



**Department of Computer Science**  
**American International- University-Bangladesh**  
**INTRODUCTION TO DABASE [N], Group [4]**

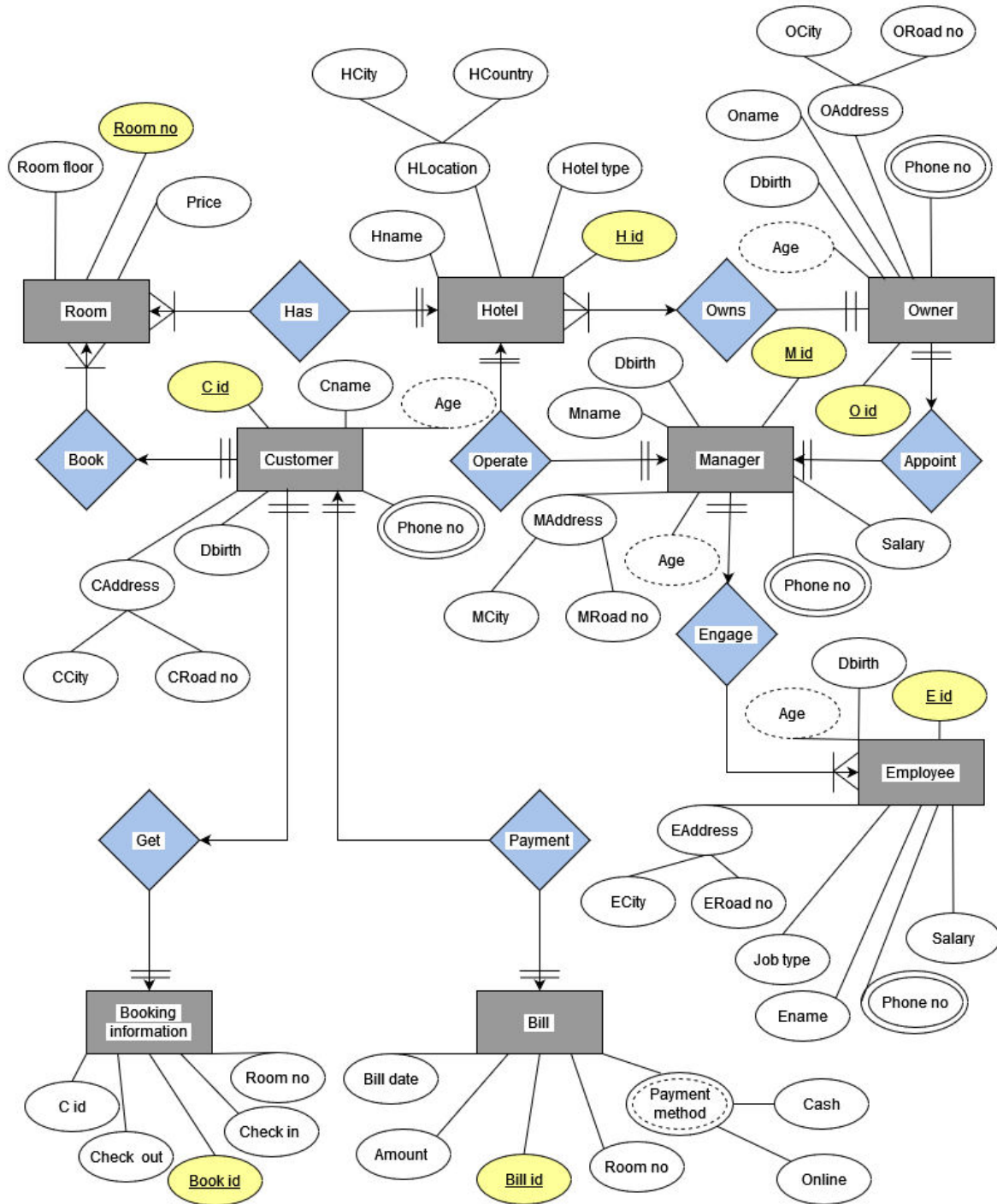
**Project Report:**  
**Hotel Management System**  
**Faculty: RIFAT IBN ALAM**

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**Case Study**

The hotel's owner has owns to create a hotel management system and it contains all information of his hotel along with hotel id, hotel type, hotel name, location. The owner of the hotel has his own id, name, address, age and phone. The owner appoints a manager to manage the hotel. The hotel manager has his own manager id, name, age, address and salary. Manager engage different kind of employees to control and manage the hotel and the employees also has their own employee id, name, phone, salary, job type, address .Hotel has many kinds of rooms and those has different size, floor, room number and price. Customers can book rooms by their own choice. Customers has many kinds of information like name, id, address ,age .Every booking of a customer has booking information like check in, check out, room number, booking id and customer id. Customers can pay bill online and cash. It is included in the payment method. Bill information like bill date, bill id and amount will also store in the management system.

# ER Diagram



## Normalization

### ***Owns::***

UNF: H id , Hname , Hotel type , HLocation , Hcity , Hcountry , O id , Oname , Dbirth(Owner) , Phone no (Owner) , OAddress , Ocity , ORoad no.

1NF:

1<sup>st</sup>: Phone no is multivalued attribute.

2NF:

1<sup>st</sup>: O id , Oname , Dbirth(Owner) , Phone no (Owner) , OAddress , Ocity , ORoad no.

2<sup>nd</sup>: H id , Hname , Hotel type , HLocation , Hcity , Hcountry , O id

3NF:

1<sup>st</sup>: O id , Oname , Dbirth(Owner) , Phone no (Owner) , OAddress\_id

2<sup>nd</sup>: OAddress\_id , Ocity , ORoad no.

3<sup>rd</sup>: H id , Hname , Hotel type , O id , HLid

4<sup>th</sup> : HLid , Hcity , Hcountry

Table 01 :

1<sup>st</sup>: O id , Oname , Dbirth(Owner) , Phone no (Owner) , OAddress\_id

2<sup>nd</sup>: OAddress\_id , Ocity , ORoad no.

3<sup>rd</sup>: H id , Hname , Hotel type , O id , HLid

4<sup>th</sup> : HLid , Hcity , Hcountry

### ***Operate ::***

UNF: H id , Hname , Hotel type , HLocation , Hcity , Hcountry , M id , Mname , Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress , Mcity , MRoad no.

1NF: Phone no is multivalued attribute.

2NF:

1<sup>st</sup>: H id , Hname , Hotel type , HLocation , Hcity , Hcountry , M id

2<sup>nd</sup>: M id , Mname , Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress , Mcity , MRoad no.

3NF:

1<sup>st</sup>: H id , Hname , Hotel type , M id , HLid

2<sup>nd</sup>: HLid , Hcity , Hcountry

3<sup>rd</sup>: M id , Mname , Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id

4<sup>th</sup> : MAddress\_id , Mcity , MRoad no.

Table 02 :

1<sup>st</sup>: H id , Hname , Hotel type , M id , HLid

2<sup>nd</sup>: HLid , Hcity , Hcountry

3<sup>rd</sup>: M id , Mname , Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id

4<sup>th</sup> : MAddress\_id , Mcity , MRoad no.

### **Engage ::**

UNF: M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress , Mcity , MRoad no, Eid ,Ename,Job\_type,phone no,salary,Dbirth(Employee),EAddress,ECity,ERoad no

1NF: Phone no is multivalues attribute.

2NF:

1<sup>st</sup>: M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress , Mcity , MRoad no.

2<sup>nd</sup>: Eid ,Ename,Job\_type,phone no,salary,Dbirth(Employee),EAddress,ECity,ERoad no, M id.

3NF:

1<sup>st</sup>: M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id

2<sup>nd</sup>: MAddress\_id , Mcity , MRoad no.

3<sup>rd</sup>: M id, Eid ,Ename,Job\_type,phone no,salary,Dbirth(Employee),EAddress\_id

4<sup>rd</sup> : EAddress\_id,ECity,ERoad no.

Table 03:

1<sup>st</sup>: M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id

2<sup>nd</sup>: MAddress\_id , Mcity , MRoad no.

3<sup>rd</sup>: M id, Eid ,Ename,Job\_type,phone no,salary,Dbirth(Employee),EAddress\_id

4<sup>rd</sup> : EAddress\_id,ECity,ERoad no.

### **Appoint ::**

UNF: O id , Oname , Dbirth(Owner) , Phone no (Owner) , OAddress , Ocity , ORoad no, M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress , Mcity , MRoad no.

1NF: Phone no is multivalues attribute.

2NF:

1<sup>st</sup>: O id , Oname , Dbirth(Owner) , Phone no (Owner) , OAddress , Ocity , ORoad no, M id

2<sup>nd</sup>: M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress , Mcity , MRoad no, O id.

3NF:

1<sup>st</sup>: O id , Oname , Dbirth(Owner) , Phone no (Owner) , M id, OAddress\_id

2<sup>nd</sup>: OAddress\_id , Ocity , ORoad no

3<sup>rd</sup> : M id, Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id

4<sup>th</sup> : MAddress\_id , Mcity , MRoad no, O id.

Table 04:

1<sup>st</sup>: O id , Oname , Dbirth(Owner) , Phone no (Owner) , M id, OAddress\_id

2<sup>nd</sup>: OAddress\_id , Ocity , ORoad no  
3<sup>rd</sup>: M id, Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) ,MAddress\_id  
4<sup>th</sup> : MAddress\_id , Mcity , MRoad no, O id.

### **Has ::**

UNF: H id , Hname , Hotel type , HLocation , Hcity , Hcountry ,Room floor,Room no,price.  
1NF: No multivalues attribute.

2NF:

1<sup>st</sup>: H id , Hname , Hotel type , HLocation , Hcity , Hcountry.

2<sup>nd</sup>: H id , Room floor,Room no,price.

3NF:

1<sup>st</sup>: H id , Hname , Hotel type ,HLid

2<sup>nd</sup>: HLid , Hcity , Hcountry.

3<sup>rd</sup>: H id , Room floor,Room no,price.

### Table 05:

1<sup>st</sup>: H id , Hname , Hotel type ,HLid

2<sup>nd</sup>: HLid , Hcity , Hcountry.

3<sup>rd</sup>: H id , Room floor,Room no,price.

### **Book ::**

UNF: Room floor,Room no,price ,Cid,DBirth(Customer),Cname,CAddress,Ccity,CRoad No,Phone No

1NF: Phone no is multivalues attribute.

2NF:

1<sup>st</sup>: Room floor,Room no,price ,Cid

2<sup>nd</sup>: Cid, DBirth(Customer),Cname , CAddress ,Phone No

3<sup>rd</sup> : CAddress,Ccity,CRoad No

3NF: No transitive dependency.

### Table 06:

1<sup>st</sup>: Room floor,Room no,price ,Cid

2<sup>nd</sup>: Cid, DBirth(Customer),Cname , CAddress\_id ,Phone No

3<sup>rd</sup> : CAddress\_id,Ccity,CRoad No

### **Payment ::**

UNF: Cid, DBirth(Customer), Cname, CAddress, Ccity, CRoad No, Phone No, Bill id ,Amount , Room no, Payment method, Cash, Online.

1NF: Phone no is multivalues attribute.

2NF:

1<sup>st</sup>: Bill id ,Amount , Room no, Payment method, Cash, Online.

2<sup>nd</sup>: Bill id, Cid, DBirth(Customer), Cname, CAddress\_id,Phone No

3<sup>rd</sup> : CAddress\_id, Ccity, CRoad No

3NF: No transitive dependency.

Table 7

1<sup>st</sup>: Bill id ,Amount , Room no, Payment method, Cash, Online.

