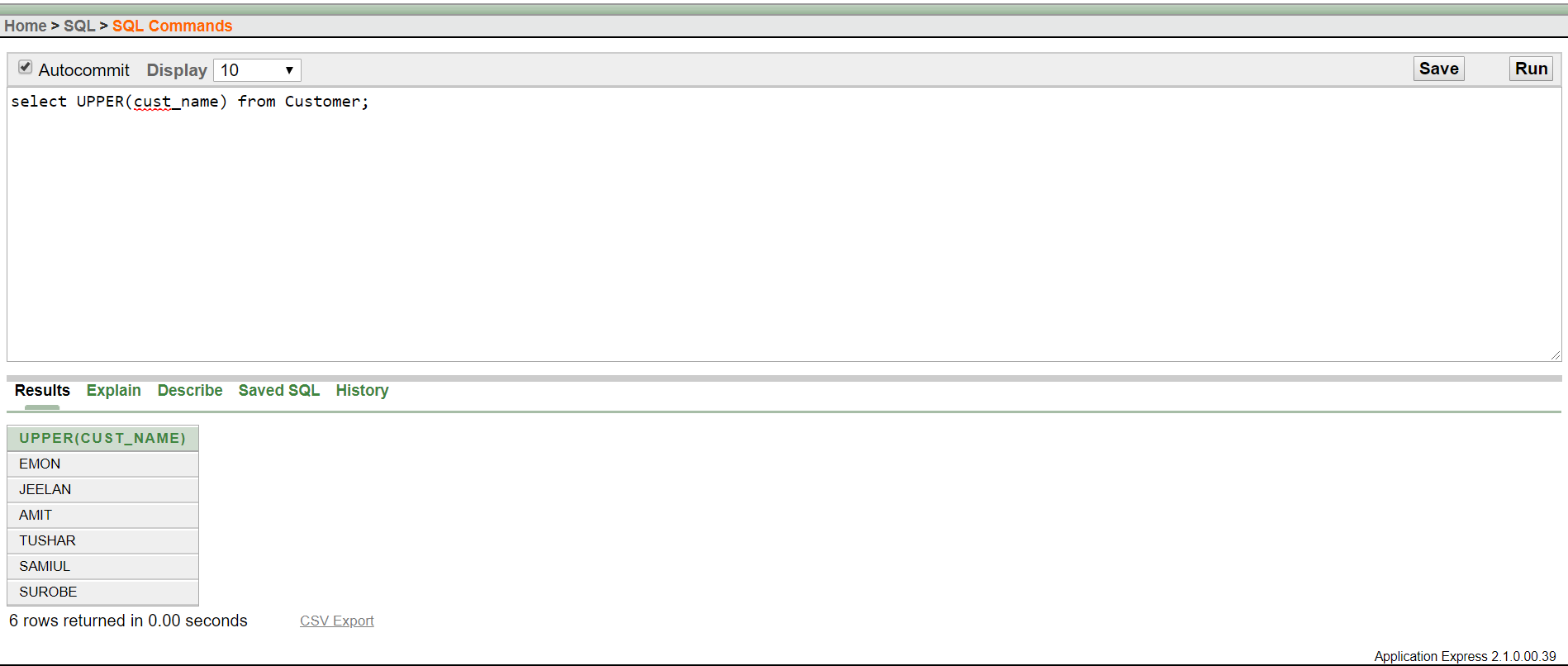
insert into Bill values(3009,2269,09,09);

