American International University-Bangladesh

Project Name: Airlines Management System

Member Name

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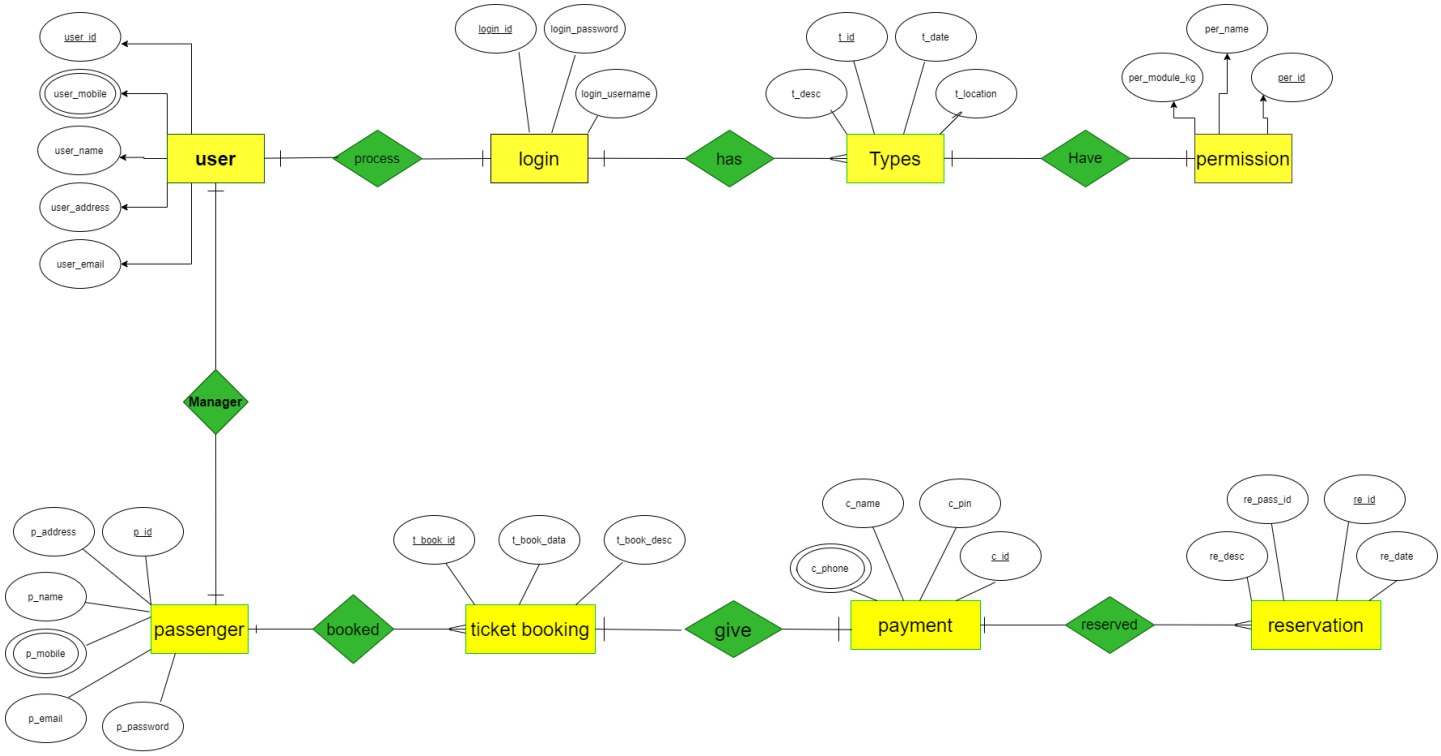
Description:

In the airline's management system, a user may book tickets. For which we need a user table. The table consists of the user's personal details. The information stored in this table includes user ID, user name, user mobile, user email and user address. Here the user ID is unique. For identifying a user the Login table is needed. The record of this table is created when a user need access to their accounts. This table stores information such as login ID, login role ID, login username, user password. Here Login ID is unique. The types section is for the passengers, if they would return or not, the customers give their details. Information stored in this table includes permission Id, permission module, permission name. Permission ID will be unique for the table. The passenger table contains the details about passengers. The information stored in this table includes passenger ID, password, name, address, mobile and email. Passenger ID will be unique for the table. The next table holds information about ticket booking such as, ticket booking description, ticket booking data, ticket booking ID. Ticket booking ID will be unique for the table. In the payment system they have to give their payment by online so they have to give their Card ID, Username, Phone number and the Card pin. In the reservation procedure the applications support direct contact with the passenger. It contains the schedules, availability, fares and related services, and through which airline inventory is maintained, reservations can be made or tickets issued. The information which is stored in this table includes reservation passenger Id, reservation ID, reservation description, reservation date. Reservation ID will be unique for the table.