2<sup>nd</sup>: Bill id, Cid, DBirth(Customer), Cname, CAddress\_id,Phone No

3<sup>rd</sup> : CAddress\_id, Ccity, CRoad No

**Get ::**

UNF: Cid, DBirth(Customer), Cname, CAddress, Ccity, CRoad No, Phone No,Cid, Book id,  
Check out , Check in, Room no.

1NF: Phone no is multivalues attribute.

2NF:

1<sup>st</sup>:Cid, DBirth(Customer), Cname, CAddress\_id, Phone No, Book id

2<sup>nd</sup> : CAddress\_id, Ccity, CRoad No

3<sup>rd</sup> : Book id,\_Check out , Check in, Room no.

3NF: No transitive dependency.

Table 8:

1<sup>st</sup>:Cid, DBirth(Customer), Cname, CAddress\_id, Phone No, Book id

2<sup>nd</sup> : CAddress\_id, Ccity, CRoad No

3<sup>rd</sup> : Book id,\_Check out , Check in, Room no.

## Total Table

1. O id , Oname , Dbirth(Owner) , Phone no (Owner) , OAddress\_id

2. OAddress\_id , Ocity , ORoad no.

3. H id , Hname , Hotel type , O id , HLid//

4. HLid ,Hcity , Hcountry //

5. H id , Hname , Hotel type , M id , HLid//

6. HLid , Hcity , Hcountry

7. M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id//

8. MAddress\_id , Mcity , MRoad no. //

9. M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id

10. MAddress\_id , Mcity , MRoad no.

11. M id, Eid ,Ename,Job\_type,phone no,salary,Dbirth(Employee),EAddress\_id//

12. EAddress\_id,Ecity,ERoad no.//

13. O id , Oname , Dbirth(Owner) , Phone no (Owner) , M id, OAddress\_id//

14. OAddress\_id , Ocity , ORoad no //

15. M id, Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) ,MAddress\_id

16. MAddress\_id , Mcity , MRoad no,O id.

17. H id , Hname , Hotel type ,HLid

18. HLid , Hcity , Hcountry.

- 19 . H id , Room floor,Room no,price.//
- 20 . Room floor,Room no,price ,Cid//
- 21 . Cid, DBirth(Customer),Cname , CAddress\_id ,Phone No//
- 22 . CAddress\_id,Ccity,CRoad No//
- 23 . Bill id ,Amount , Room no, Payment method, Cash, Online.//
- 24 .Bill id, Cid, DBirth(Customer), Cname, CAddress\_id,Phone No
- 25 . CAddress\_id, Ccity, CRoad No
- 26 . Cid, DBirth(Customer), Cname, CAddress\_id, Phone No, Book id//
- 27 . CAddress\_id, Ccity, CRoad No
- 28 .Book id ,\_Check out , Check in, Room no.//

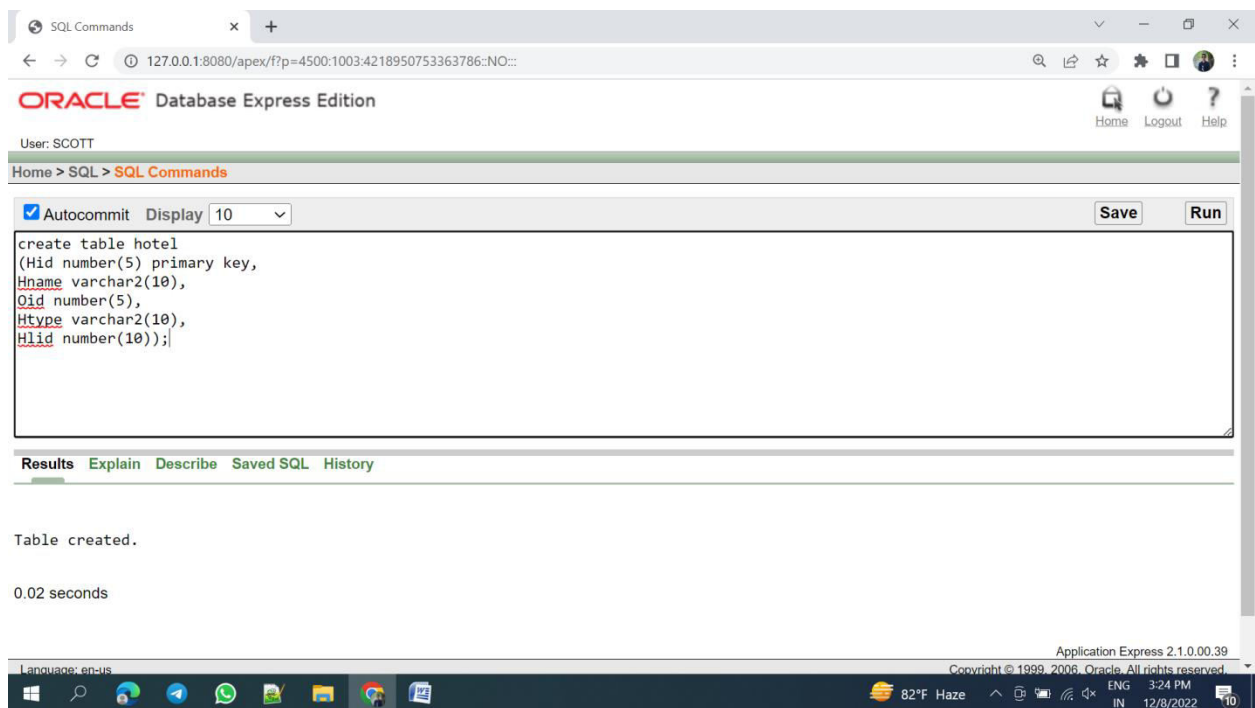
### Final Table

3. H id , Hname , Hotel type , O id , HLid
- 4 . HLid ,Hcity , Hcountry
- 5 . H id , Hname , Hotel type , M id , HLid
- 7 . M id , Mname ,Salary(manager) , Dbirth(Manager) , Phone no (Manager) , MAddress\_id
- 8 . MAddress\_id , Mcity , MRoad no.
- 11 .M id, Eid ,Ename,Job\_type,phone no,salary,Dbirth(Employee),EAddress\_id
- 12 . EAddress\_id,Ecity,ERoad no.
- 13 . O id , Oname , Dbirth(Owner) , Phone no (Owner) , M id, OAddress\_id
- 14 . OAddress\_id , Ocity , ORoad no
- 19 . H id , Room floor,Room no,price.
- 20 . Room floor,Room no,price ,Cid
- 21 . Cid, DBirth(Customer),Cname , CAddress\_id ,Phone No
- 22 . CAddress\_id,Ccity,CRoad No
- 23 . Bill id ,Amount , Room no, Payment method, Cash, Online.
- 26 . Cid, DBirth(Customer), Cname, CAddress\_id, Phone No, Book id
- 28 .Book id ,\_Check out , Check in, Room no.

## Table Creation

### 1 .Hotel Table:

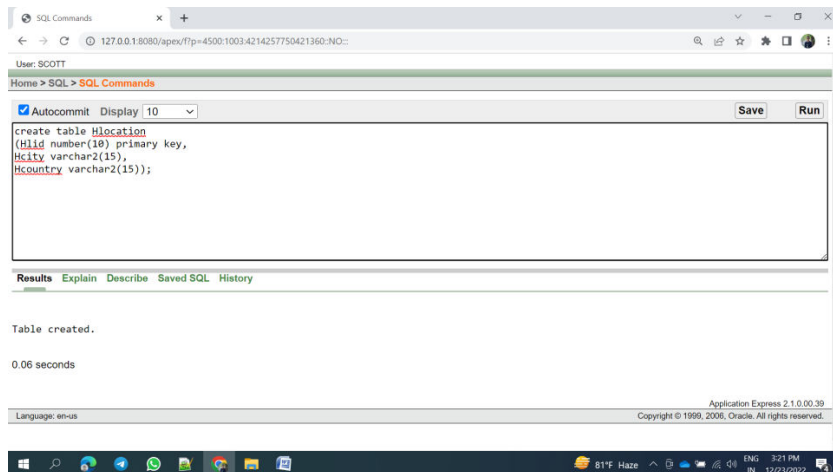
create table hotel (Hid number(5) primary key, Hname varchar2(10), Oid number(5), Htype varchar2(10), Hlid number(10));



### 2. Hotel Location Table:

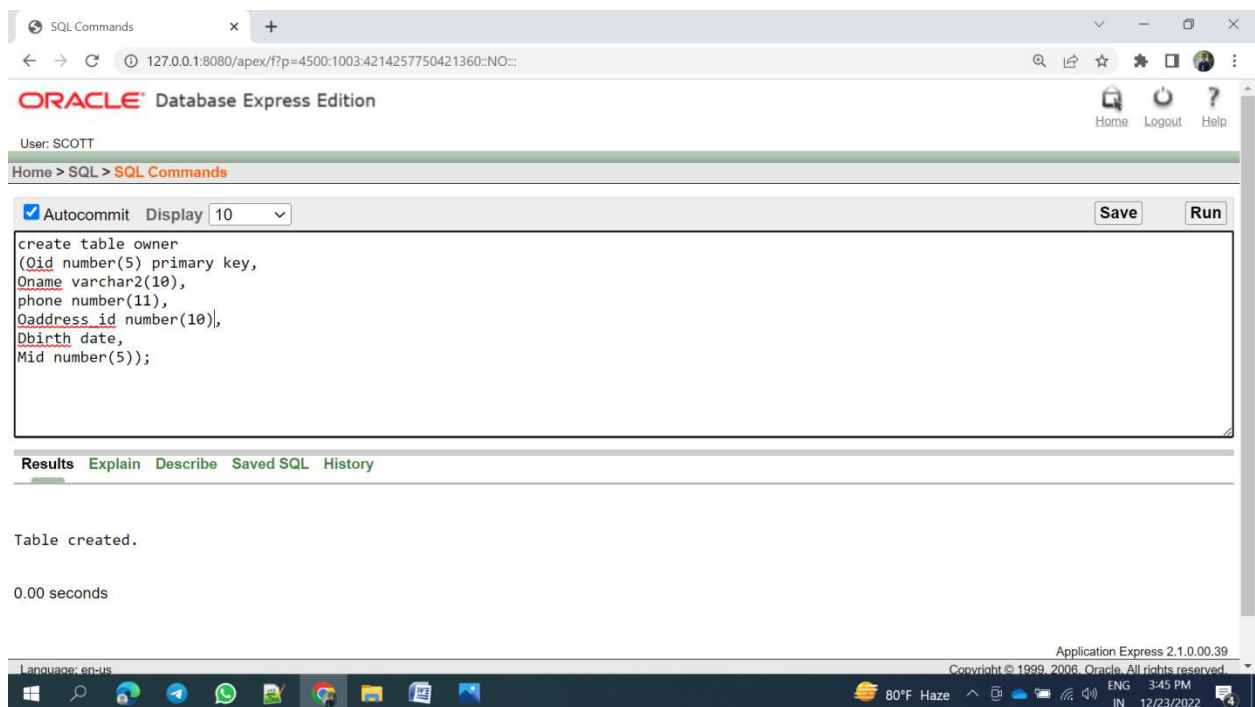
create table Hlocation (Hlid number(10) primary key, Hcity varchar2(15), Hcountry varchar2(15));