**QUERY WRITING:**

**Single Row Functions:**

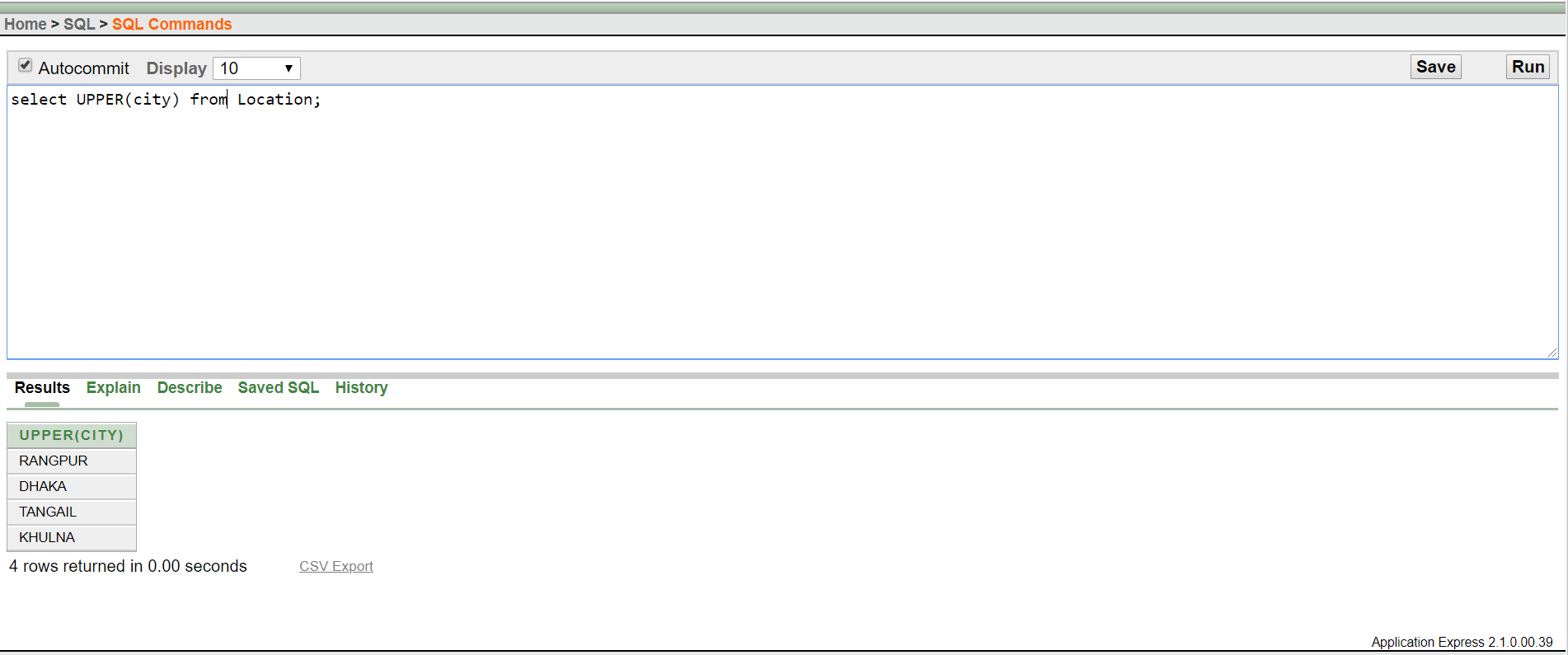
Ques: Show the name of all customer.

Ans: select UPPER(cust\_name) from Customer;



Ques: Display the place name in upper case.