ER DIAGRAM



Normalization

Green->Primary key,

Red-> Foreign key

Booked(p_id,p_adress,p_name,p_mobile,p_email,p_password,t_book_id,t_book_data,t_book_desc)

1NF : p_mobile is a multivalued attribute

2NF :

p_id,p_adress,p_name,p_mobile,p_email,p_password

t_book_id,t_book_data,t_book_desc

3NF:

p_id,p_adress,p_name,p_mobile,p_email,p_password

t_book_id,t_book_data,t_book_desc

No Transitive dependency.

Table from booked:

p_id,p_adress,p_name,p_email,p_password,

t_book_id,t_book_data,t_book_desc, p_id

p_id , p_mobile

Give(t_book_id, t_book_data, t_book_desc , c_id , c_phone, c_name, c_pin)

1NF : c_phone multivalued attribute.

2NF :

t_book_id, t_book_data, t_book_desc

c_id , c_phone, c_name, c_pin

3NF :

t_book_id, t_book_data, t_book_desc

c_id , c_phone, c_name, c_pin

No transitive dependency

Table from give:

t_book_id, t_book_data, t_book_desc

c_id , c_name, c_pin,t_book_id

c_id , c_phone

Reserved (c_id, c_name, c_phone, c_pin, re_id, re_pass_id, re_date, re_desc)

1NF : c_phone multivalued attribute

2NF :

c_id, c_name, c_phone, c_pin

re_id, re_pass_id, re_date, re_desc

3NF :

c_id, c_name, c_phone,c_pin

re_id, re_pass_id, re_date, re_desc

No transitive dependency.

Table from reserved:

c_id, c_name,c_pin

re_id, re_pass_id, re_date, re_desc, c_id

c_id,c_phone

Process(user_id,user_mobile,user_name,user_address,user_email, login_id, ,login_password, login_username)

1NF : user_mobile multivalued attribute.

2NF :

user_id,user_mobile,user_name,user_address,user_email

login_id,login_password, login_username

3NF:

user_id,user_mobile,user_name,user_address,user_email

login_id,login_password, login_username

No transitive dependency

Table from process:

user_id,user_name,user_address,user_email

login_id, login_password, login_username, user_id

user_id, user_mobile

Has(t_id, t_date, t_desc, t_location, login_id ,login_password, login_username)

1NF : No multivalued attribute

2NF :

t_id, t_date, t_desc, t_location

login_id, login_password, login_username

3 NF :

t_id, t_date, t_desc, t_location

login_id, login_password, login_username

No transitive dependency

Table from has:

t_id, t_date, t_desc, t_location, login_id

login_id, login_password, login_username

Have(t_id, t_date, t_desc, t_location, per_id, per_name, per_module)

1NF: No multivalued attribute

2NF :

t_id, t_date, t_desc, t_location

per_id, per_name, per_module

3NF :

t_id, t_date, t_desc, t_location

per_id, per_name, per_module

No transitive dependency

Table from have:

t_id, t_date, t_desc, t_location

per_id, per_name, per_module, t_id

Manager(user_id, user_mobile, user_name, user_address, user_email ,p_id, p_address, p_name, p_mobile, p_email, p_password)

1NF : user_mobile , p_mobile

2NF :

user_id, user_mobile, user_name, user_address, user_email

p_id, p_address, p_name, p_mobile, p_email, p_password

3NF :

user_id, user_mobile, user_name, user_address, user_email

p_id, p_address, p_name, p_mobile, p_email, p_password

Table from Manager:

user_id, user_name, user_address, user_email

p_id, p_address, p_name, p_email, p_password ,user_id

user_id, user_mobile

p_id, p_mobile

Total Table :