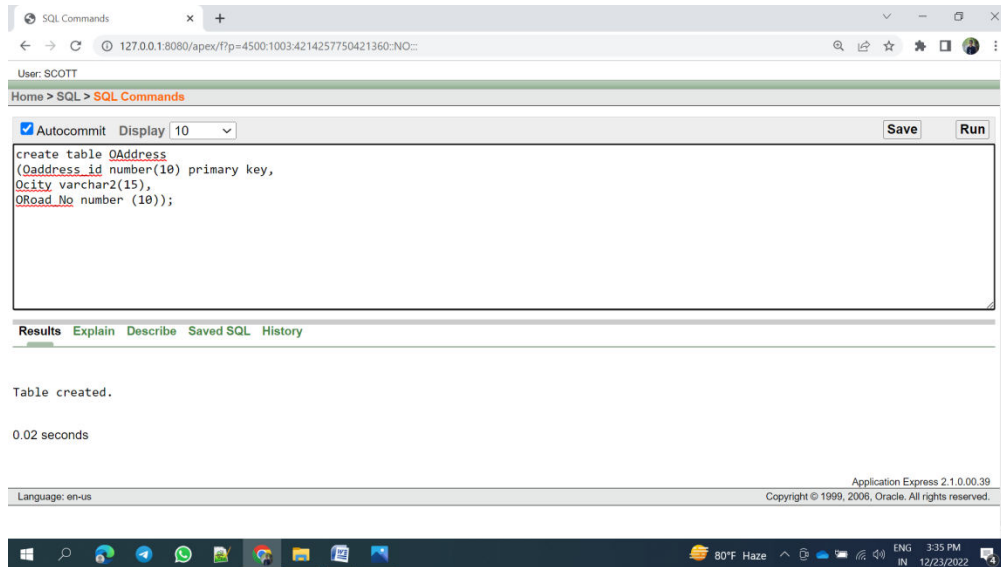
### 3. Owner Table.

create table owner (Oid number(5) primary key, Oname varchar2(10), phone number(11), Oaddress\_id number(10) ,Dbirth date, Mid number(5));



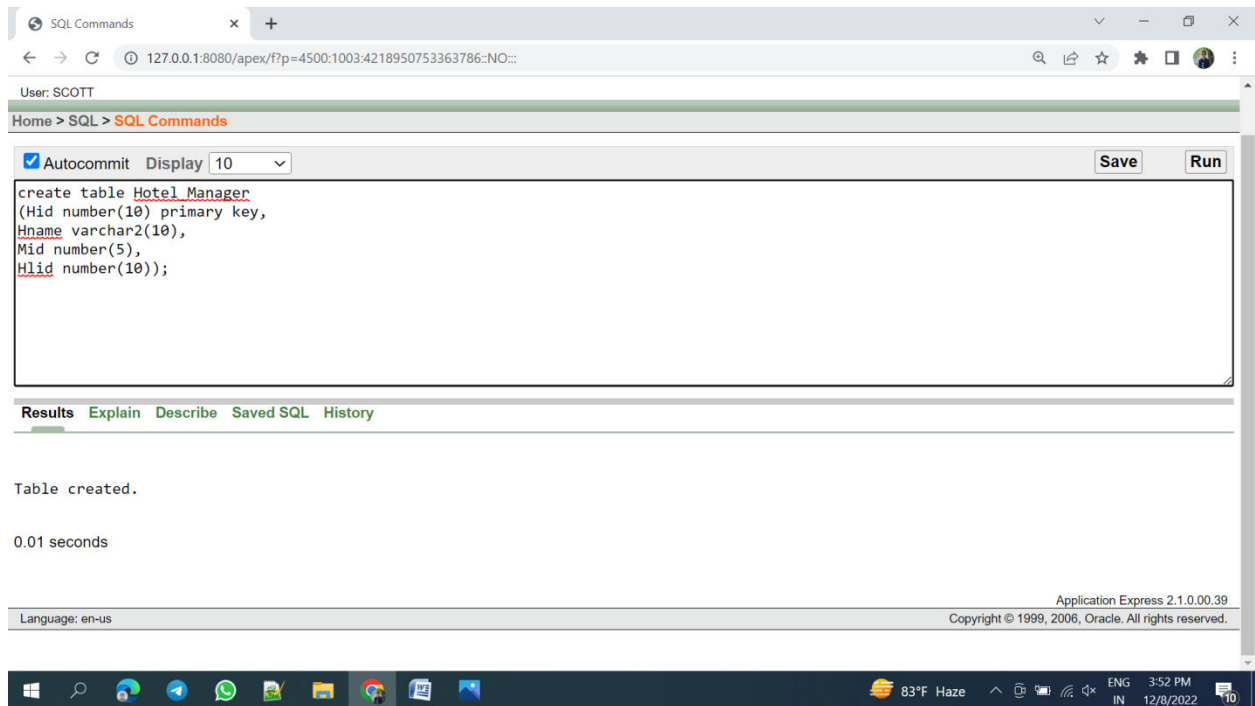
### 4. Owner address table

create table OAddress (Oaddress\_id number(10) primary key, Ocity varchar2(15), ORoad\_no Number(15));



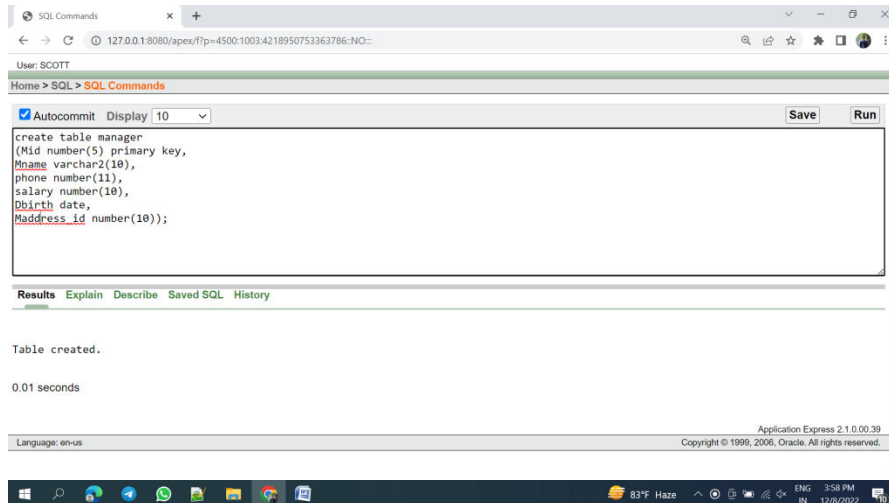
## 5. Hotel Manager Table

create table Hotel\_Manager (Hid number(10) primary key, Hname varchar2(10),Mid number(5),Hlid number(10));



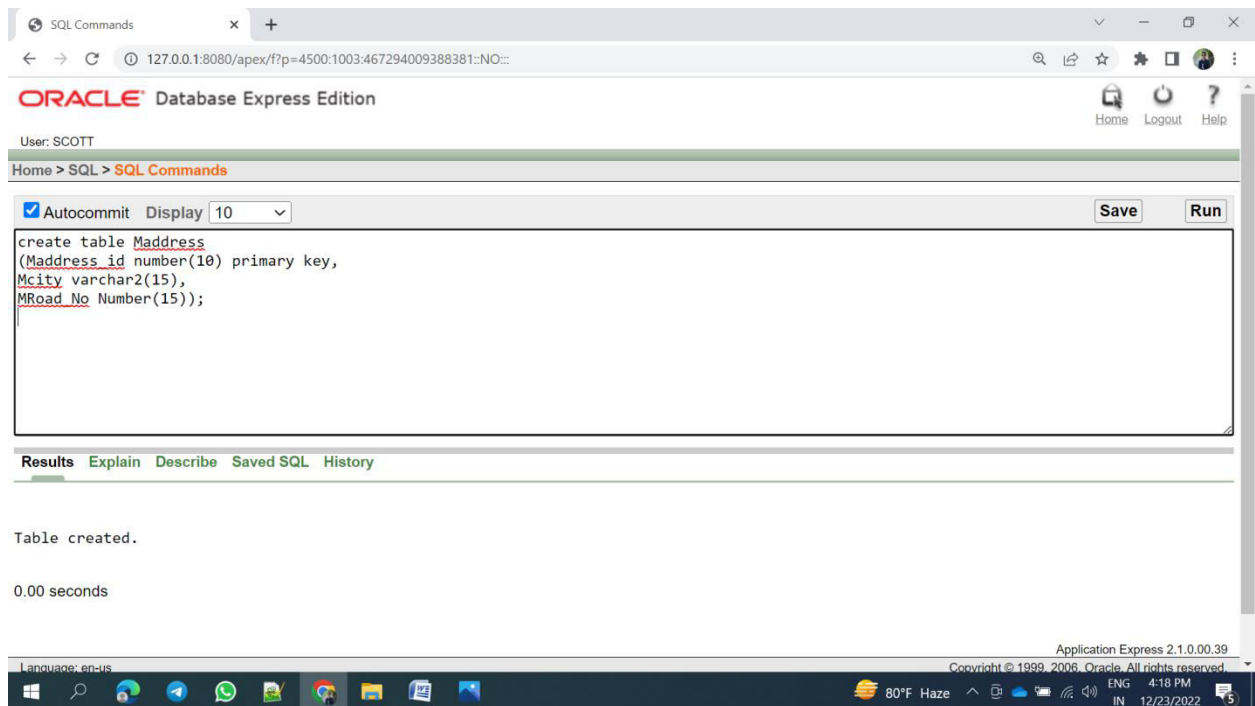
## 6 . Manager Table

create table manager (Mid number(5) primary key, Mname varchar2(10), phone number(11), salary number(10), Dbirth date,Maddress\_id number(10));



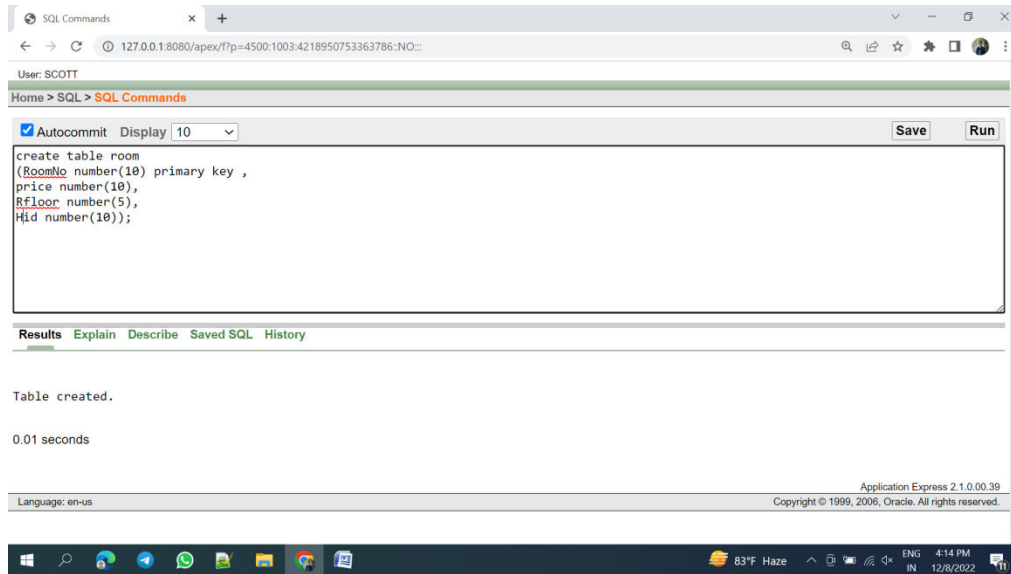
## 7. Manager address Table

create table Maddress (Maddress\_id number(10) primary key, Mcity varchar2(15), MRoad\_No Number(15));