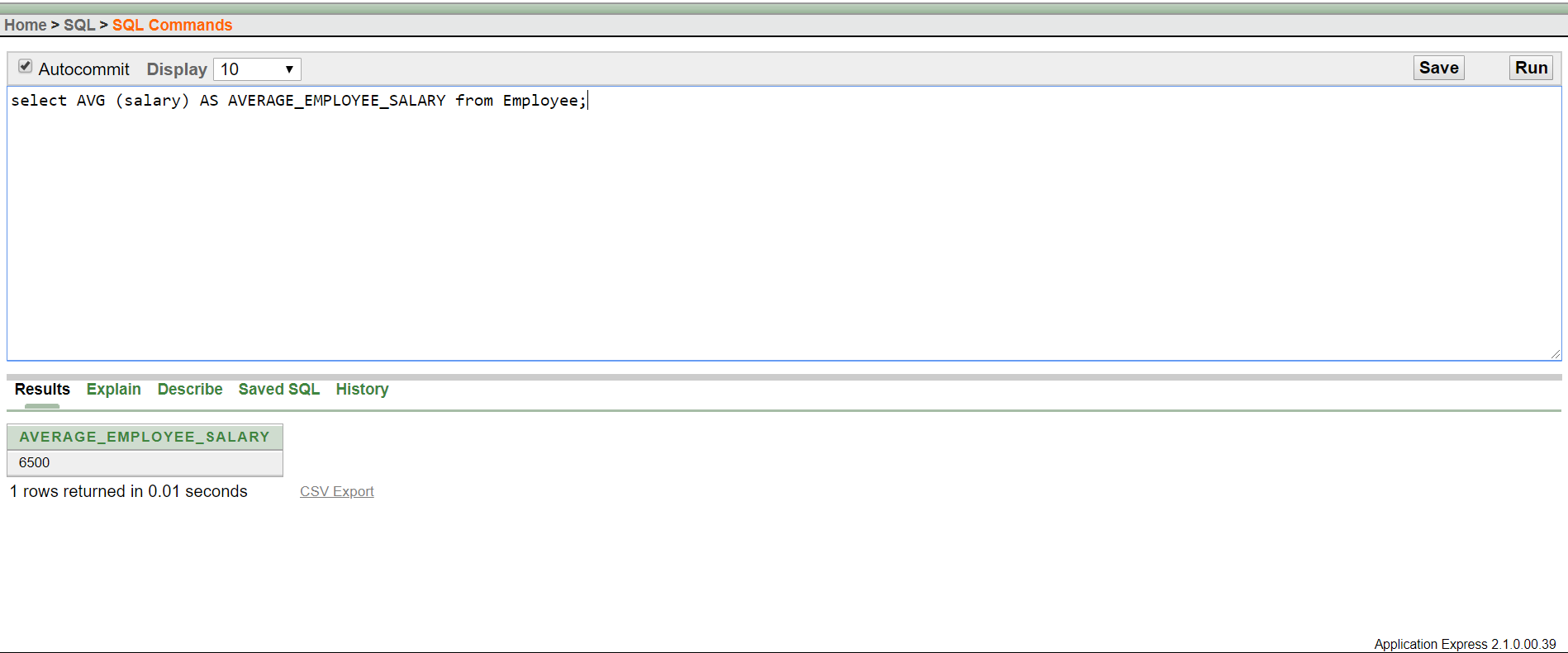
Ans: select UPPER(city) from Location;



**Group Function:**

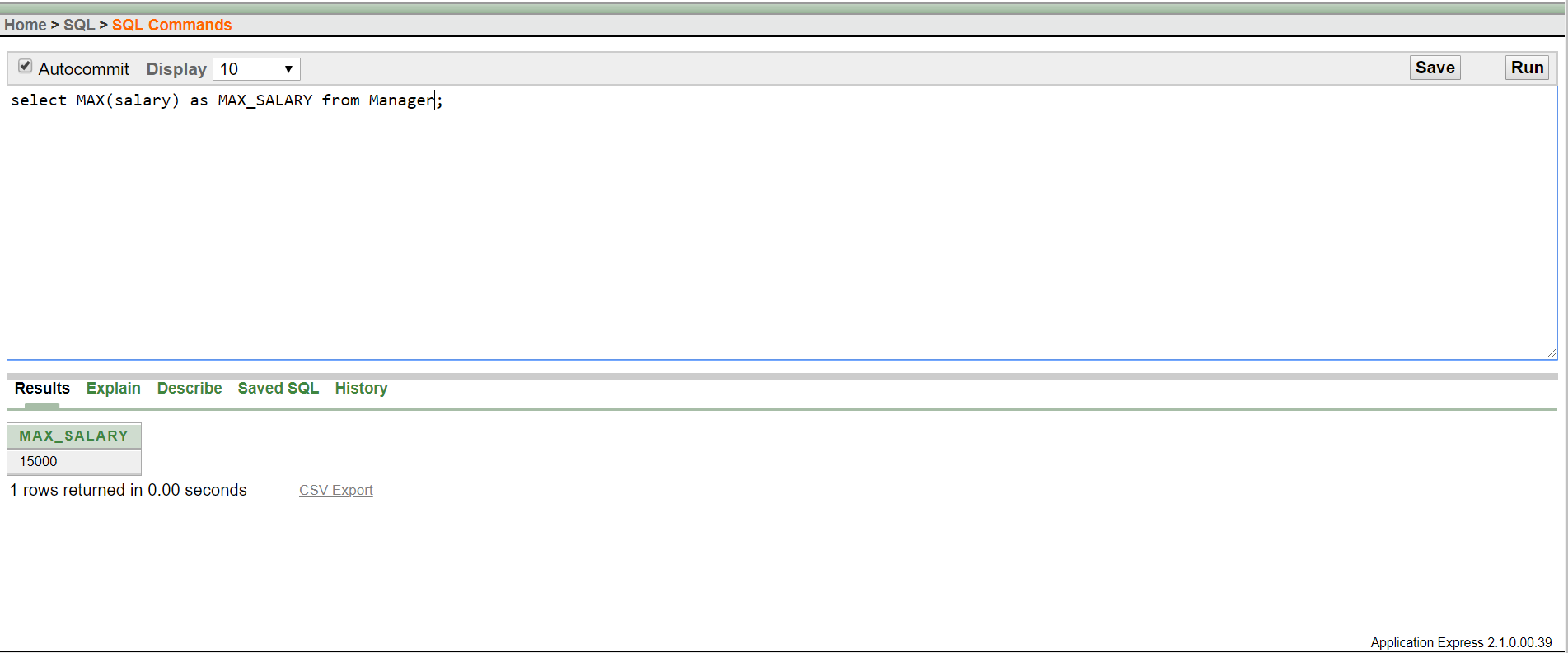
Ques: Find the average salary of the employees.