~~p_id,p_adress,p_name,p_email,p_password,~~

t_book_id,t_book_data,t_book_desc, p_id

p_id , p_mobile

~~t_book_id, t_book_data, t_book_desc~~

c_id , c_name, c_pin,t_book_id

c_id , c_phone

~~c_id, c_name,c_pin~~

re_id, re_pass_id, re_date, re_desc, c_id

~~c_id,c_phone~~

user_id,user_name,user_address,user_email

login_id, login_password, login_username, user_id

user_id, user_mobile

t_id, t_date, t_desc, t_location, login_id

~~login_id, login_password, login_username~~

~~t_id, t_date, t_desc, t_location~~

per_id, per_name, per_module, t_id

~~user_id, user_name, user_address, user_email~~

p_id, p_address, p_name, p_email, p_password ,user_id

~~user_id, user_mobile~~

~~p_id, p_mobile~~

Final Table

t_book_id,t_book_data,t_book_desc, p_id

p_id , p_mobile

c_id , c_name, c_pin,t_book_id

c_id , c_phone

re_id, re_pass_id, re_date, re_desc, c_id

user_id,user_name,user_address,user_email

login_id, login_password, login_username, user_id

user_id, user_mobile

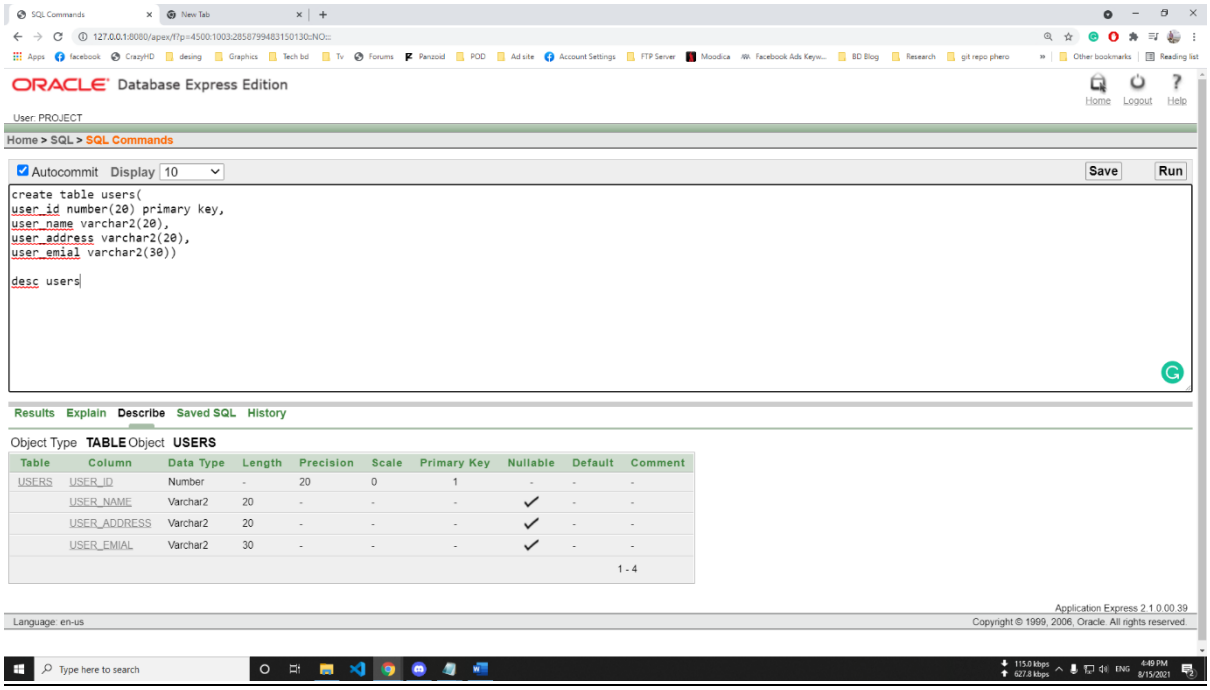
t_id, t_date, t_desc, t_location, login_id

per_id, per_name, per_module, t_id

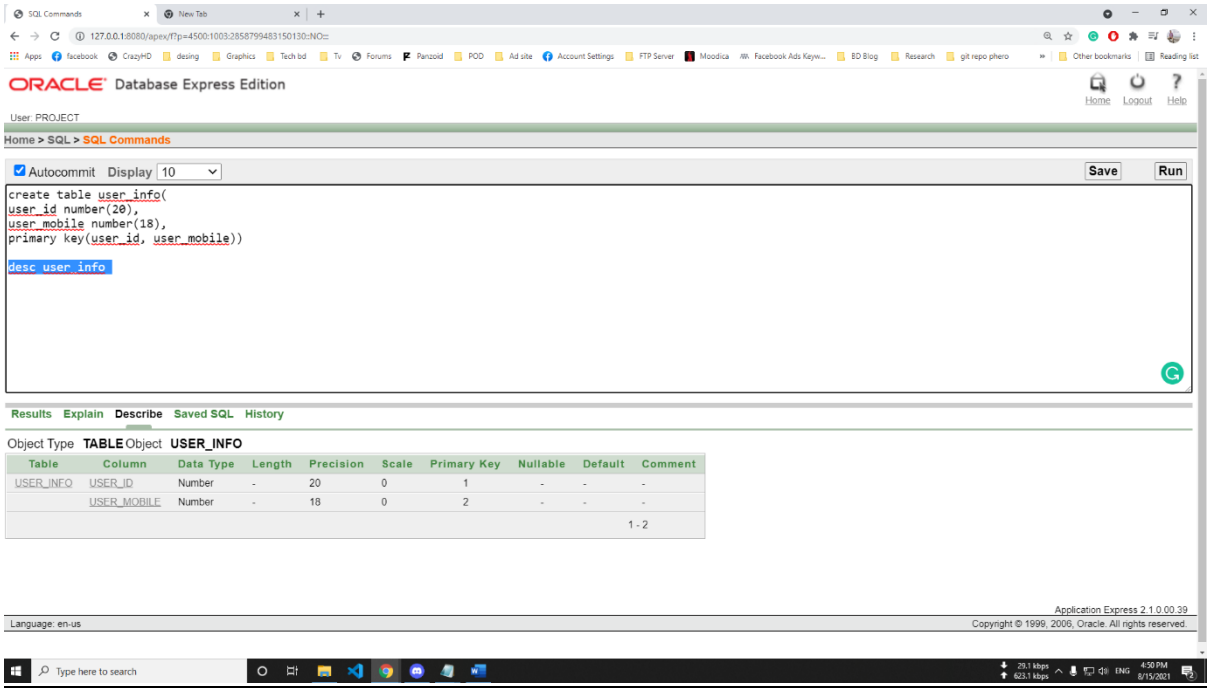
p_id, p_address, p_name, p_email, p_password ,user_id