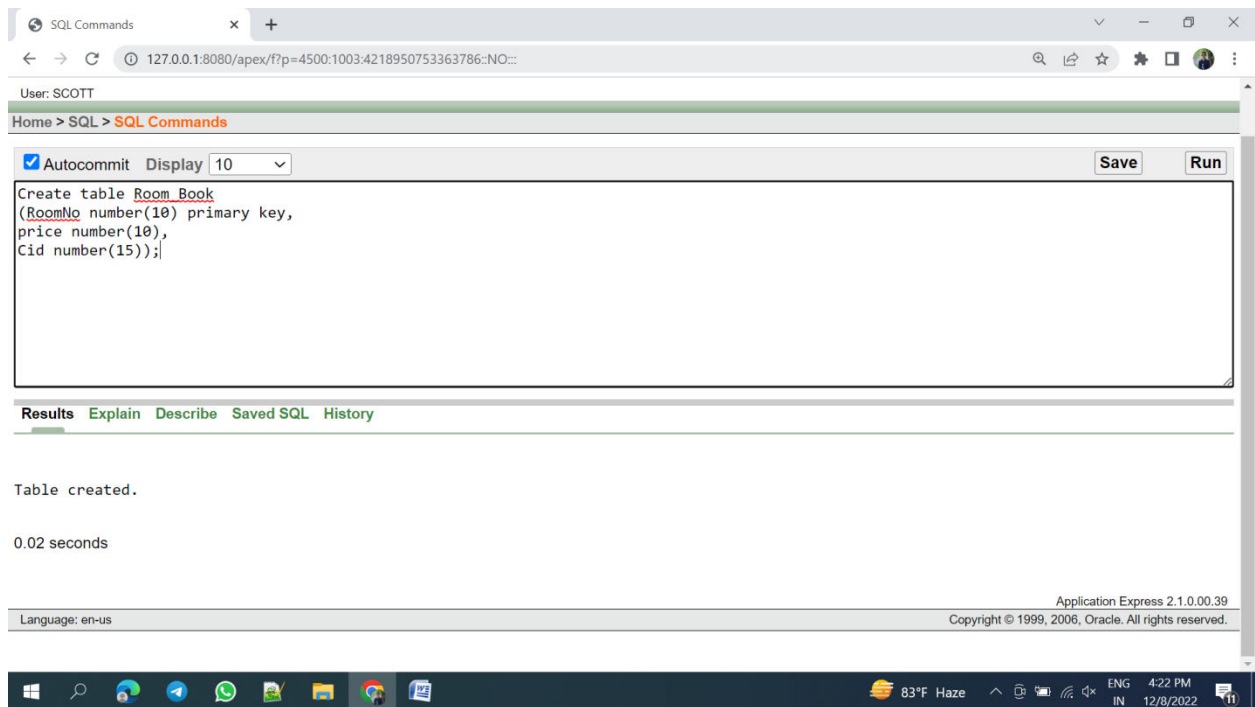
## 8. Room Table

create table room (RoomNo number(10) primary key , price number(10), Rfloor number(5),Hid number(10));



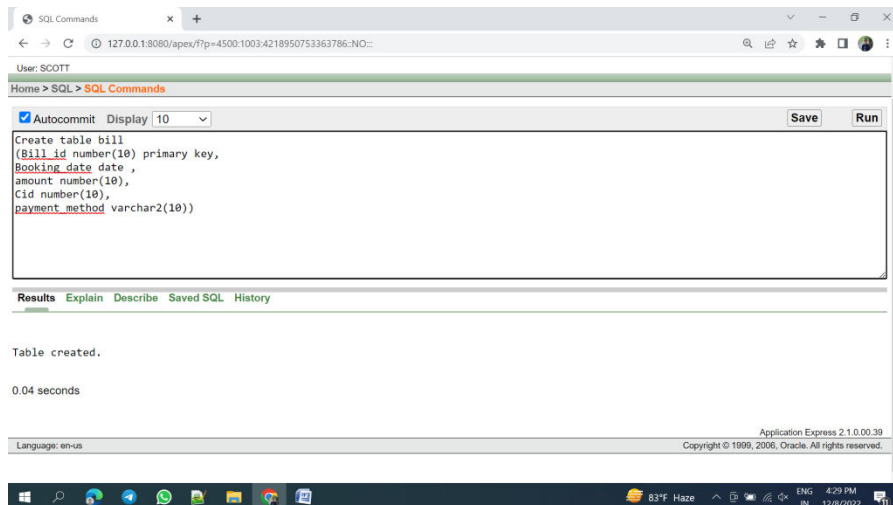
## 9. Room\_Book Table

Create table Room\_Book (RoomNo number(10) primary key, price number(10), Cid number(15));



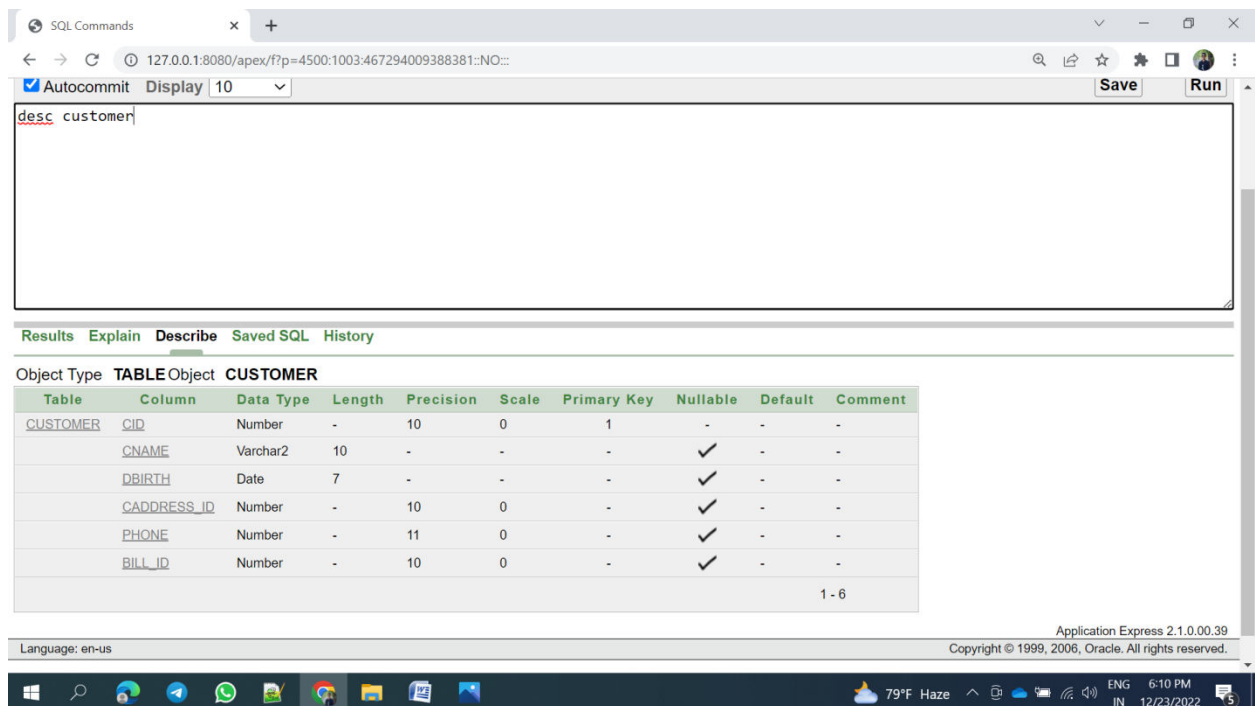
## 10. Bill Table

Create table bill (Bill\_id number(10) primary key, Booking\_date date , amount number(10), Cid number(10), payment\_method varchar2(10))



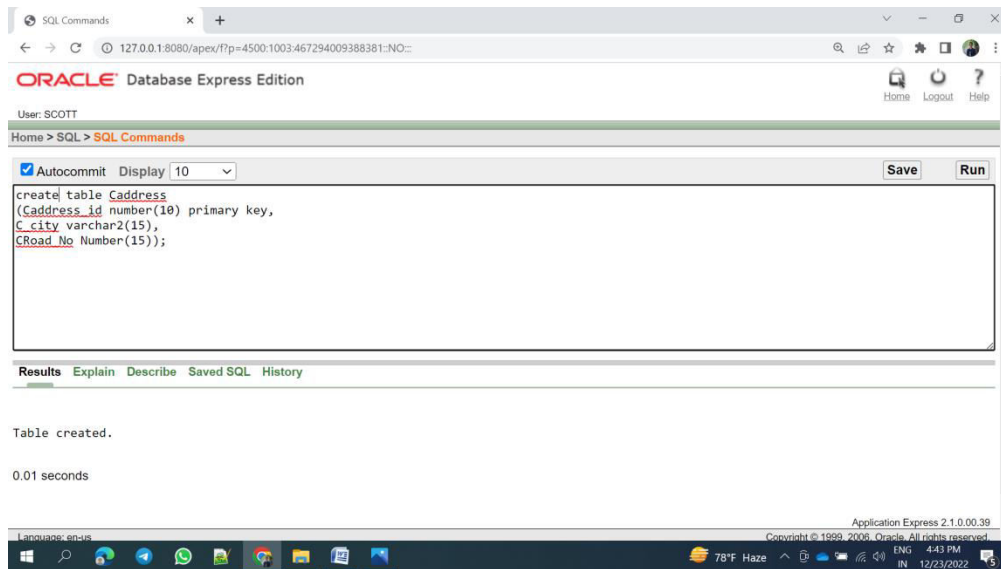
## 11. Customer table

Create table customer (Cid number(10) primary key, Cname varchar2(10), Dbirth date, Caddress\_id number(10), phone number(11), Bill\_id number(10));



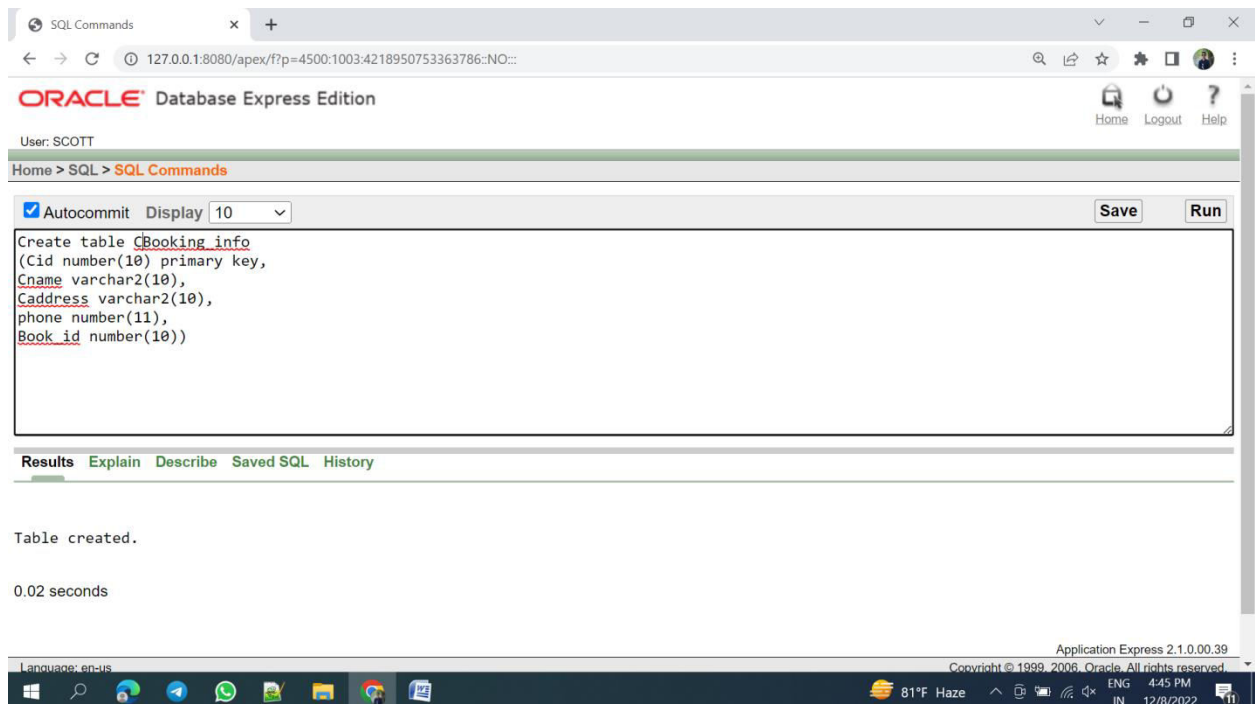
## 12. Customer address Table

create table Address (Caddress\_id number(10) primary key, C\_city varchar2(15), CRoad\_No Number(15));