Ans: select AVG (salary) AS AVERAGE\_EMPLOYEE\_SALARY from Employee;



Ques: Find maximum salary of a manager.

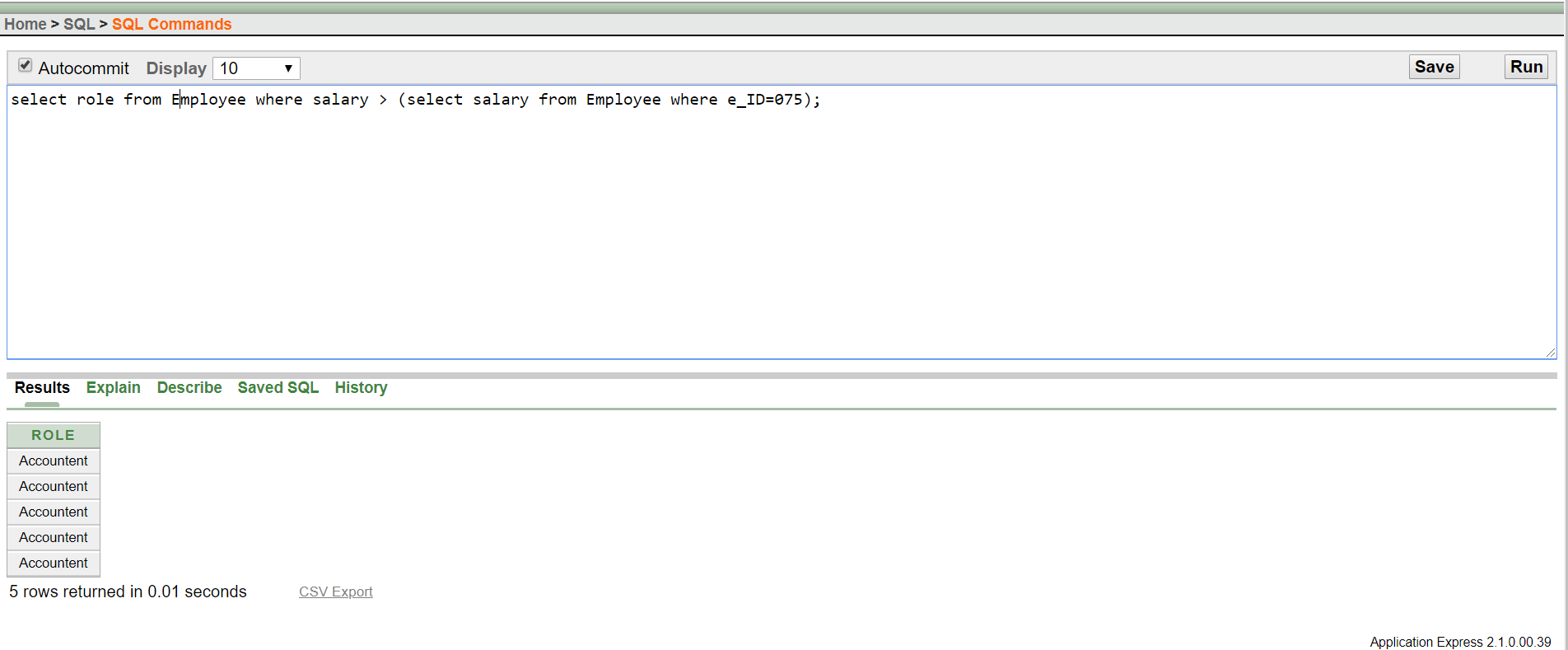
Ans: select MAX(salary) as MAX\_SALARY from Manager;