Table Creation with Constraints

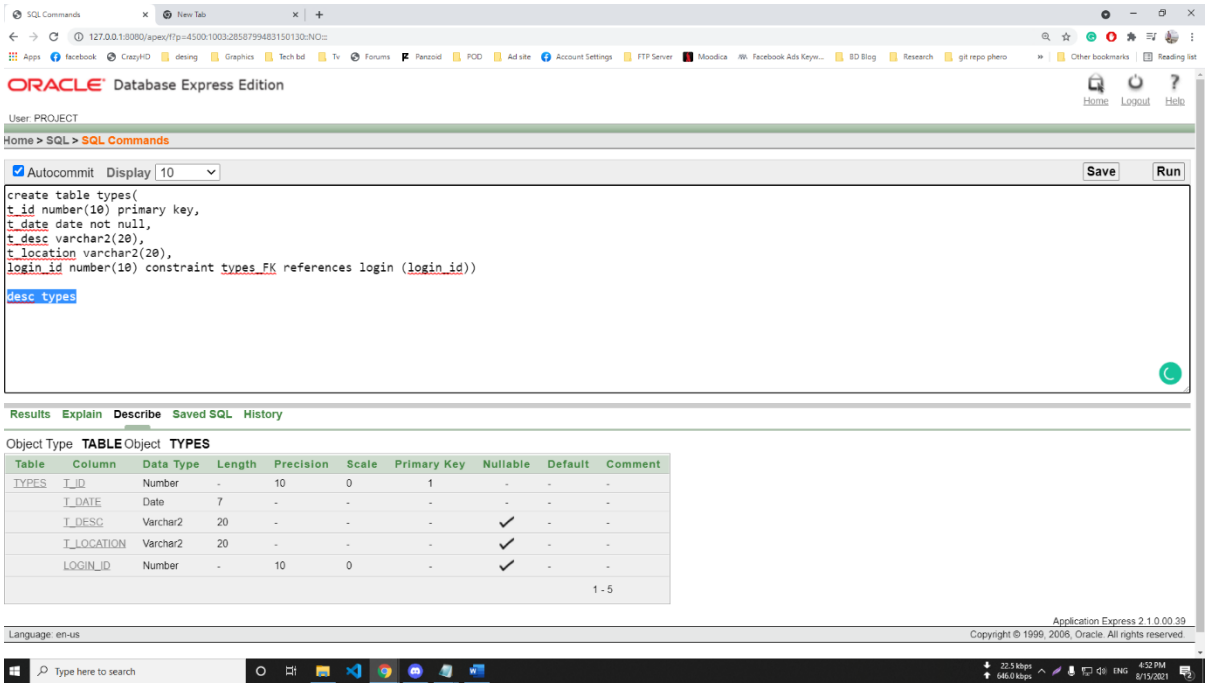
USERS TABLE



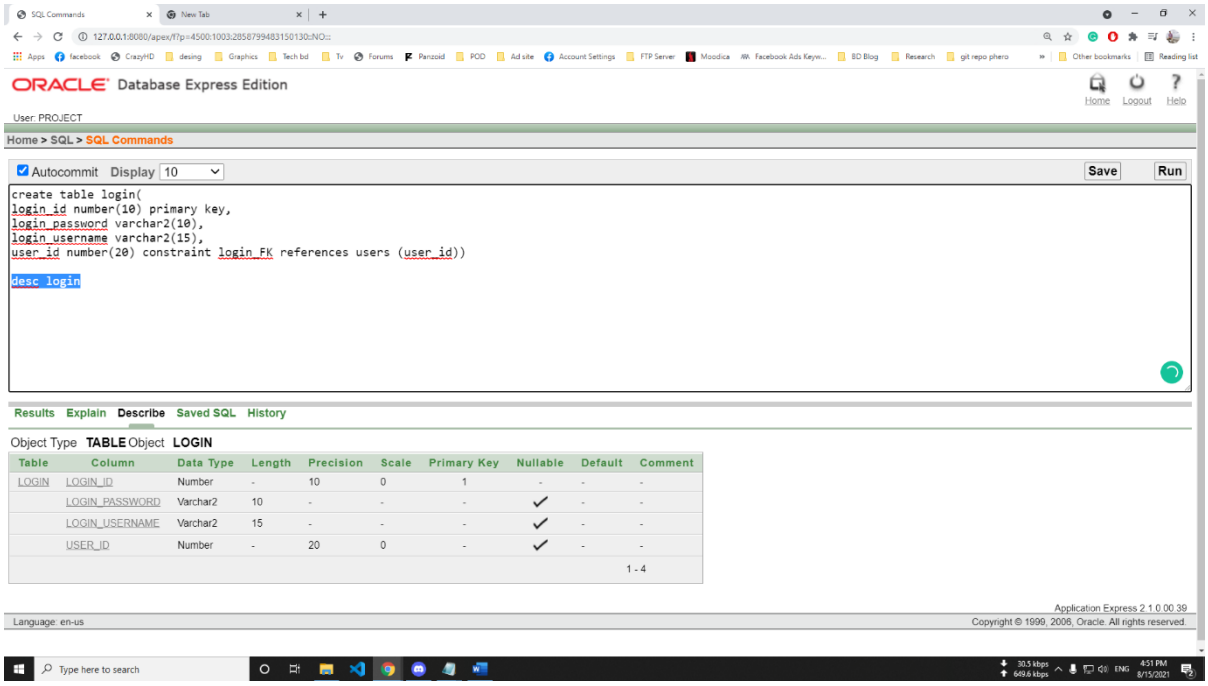
USER_INFO TABLE



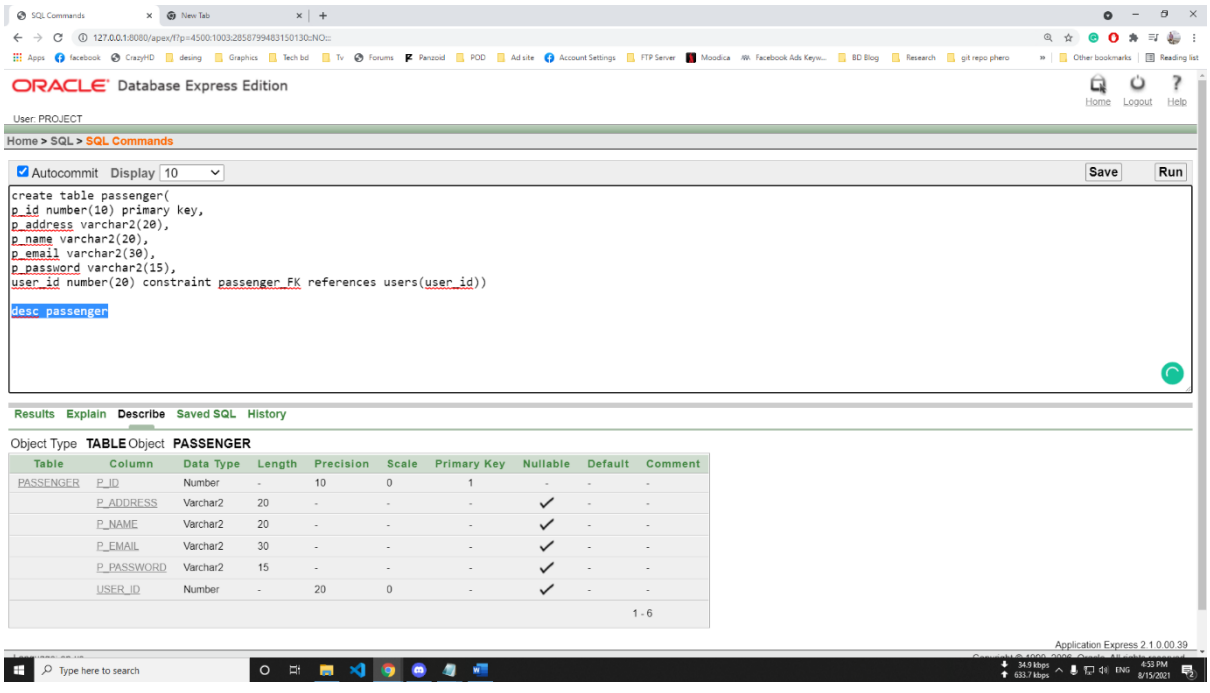