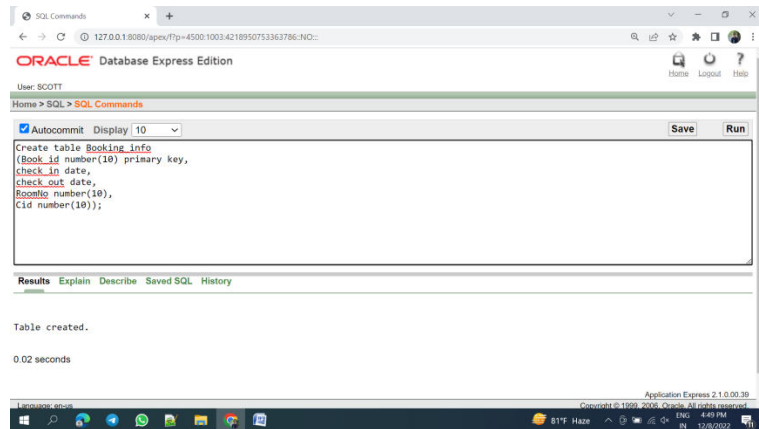
### 13. CBooking\_info Table

Create table CBooking\_info (Cid number(10) primary key, Cname varchar2(10), Caddress varchar2(10), phone number(11), Book\_id number(10))



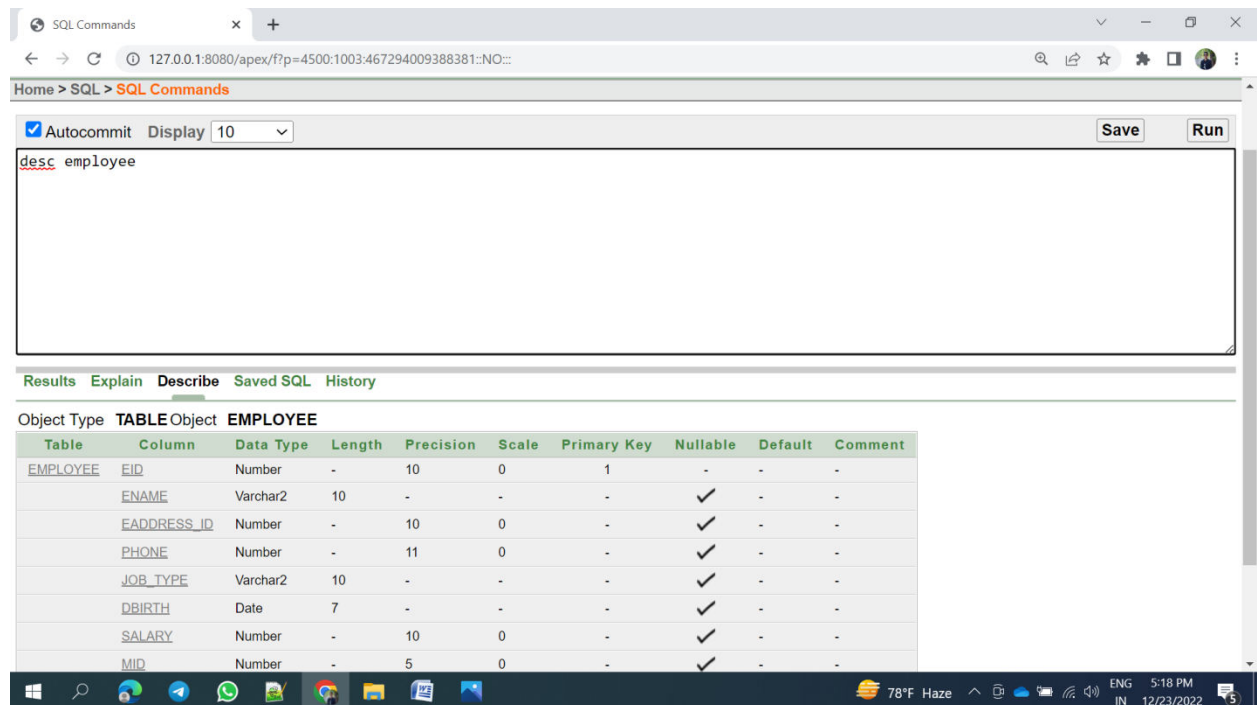
## 14. Booking information Table

Create table Booking\_info (Book\_id number(10) primary key, check\_in date, check\_out date, RoomNo number(10), Cid number(10));



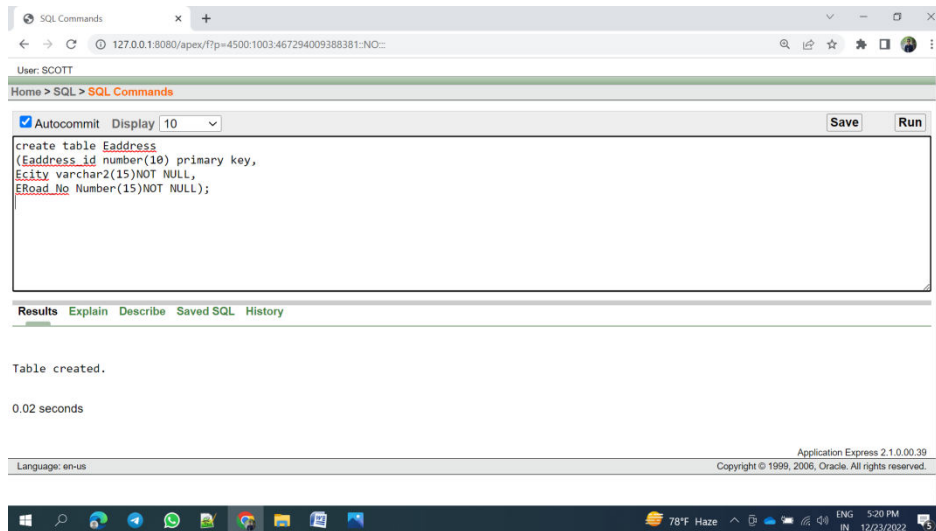
## 15. Employee Table

Create table employee (Eid number(10) primary key, Ename varchar2(10), Eaddress\_id number(10), phone number(11), job\_type varchar2(10), Dbirth date, salary number(10), Mid number(5));

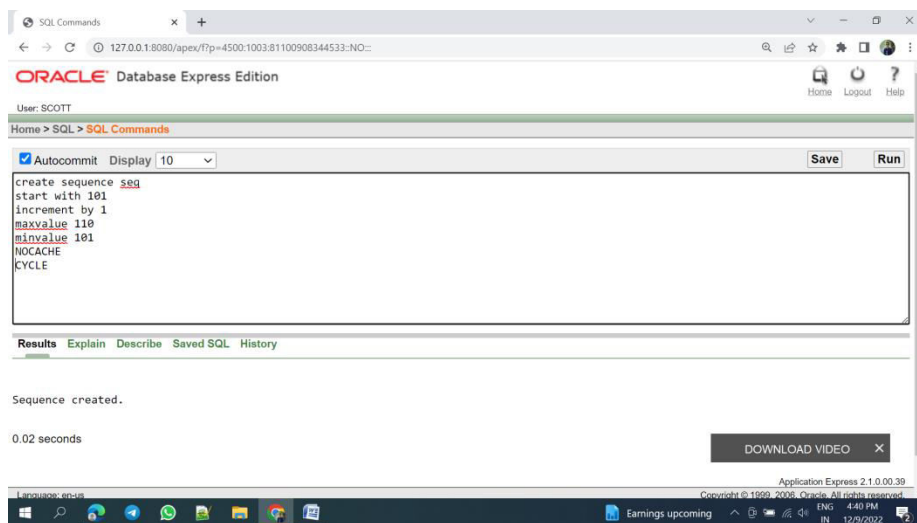


## 16. Employee address Table (WITH CONSTRAINT)

create table Eaddress (Eaddress\_id number(10) primary key, Ecity varchar2(15)NOT NULL, ERoad\_No Number(15)NOT NULL);



## Sequence Create





# Data Insertion

## 1. Hotel

INSERT INTO HOTEL VALUES (102,'HILTON',2,'4\_STAR',1210),

INSERT INTO HOTEL VALUES(103,'LE\_MERIDIEN',3,'5\_STAR',1410),

INSERT INTO HOTEL VALUES(104,'SERATON',4,'5\_STAR',1156),

INSERT INTO HOTEL VALUES(105,'RADISSION',5,'4\_STAR',1199);

The screenshot shows the SQL Developer interface. The top pane displays the SQL command: `SELECT * FROM HOTEL`. The bottom pane shows the results of the query, which are 5 rows of data. The results are displayed in a table with the following columns: **HID**, **HNAME**, **OID**, **HTYPE**, and **HLID**. The data rows are:

HID	HNAME	OID	HTYPE	HLID
101	GREENVIEW	1	3_STAR	1110
102	RHINESTONE	2	4_STAR	1116
103	MERIDIEN	3	5_STAR	1410
104	SERATON	4	5_STAR	1156
105	RADISSION	5	4_STAR	1199

Below the table, it states "5 rows returned in 0.00 seconds" and provides a "CSV Export" link. The bottom status bar shows "Language: en-us" and "Copyright © 1996, 2006, Oracle. All rights reserved."

## 2. Hotel location

The screenshot shows the SQL Developer interface. The top pane displays the SQL command: `INSERT INTO Hlocation values (1110,'Dhaka','Bangladesh');  
INSERT INTO Hlocation values (1116,'Sylhet','Bangladesh');  
INSERT INTO Hlocation values (1150,'Chattogram','Bangladesh');  
INSERT INTO Hlocation values (1410,'Khulna','Bangladesh');  
INSERT INTO Hlocation values (1199,'Cumilla','Bangladesh');  
select*  
from Hlocation`. The bottom pane shows the results of the query, which are 5 rows of data. The results are displayed in a table with the following columns: **HLID**, **HCITY**, and **HCOUNTRY**. The data rows are:

HLID	HCITY	HCOUNTRY
1110	Dhaka	Bangladesh
1116	Sylhet	Bangladesh
1150	Chattogram	Bangladesh
1410	Khulna	Bangladesh
1199	Cumilla	Bangladesh

Below the table, it states "5 rows returned in 0.02 seconds" and provides a "CSV Export" link. The bottom status bar shows "Language: en-us" and "Application Express 2.1.0.00.39 Copyright © 1996, 2006, Oracle. All rights reserved."