**Sub Query:**

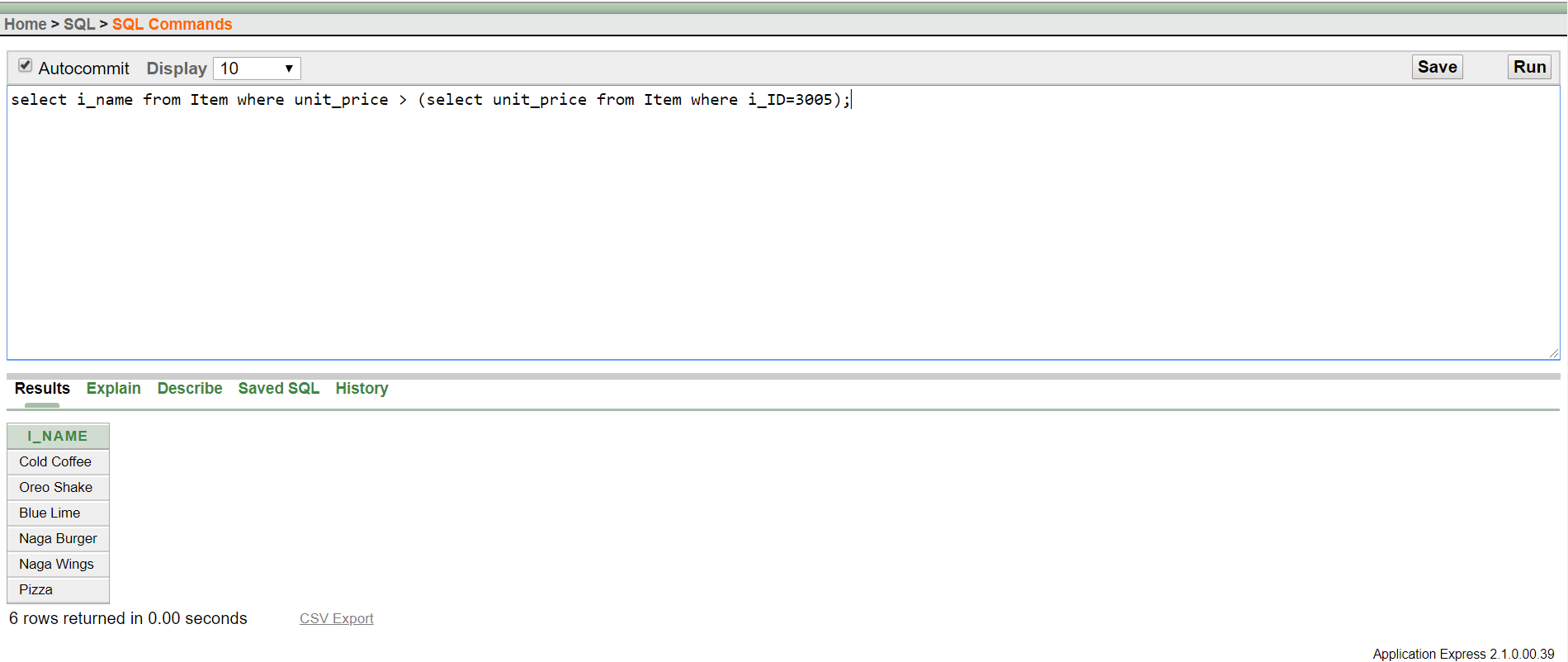
Ques: Find the role of employees who get more salary then e\_id= 075.