TYPES TABLE



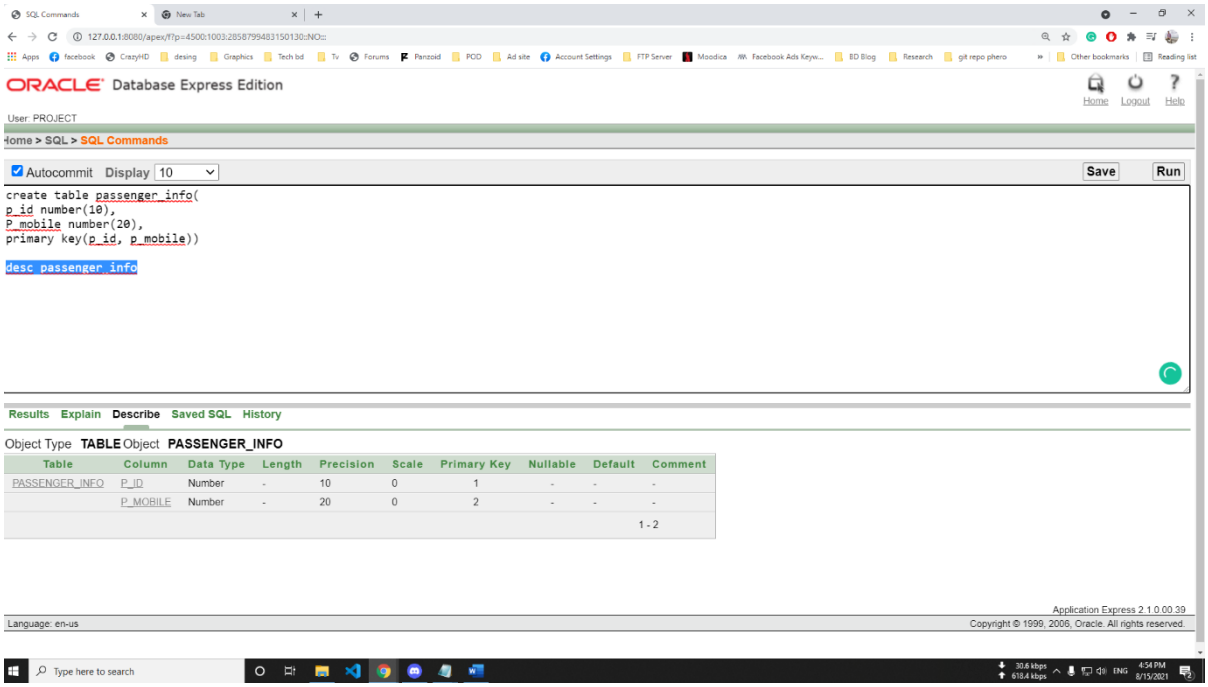
LOGIN TABLE



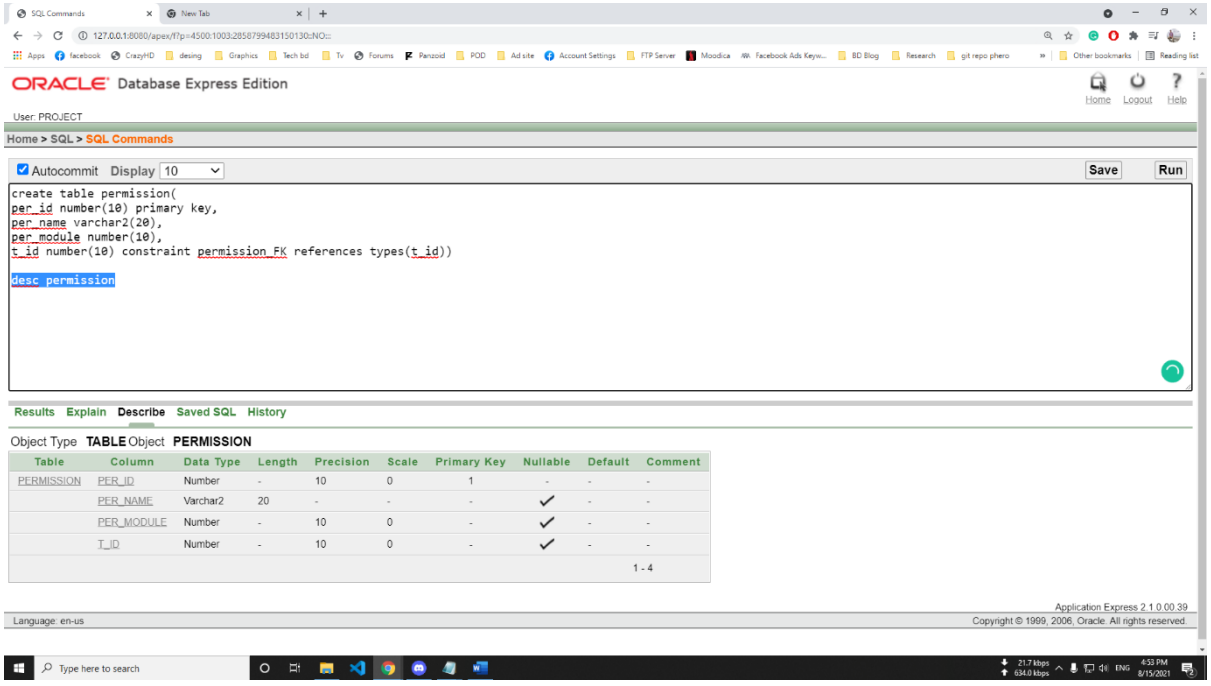
PASSENGER TABLE



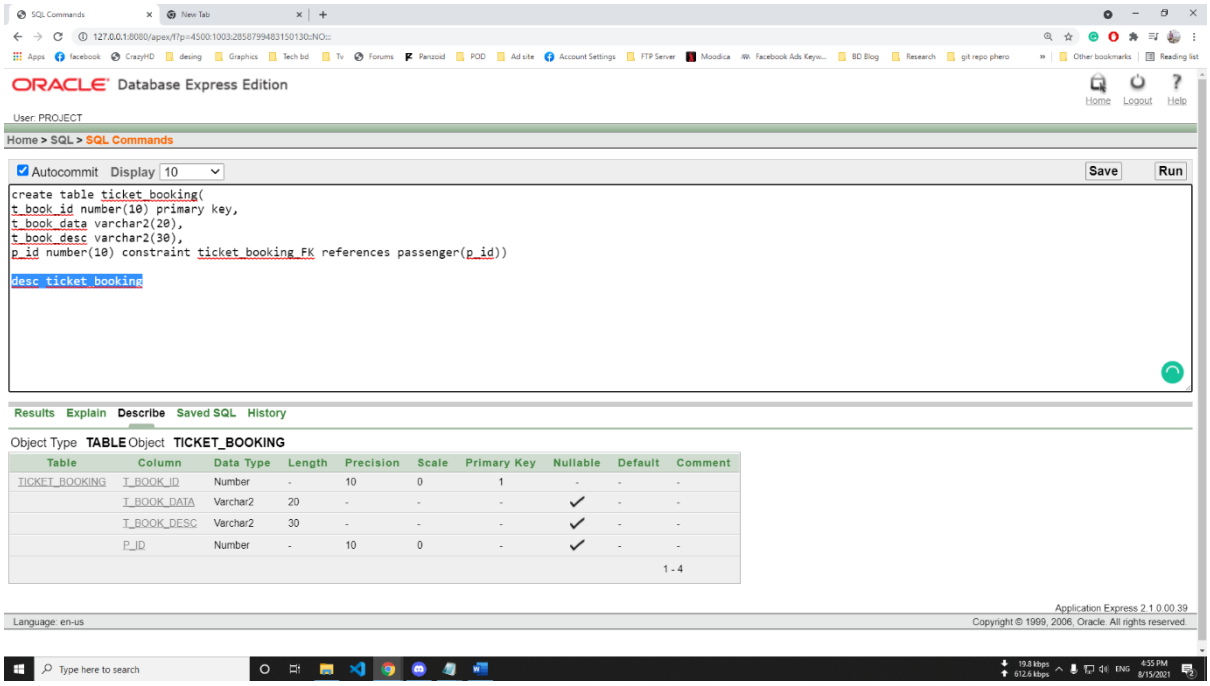