### 3. Owner

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following SQL script:

```
INSERT INTO owner VALUES (1,'UTSHO',01719634629,100,'22-NOV-1998',10);
INSERT INTO owner VALUES (2,'BORNO',0171678676,101,'22-MAY-1999',11);
INSERT INTO owner VALUES (3,'PRANTO',0171456762,102,'22-JUN-1997',12);
INSERT INTO owner VALUES (4,'ORI',01996346,103,'22-JULY-1999',13);
INSERT INTO owner VALUES (5,'SAFWAN',01719454629,104,'22-MARCH-1996',14);
select*
from owner;
```

The Results tab shows the following data:

OID	ONAME	PHONE	OADDRESS_ID	DBIRTH	MID
1	UTSHO	1719634629	100	22-NOV-98	10
2	BORNO	171678676	101	22-MAY-99	11
3	PRANTO	171456762	102	22-JUN-97	12
4	ORI	1996346	103	22-JUL-99	13
5	SAFWAN	1719454629	104	22-MAR-96	14

5 rows returned in 0.02 seconds

### 4. Owner address

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following SQL script:

```
INSERT INTO OAddress values (100,'Dhaka',15);
INSERT INTO OAddress values (101,'Sylhet',16);
INSERT INTO OAddress values (102,'Chattogram',17);
INSERT INTO OAddress values (103,'Khulna',18);
INSERT INTO OAddress values (104,'Cumilla',19);
select*
from OAddress;
```

The Results tab shows the following data:

OADDRESS_ID	OCITY	OROAD_NO
100	Dhaka	15
101	Sylhet	16
102	Chattogram	17
103	Khulna	18
104	Cumilla	19

5 rows returned in 0.00 seconds

## 5. Hotel manager

SQL Commands window in Oracle Database Express Edition. The user is SCOTT. The SQL Commands tab is active, showing the following SQL statements:

```
INSERT INTO Hotel_manager values (101,'GREENVIEW',10,1110);
INSERT INTO Hotel_manager values (102,'RHINESTONE',11,1116);
INSERT INTO Hotel_manager values (103,'MERIDIEN',12,1150);
INSERT INTO Hotel_manager values (104,'SERATON',13,1410);
INSERT INTO Hotel_manager values (105,'RADISSION',14,1199);
select *
from Hotel_Manager
```

The Results tab shows the following data:

HID	HNAME	MID	HLID
101	GREENVIEW	10	1110
102	RHINESTONE	11	1116
103	MERIDIEN	12	1150
104	SERATON	13	1410
105	RADISSION	14	1199

5 rows returned in 0.00 seconds. A CSV Export button is visible.

## 6. Manager

SQL Commands window in Oracle Database Express Edition. The user is SCOTT. The SQL Commands tab is active, showing the following SQL statements:

```
INSERT INTO manager values (10,'Rahim',123456789,20000,'12-jan-1992',20);
INSERT INTO manager values (11,'karim',12340945,18000,'14-jun-1991',21);
INSERT INTO manager values (12,'jamim',12356389,22000,'12-may-1990',22);
INSERT INTO manager values (13,'rofiq',0134789,25000,'12-nov-1992',23);
INSERT INTO manager values (14,'shofiq',09946789,30000,'24-oct-1996',24);
select *
from manager
```

The Results tab shows the following data:

MID	MNAME	PHONE	SALARY	DBIRTH	MADDRESS_ID
10	Rahim	123456789	20000	12-JAN-92	20
11	karim	12340945	18000	14-JUN-91	21
12	jamim	12356389	22000	12-MAY-90	22
13	rofiq	134789	25000	12-NOV-92	23
14	shofiq	9946789	30000	24-OCT-96	24

5 rows returned in 0.00 seconds. A CSV Export button is visible.

## 7. Manager address

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL Commands window contains the following SQL script:

```
INSERT INTO Maddress values (20,'Dhaka',5);
INSERT INTO Maddress values (21,'Sylhet',6);
INSERT INTO Maddress values (22,'Chattogram',7);
INSERT INTO Maddress values (23,'Khulna',8);
INSERT INTO Maddress values (24,'Cumilla',9);
select *
from Maddress
```

The results of the query are displayed in a table with 5 rows:

MADDRESS_ID	MCITY	MROAD_NO
20	Dhaka	5
21	Sylhet	6
22	Chattogram	7
23	Khulna	8
24	Cumilla	9

5 rows returned in 0.02 seconds

## 8. Room

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL Commands window contains the following SQL script:

```
INSERT INTO room values (201,1200,2,101);
INSERT INTO room values (202,1000,2,102);
INSERT INTO room values (203,3000,2,103);
INSERT INTO room values (204,4000,2,104);
INSERT INTO room values (205,5000,2,105);
select *
from room
```

The results of the query are displayed in a table with 5 rows:

ROOMNO	PRICE	RFLOOR	HID
201	1200	2	101
202	1000	2	102
203	3000	2	103
204	4000	2	104
205	5000	2	105

5 rows returned in 0.00 seconds

## 9. Room\_book

The screenshot shows the SQL Developer interface with a query window titled "SQL Commands". The query entered is:

```
select*  
From room_book
```

The query is executed, and the results are displayed in a table with 5 rows. The table has columns: ROOMNO, PRICE, and CID.

ROOMNO	PRICE	CID
201	1200	2101
202	1000	2102
203	3000	2103
204	4000	2104
205	5000	2105

5 rows returned in 0.32 seconds

Language: en-us

## 10. Bill

The screenshot shows the SQL Developer interface with a query window titled "SQL Commands". The query entered is:

```
INSERT INTO bill values (90,'22-NOV-2022',1200,21,'CASH');  
INSERT INTO bill values (91,'22-MARCH-2022',1250,22,'CASH');  
INSERT INTO bill values (92,'22-JULY-2022',1300,23,'CARD');  
INSERT INTO bill values (93,'22-JAN-2022',1000,24,'ONLINE');  
INSERT INTO bill values (94,'22-OCT-2022',900,25,'CASH');  
select*  
from bill
```

The query is executed, and the results are displayed in a table with 5 rows. The table has columns: BILL\_ID, BOOKING\_DATE, AMOUNT, CID, and PAYMENT\_METHOD.

BILL_ID	BOOKING_DATE	AMOUNT	CID	PAYMENT_METHOD
90	22-NOV-22	1200	21	CASH
91	22-MAR-22	1250	22	CASH
92	22-JUL-22	1300	23	CARD
93	22-JAN-22	1000	24	ONLINE
94	22-OCT-22	900	25	CASH

5 rows returned in 0.00 seconds

Language: en-us

## 11. Customer

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following SQL script:

```
INSERT INTO customer VALUES (21,'KARIM','22-NOV-1998',50,012345678,90);
INSERT INTO customer VALUES (22,'RAHIM','22-AUG-1999',51,016545678,91);
INSERT INTO customer VALUES (23,'SONY','22-JAN-1988',52,012300078,92);
INSERT INTO customer VALUES (24,'RASEL','22-OCT-1978',53,012345234,93);
INSERT INTO customer VALUES (25,'FUAD','22-NOV-1968',54,014445678,94);
SELECT*
FROM customer
```

The results window displays the following data:

CID	CNAME	DBIRTH	CADDRESS_ID	PHONE	BILL_ID
21	KARIM	22-NOV-98	50	12345678	90
22	RAHIM	22-AUG-99	51	16545678	91
23	SONY	22-JAN-88	52	12300078	92
24	RASEL	22-OCT-78	53	12345234	93
25	FUAD	22-NOV-68	54	14445678	94

5 rows returned in 0.00 seconds

## 12. Customer address

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following SQL script:

```
INSERT INTO Caddress values (50,'Dhaka',60);
INSERT INTO Caddress values (51,'Sylhet',61);
INSERT INTO Caddress values (52,'Chattogram',71);
INSERT INTO Caddress values (53,'Khulna',8);
INSERT INTO Caddress values (54,'Cumilla',9);
select*
from Caddress
```

The results window displays the following data:

CADDRESS_ID	C_CITY	CROAD_NO
50	Dhaka	60
51	Sylhet	61
52	Chattogram	71
53	Khulna	8
54	Cumilla	9

5 rows returned in 0.00 seconds

### 13. Cbooking\_info

SQL Commands

127.0.0.1:8080/apex/?p=4500:1003:467294009388381::NO::

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

```
INSERT INTO CBooking_info VALUES (21,'KARIM','Dhaka',012345678,80);
INSERT INTO CBooking_info VALUES (22,'RAHIM','Sylhet',016545678,81);
INSERT INTO CBooking_info VALUES (23,'SONY','Chattogram',012300078,82);
INSERT INTO CBooking_info VALUES (24,'RASEL','Khulna',012345234,83);
INSERT INTO CBooking_info VALUES (25,'FUAD','Cumilla',014445678,84);
select*
from CBooking_info
```

Results Explain Describe Saved SQL History

CID	CNAME	CADDRESS	PHONE	BOOK_ID
21	KARIM	Dhaka	12345678	80
22	RAHIM	Sylhet	16545678	81
23	SONY	Chattogram	12300078	82
24	RASEL	Khulna	12345234	83
25	FUAD	Cumilla	14445678	84

5 rows returned in 0.00 seconds [CSV Export](#)

Activate Windows  
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Language: en-us

77°F Haze 6:31 PM 12/23/2022

### 14. Booking\_info

SQL Commands

127.0.0.1:8080/apex/?p=4500:1003:467294009388381::NO::

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

```
INSERT INTO Booking_info VALUES (80,'22-NOV-2022','25-NOV-2022',201,21);
INSERT INTO Booking_info VALUES (81,'22-JAN-2022','25-JAN-2022',202,22);
INSERT INTO Booking_info VALUES (82,'22-MARCH-2022','25-MARCH-2022',203,23);
INSERT INTO Booking_info VALUES (83,'22-NOV-2022','25-NOV-2022',204,24);
INSERT INTO Booking_info VALUES (84,'22-NOV-2022','25-NOV-2022',205,25);
select*
from Booking_info
```

Results Explain Describe Saved SQL History

BOOK_ID	CHECK_IN	CHECK_OUT	ROOMNO	CID
80	22-NOV-22	25-NOV-22	201	21
81	22-JAN-22	25-JAN-22	202	22
82	22-MAR-22	25-MAR-22	203	23
83	22-NOV-22	25-NOV-22	204	24
84	22-NOV-22	25-NOV-22	205	25

5 rows returned in 0.00 seconds [CSV Export](#)

Activate Windows  
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Language: en-us

77°F Haze 6:42 PM 12/23/2022



## 15. Employee

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:467294009388381::NO::

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

```
INSERT INTO employee VALUES (31,'ROY',70,012345678,'SECURITY','22-NOV-1998',15000,10);
INSERT INTO employee VALUES (32,'ARJIT',71,016545678,'CLEANER','22-AUG-1999',12000,11);
INSERT INTO employee VALUES (33,'PUNIT',72,012300078,'CLEANER','22-JAN-1988',12000,12);
INSERT INTO employee VALUES (34,'MINTU',73,012345234,'SECURITY','22-OCT-1978',23000,13);
INSERT INTO employee VALUES (35,'JASHIM',74,014445678,'CHEF','22-NOV-1968',54000,14);
select*
from employee
```

Results Explain Describe Saved SQL History

EID	ENAME	EADDRESS_ID	PHONE	JOB_TYPE	DBIRTH	SALARY	MID
31	ROY	70	12345678	SECURITY	22-NOV-98	15000	10
32	ARJIT	71	16545678	CLEANER	22-AUG-99	12000	11
33	PUNIT	72	12300078	CLEANER	22-JAN-88	12000	12
34	MINTU	73	12345234	SECURITY	22-OCT-78	23000	13
35	JASHIM	74	14445678	CHEF	22-NOV-68	54000	14

5 rows returned in 0.00 seconds [CSV Export](#)

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Language: en-us

## 16. Employee address

SQL Commands

127.0.0.1:8080/apex/f?p=4500:1003:467294009388381::NO::