Ans: select role from Employee where salary > (select salary from Employee where e\_ID=075);



Ques: Find the name of items which prices is more then i\_id=3005.

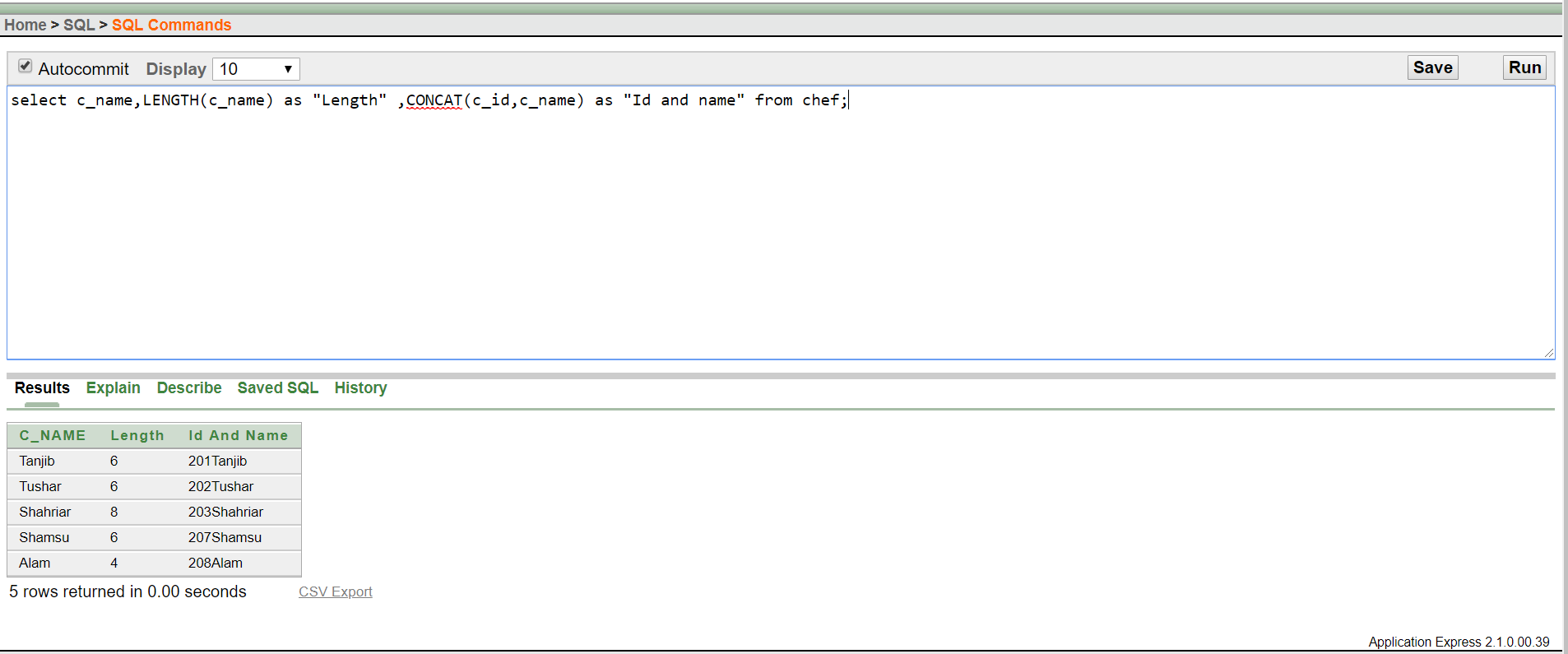
Ans: select i\_name from Item where unit\_price > (select unit\_price from Item where i\_ID=3005);