PASSENGER_INFO TABLE



PERMISSION TABLE



TICKET_BOOKING TABLE



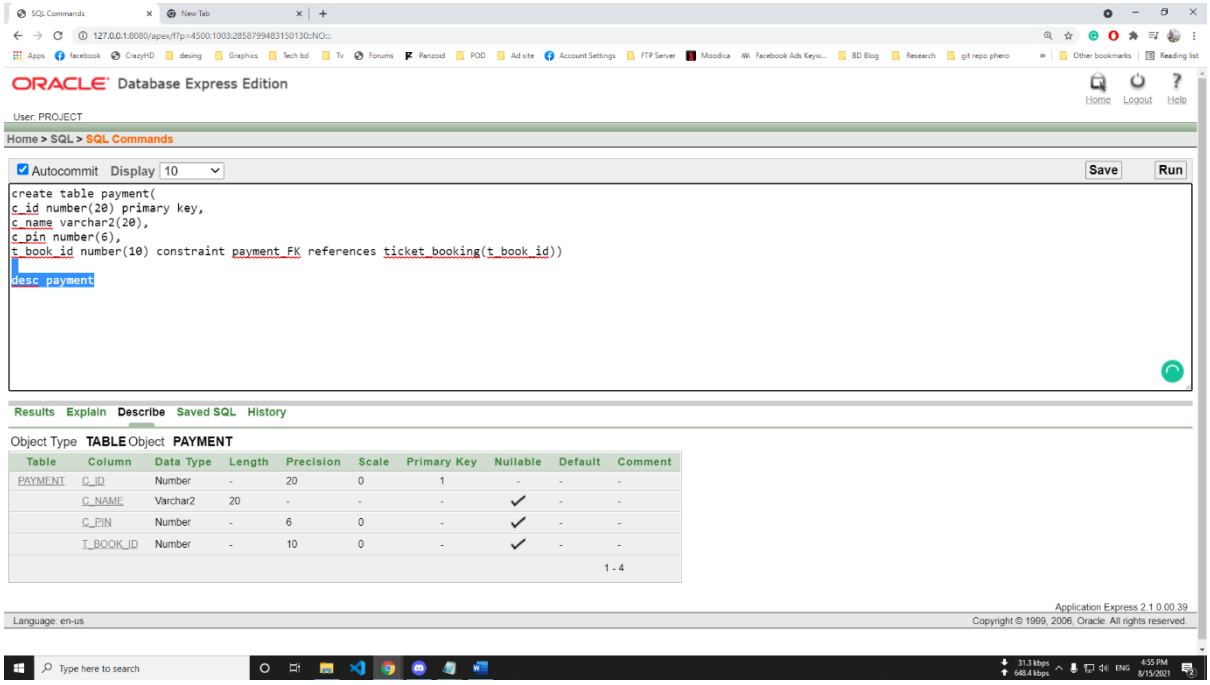
```
create table ticket_booking(
t_book_id number(10) primary key,
t_book_data varchar2(20),
t_book_desc varchar2(30),
p_id number(10) constraint ticket_booking_FK references passenger(p_id))

desc ticket_booking
```