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

```
INSERT INTO Eaddress values (70,'Sylhet',6);
INSERT INTO Eaddress values (71,'Chattogram',7);
INSERT INTO Eaddress values (72,'Khulna',8);
INSERT INTO Eaddress values (73,'Cumilla',9);
INSERT INTO Eaddress values (74,'Cumilla',12);
select*
from Eaddress
```

Results Explain Describe Saved SQL History

EADDRESS_ID	ECITY	EROAD_NO
70	Sylhet	6
71	Chattogram	7
72	Khulna	8
73	Cumilla	9
74	Cumilla	12

5 rows returned in 0.00 seconds [CSV Export](#)

Application Express 2.1.0.00.39  
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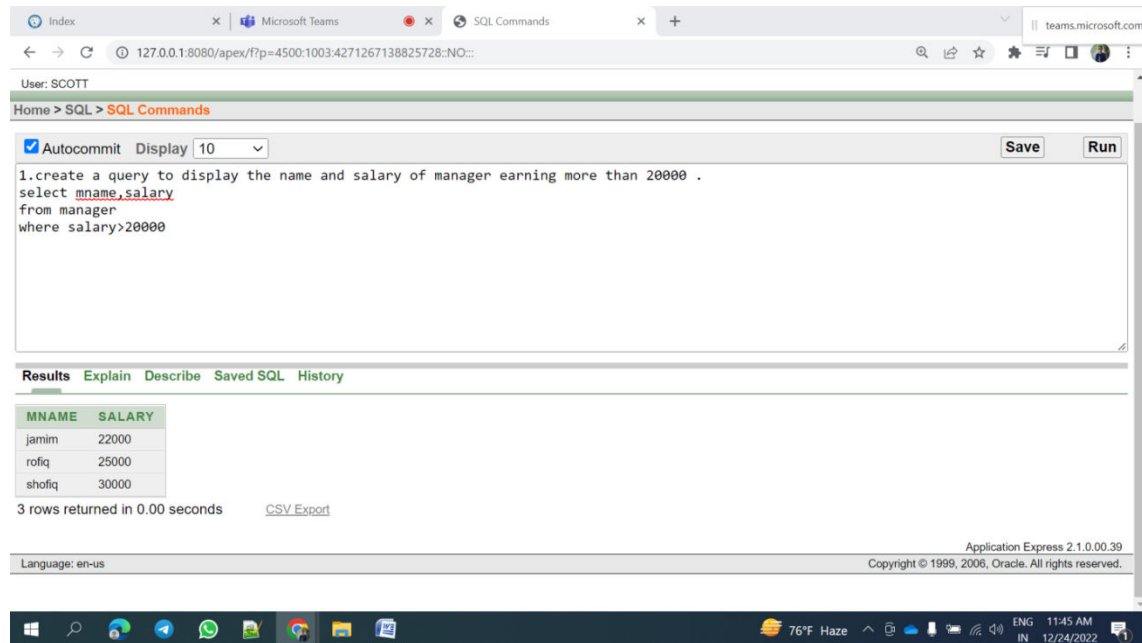
Language: en-us



## General query

1.create a query to display the name and salary of manager earning more than 20000 .

select mname,salary from manager where salary>20000



The screenshot shows a web browser window with the URL `127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728::NO::`. The page is titled "SQL Commands" and shows the user "SCOTT". The query entered is:

```
1.create a query to display the name and salary of manager earning more than 20000 .
select mname,salary
from manager
where salary>20000
```

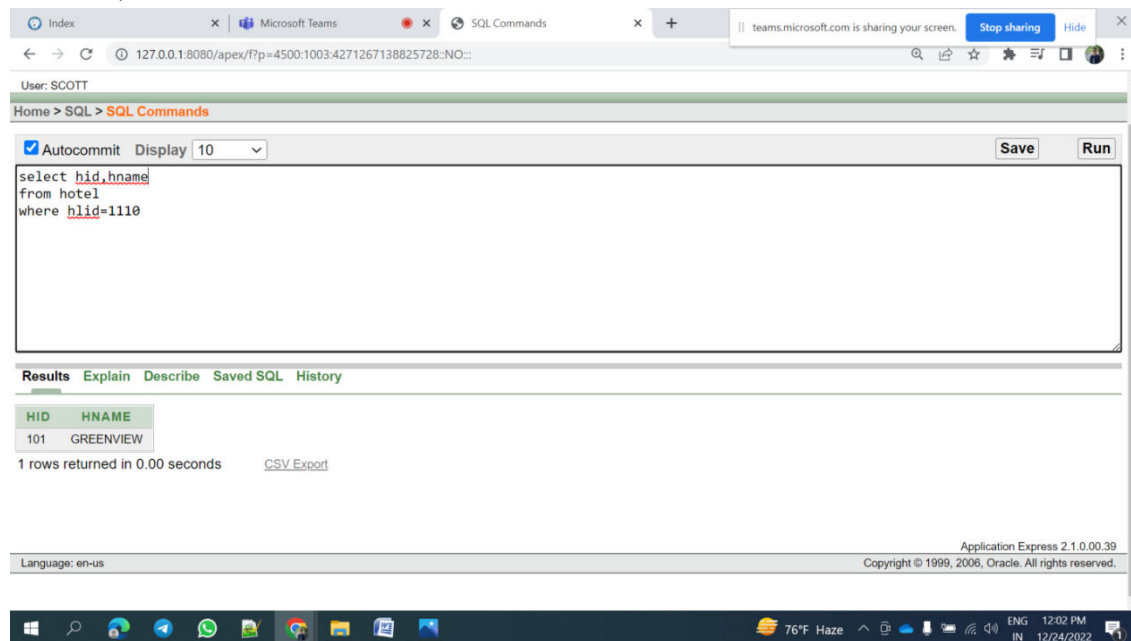
The results are displayed in a table with columns "MNAME" and "SALARY".

MNAME	SALARY
jamim	22000
rofiq	25000
shofiq	30000

3 rows returned in 0.00 seconds. The interface also includes buttons for "Autocommit", "Display", "Save", and "Run".

2. Find the id and name of a hotel whose location id is 1110.

select hid,hname from hotel where hlid=1110



The screenshot shows a web browser window with the URL `127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728::NO::`. The page is titled "SQL Commands" and shows the user "SCOTT". The query entered is:

```
select hid,hname
from hotel
where hlid=1110
```

The results are displayed in a table with columns "HID" and "HNAME".

HID	HNAME
101	GREENVIEW

1 rows returned in 0.00 seconds. The interface also includes buttons for "Autocommit", "Display", "Save", and "Run".

### 3. Display the city and country name from hotel location. Where hotel location id 1110.

select hcity, hcountry from hlocation where hlid=1110

The screenshot shows a web browser window with the URL `127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728:NO::`. The page is titled "SQL Commands" and shows a query executed by user SCOTT. The query is:

```
select hcity,hcountry
from hlocation
where hlid=1110
```

The results are displayed in a table with columns HCITY and HOUNTRY. The result is Dhaka, Bangladesh.

HCITY	HOUNTRY
Dhaka	Bangladesh

1 rows returned in 0.00 seconds

## Joining

### 1.find the customer id and booking id and check in date from customer ,customer booking information, booking information.

select c.cid, cbinfo.book\_id, binfo.check\_in from customer c ,cbooking\_info cbinfo,booking\_info binfo where c.cid=cbinfo.cid and cbinfo.book\_id=binfo.book\_id

The screenshot shows a web browser window with the URL `127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728:NO::`. The page is titled "SQL Commands" and shows a query executed by user SCOTT. The query is:

```
select c.cid, cbinfo.book_id,binfo.check_in
from customer c ,cbooking_info cbinfo,booking_info binfo
where c.cid=cbinfo.cid and cbinfo.book_id=binfo.book_id
```

The results are displayed in a table with columns CID, BOOK\_ID, and CHECK\_IN. The results are 5 rows.

CID	BOOK_ID	CHECK_IN
21	80	22-NOV-22
22	81	22-JAN-22
23	82	22-MAR-22
24	83	22-NOV-22
25	84	22-NOV-22

5 rows returned in 0.14 seconds

## 2. find the employee name and their job type from employee.

select e.ename||' works as a '||j.job\_type from employee e,employee j

where e.eid=j.eid

The screenshot shows a web browser window with the 'SQL Commands' tab active. The query entered is: `select e.ename||' works as a '||j.job_type from employee e,employee j where e.eid=j.eid`. The results are displayed in a table with the following data:

E.ENAME  'WORKSASA'  J.JOB_TYPE
ROY works as a SECURITY
ARJIT works as a CLEANER
PUNIT works as a CLEANER
MINTU works as a SECURITY
JASHIM works as a CHEF

5 rows returned in 0.05 seconds. The interface also includes buttons for 'Autocommit', 'Display', 'Save', and 'Run'.

## 3. Find the hotel id and city from hotel and hotel location.

select h.hid , hl.hcity from hotel h , hlocation hl where h.hlid = hl.hlid

The screenshot shows a web browser window with the 'SQL Commands' tab active. The query entered is: `select h.hid , hl.hcity from hotel h , hlocation hl where h.hlid = hl.hlid`. The results are displayed in a table with the following data:

HID	H CITY
101	Dhaka
102	Sylhet
103	Khulna
105	Cumilla

4 rows returned in 0.00 seconds. The interface also includes buttons for 'Autocommit', 'Display', 'Save', and 'Run'.

#### 4. Find the room id and customer id from room and room\_rent .

select r.roomno, rb.cid from room r , room\_book rb where r.roomno= rb.roomno

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL command entered is: `select r.roomno, rb.cid from room r , room_book rb where r.roomno= rb.roomno`. The results are displayed in a table with 5 rows.

ROOMNO	CID
201	2101
202	2102
203	2103
204	2104
205	2105

5 rows returned in 0.01 seconds

#### 5. Find the owner id and hotel id from owner and hotel\_manager.

select o.oid, m.hid from owner o, hotel\_manager m where o.mid=m.mid

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL command entered is: `select o.oid, m.hid from owner o, hotel_manager m where o.mid=m.mid`. The results are displayed in a table with 5 rows.

OID	HID
1	101
2	102
3	103
4	104
5	105

5 rows returned in 0.01 seconds

## Sub query:

### 1. Show Employee name, dress and salary who earned more than punit.

```
select ename,eaddress_id,salary
```

```
from employee
```

```
where salary>(select salary from employee where ename='PUNIT')
```

The screenshot shows the Oracle Database Express Edition web interface. The browser tabs include 'Index', 'Microsoft Teams', 'SQL Commands', and a Teams sharing window. The URL is '127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728:NO::'. The interface shows the user 'SCOTT' logged in. The 'SQL Commands' tab is active, displaying the following query:

```
1.Show Employee name, dress and salary who earned more than punit
select ename,eaddress_id,salary
from employee
where salary>(select salary from employee where ename='PUNIT')
```

Below the query editor, the 'Results' tab is selected, showing a table with 3 rows:

ENAME	EADDRESS_ID	SALARY
ROY	70	15000
MINTU	73	23000
JASHIM	74	54000

3 rows returned in 0.01 seconds. A 'CSV Export' link is available. The bottom of the screen shows the Windows taskbar with the date '12/24/2022' and time '3:51 PM'.

### 2. Show manager information who earn more than average salary.

```
select*
```

```
from manager
```

```
where salary>(select avg(salary)from manager)
```

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL command entered is:

```
select*
from manager
where salary>(select avg(salary)from manager)
```

The results are displayed in a table with 2 rows:

MID	MNAME	PHONE	SALARY	DBIRTH	MADDRESS_ID
13	rofiq	134789	25000	12-NOV-92	23
14	shofiq	9946789	30000	24-OCT-96	24

2 rows returned in 0.05 seconds. The interface also shows a taskbar at the bottom with various application icons and a system tray with the date 12/24/2022.