**Joining:**

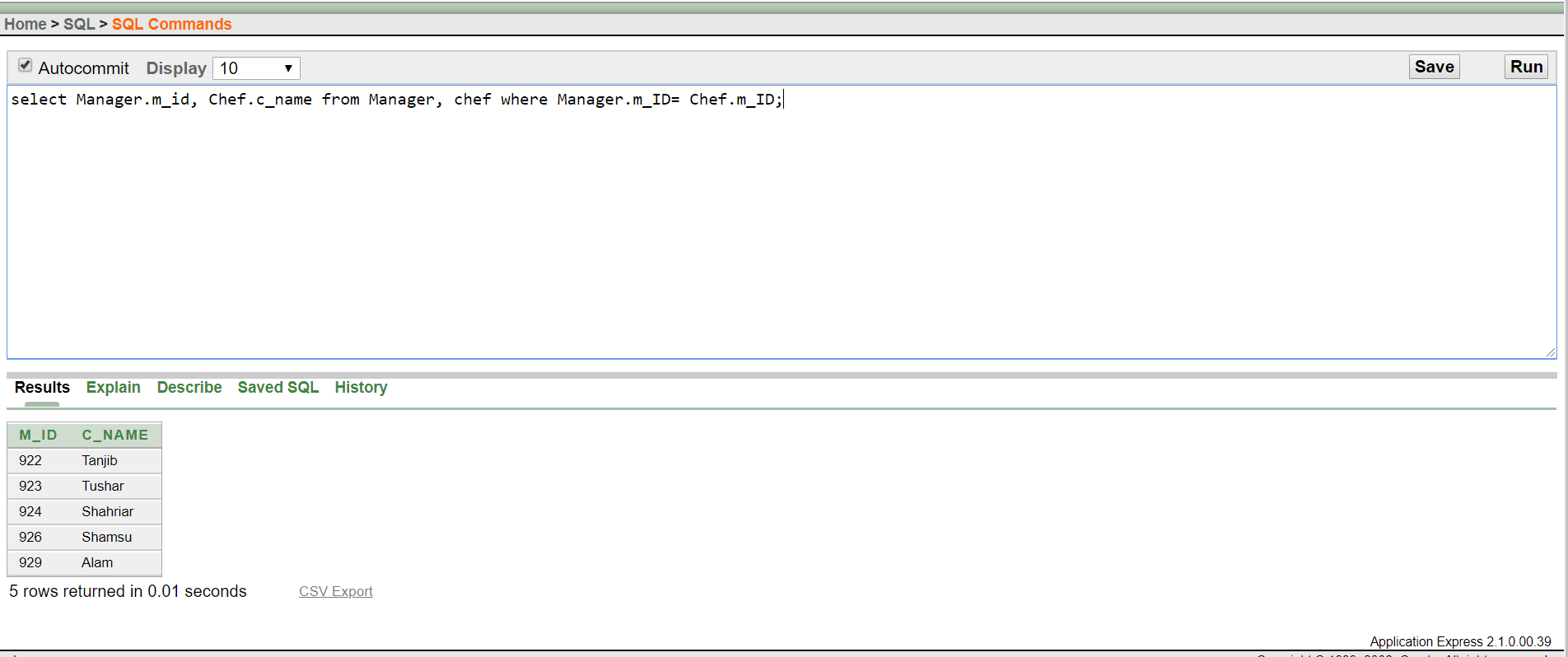
Ques: Show the length of chef name and join their id and name.

Ans: select c\_name,LENGTH(c\_name) as "Length" ,CONCAT(c\_id,c\_name) as "Id and name" from chef;



Ques: Display the manager ID and his chef name.

Ans: select Manager.m\_id, Chef.c\_name from Manager, chef where Manager.m\_ID= Chef.m\_ID;



**Conclusion :**

After lots of hard works of all our group member. We are able to create our database project “Coffee Shop Management System”. While doing the project we faced some difficulty and we overcome that. Now we are confident about our project. Hopefully in future we will be able to create a real database system for any purpose.