### 3. Show customer reservation details where customer id below Rahim's Customer id.

select\*

from cbooking\_info

where cid<(select cid from cbooking\_info where cname='RAHIM')

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL command entered is:

```
3.Show customer reservation details where customer id below Rahim's Customer id
select*
from cbooking_info
where cid<(select cid from cbooking_info where cname='RAHIM')
```

The results are displayed in a table with 1 row:

CID	CNAME	CADDRESS	PHONE	BOOK_ID
21	KARIM	Dhaka	12345678	80

1 rows returned in 0.00 seconds. The interface also shows a taskbar at the bottom with various application icons and a system tray with the date 12/24/2022.

**4. Show name,address and job where salary is less than the salary of a chef.**

```
select ename,eaddress_id,job_type
```

```
from employee
```

```
where salary<any (select salary from employee where job_type='CHEF')
```

The screenshot shows the Oracle Database Express Edition interface. The SQL Commands window contains the following query:

```
select ename,eaddress_id,job_type
from employee
where salary<any (select salary from employee where job_type='CHEF')
```

The query has been executed, and the results are displayed in a table with 4 rows:

ENAME	EADDRESS_ID	JOB_TYPE
PUNIT	72	CLEANER
ARJIT	71	CLEANER
ROY	70	SECURITY
MINTU	73	SECURITY

4 rows returned in 0.02 seconds

**5. Show employee name,job type and salary information where employee id is 31 and earn more than the person who's employee id is 32.**

```
select ename,job_type,salary
```

```
from employee
```

```
where salary=(select salary from employee where eid=31)and salary>(select salary from employee where eid=32)
```

The screenshot shows the SQL Developer interface with the following details:

- Query Text:**

```
select ename,job_type,salary
from employee
where salary=(select salary from employee where eid=31)and salary>(select salary from employee where eid=32)
```
- Results:**

ENAME	JOB_TYPE	SALARY
ROY	SECURITY	15000
- Summary:** 1 rows returned in 0.00 seconds
- Footer:** Application Express 2.1.0.00.39, Copyright © 1999, 2006, Oracle. All rights reserved.

## Single row function:

1. Display the hotel id and hotel name for hotel SERATON.

select hid,hname

from hotel

where upper(hname)='SERATON'

The screenshot shows the SQL Developer interface with the following details:

- Query Text:**

```
from hotel
where upper(hname)='SERATON'
```
- Results:**

HID	HNAME
104	SERATON
- Summary:** 1 rows returned in 0.00 seconds
- Footer:** Application Express 2.1.0.00.39, Copyright © 1999, 2006, Oracle. All rights reserved.



## 2. Find the hotel name and the length of those hotel name of all hotel.

```
select hname,length(hname)
```

```
from hotel
```

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL Commands window contains the following query:

```
2.Find the hotel name and the length of those hotel name of all hotel.
select hname,length(hname)
from hotel
```

The query has been executed, and the results are displayed in a table:

HNAME	LENGTH(HNAME)
GREENVIEW	9
RHINESTONE	10
MERIDIEN	8
SERATON	7
RADISSION	9

5 rows returned in 0.01 seconds

Windows taskbar at the bottom shows the date as 12/24/2022 and time as 4:33 PM.

## 3. Display the cname with their phone number and also show the caddress of customer.

```
select caddress,concat(cname,phone)
```

```
from cbooking_info
```

Index x Microsoft Teams x SQL Commands x

127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728::NO::

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

3. Display the cname with their phone number and also show the caddress of customer;

```
select caddress,concat(cname,phone)
from cbooking_info
```

Results Explain Describe Saved SQL History

CADDRESS	CONCAT(CNAME,PHONE)
Dhaka	KARIM12345678
Sylhet	RAHIM16545678
Chattogram	SONY12300078
Khulna	RASEL12345234
Cumilla	FUAD14445678

5 rows returned in 0.00 seconds [CSV Export](#)

Language: en-us

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Go to Settings to activate Windows.

77°F Haze 4:45 PM 12/24/2022

## Group function:

### 1. Find the name and highest salary of manager earning less than 30000

```
select mname,max(salary)
```

```
from manager group by mname having max(salary)<30000
```

Index x Microsoft Teams x SQL Commands x teams.microsoft.com is sharing your screen. Stop sharing Hide

127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728::NO::

ORACLE Database Express Edition

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

```
select mname,max(salary)
from manager group by mname having max(salary)<30000
```

Results Explain Describe Saved SQL History

MNAME	MAX(SALARY)
karim	18000
jamim	22000
Rahim	20000
rofiq	25000

4 rows returned in 0.07 seconds CSV Export

Activate Windows  
Go to Settings to activate Windows.

Application Express 2.1.0.00.39

77°F Haze 4:50 PM 12/24/2022

## 2. Find the id number and lowest salary of manager earning more than 18000

select mid,min(salary)

from manager

group by mid having min(salary)>18000

Index x Microsoft Teams x SQL Commands x teams.microsoft.com is sharing your screen. Stop sharing Hide

127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728::NO::

ORACLE Database Express Edition

User: SCOTT

Home > SQL > SQL Commands

☒ Autocommit Display 10 Save Run

```
select mid,min(salary)
from manager
group by mid having min(salary)>18000
```

Results Explain Describe Saved SQL History

MID	MIN(SALARY)
10	20000
12	22000
13	25000
14	30000

4 rows returned in 0.03 seconds CSV Export

Activate Windows  
Go to Settings to activate Windows.

Application Express 2.1.0.00.39

77°F Haze 4:54 PM 12/24/2022

### 3. Find the room and lowest price over 1000

select roomno,min(price)

from room

group by roomno having min(price)>1000

The screenshot shows the Oracle Database Express Edition web interface. The browser address bar indicates the URL is 127.0.0.1:8080/apex/f?p=4500:1003:4271267138825728:NO... The user is logged in as SCOTT. The page title is "ORACLE Database Express Edition". The breadcrumb navigation shows "Home > SQL > SQL Commands". The "Autocommit" checkbox is checked, and the "Display" dropdown is set to 10. The SQL command entered in the text area is:

```
select roomno,min(price)
from room
group by roomno having min(price)>1000
```

The "Run" button is visible. Below the command area, the "Results" tab is selected, showing a table with two columns: "ROOMNO" and "MIN(PRICE)". The table contains four rows of data:

ROOMNO	MIN(PRICE)
201	1200
203	3000
204	4000
205	5000

Below the table, it states "4 rows returned in 0.00 seconds" and provides a "CSV Export" link. The Windows taskbar at the bottom shows the system clock as 4:57 PM on 12/24/2022, with a weather widget showing 77°F Haze.

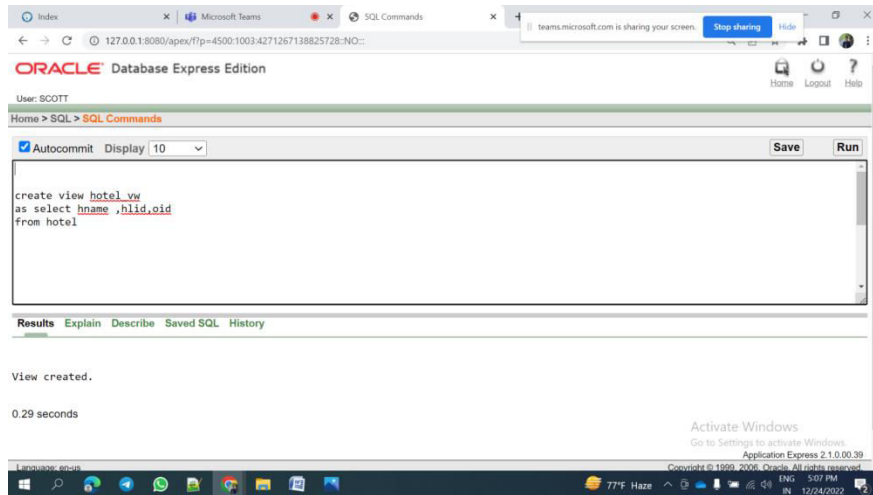
## View

1. create a view for show that only hotel name,hotel location and owner name to the user

create view hotel\_vw

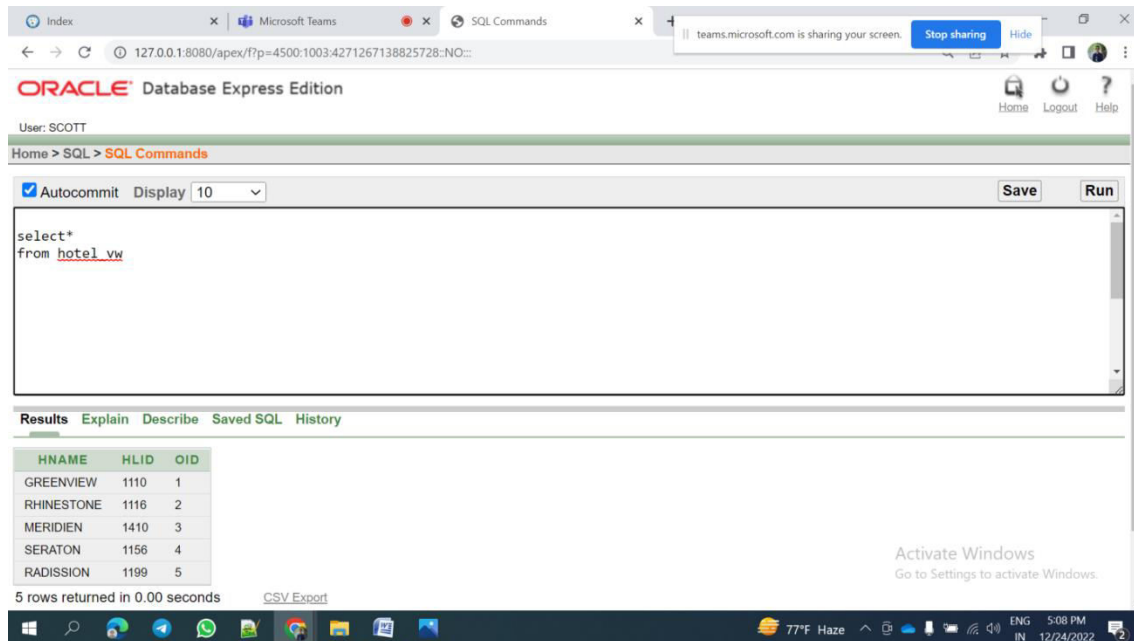
as select hname ,hlid,oid

from hotel



select\*

from hotel\_vw



# Sequence

**Write a script to display the following information about your sequences: sequence name, maximum value, increment size, and last number.**

SELECT SEQUENCE\_NAME,

MAX\_VALUE,

INCREMENT\_BY,

LAST\_NUMBER

FROM USER\_SEQUENCES;

The screenshot shows the Oracle Database Express Edition interface. The user is SCOTT. The SQL Command window contains the following query:

```
SELECT SEQUENCE_NAME,  
       MAX_VALUE,  
       INCREMENT_BY,  
       LAST_NUMBER  
FROM USER_SEQUENCES;
```

The query has been executed, and the results are displayed in a table with 4 columns: SEQUENCE\_NAME, MAX\_VALUE, INCREMENT\_BY, and LAST\_NUMBER. The results are as follows:

SEQUENCE_NAME	MAX_VALUE	INCREMENT_BY	LAST_NUMBER
DEPT_ID_SEQ	100	10	60
SEQ	110	1	101
DEPT_ID_SEQ	200	10	60

3 rows returned in 0.03 seconds. [CSV Export](#)

Activate Windows  
Go to Settings to activate Windows.  
Application Express 2.1.0.00.39