Object Type **TABLE** Object **TICKET_BOOKING**

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
TICKET_BOOKING	T_BOOK_ID	Number	-	10	0	1	-	-	-
	T_BOOK_DATA	Varchar2	20	-	-	-	✓	-	-
	T_BOOK_DESC	Varchar2	30	-	-	-	✓	-	-
	P_ID	Number	-	10	0	-	✓	-	-

1 - 4

PAYMENT TABLE



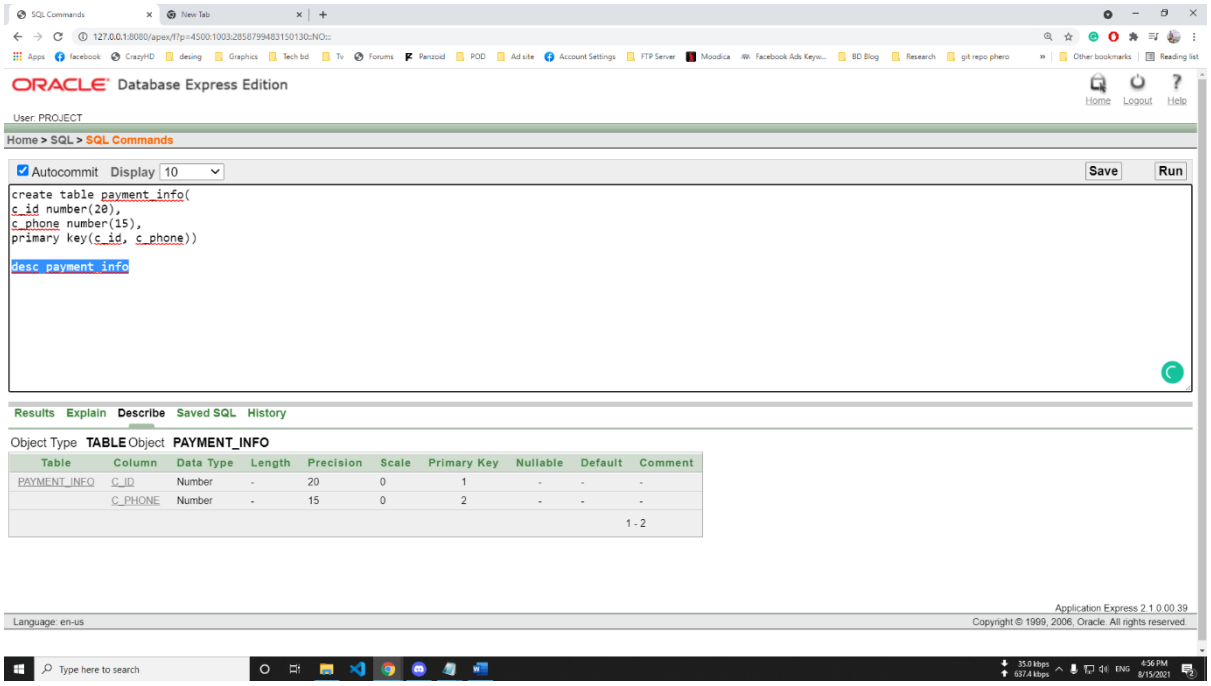
```
create table payment(
c_id number(20) primary key,
c_name varchar2(20),
c_pin number(6),
t_book_id number(10) constraint payment_FK references ticket_booking(t_book_id))

desc payment
```

Object Type **TABLE** Object **PAYMENT**

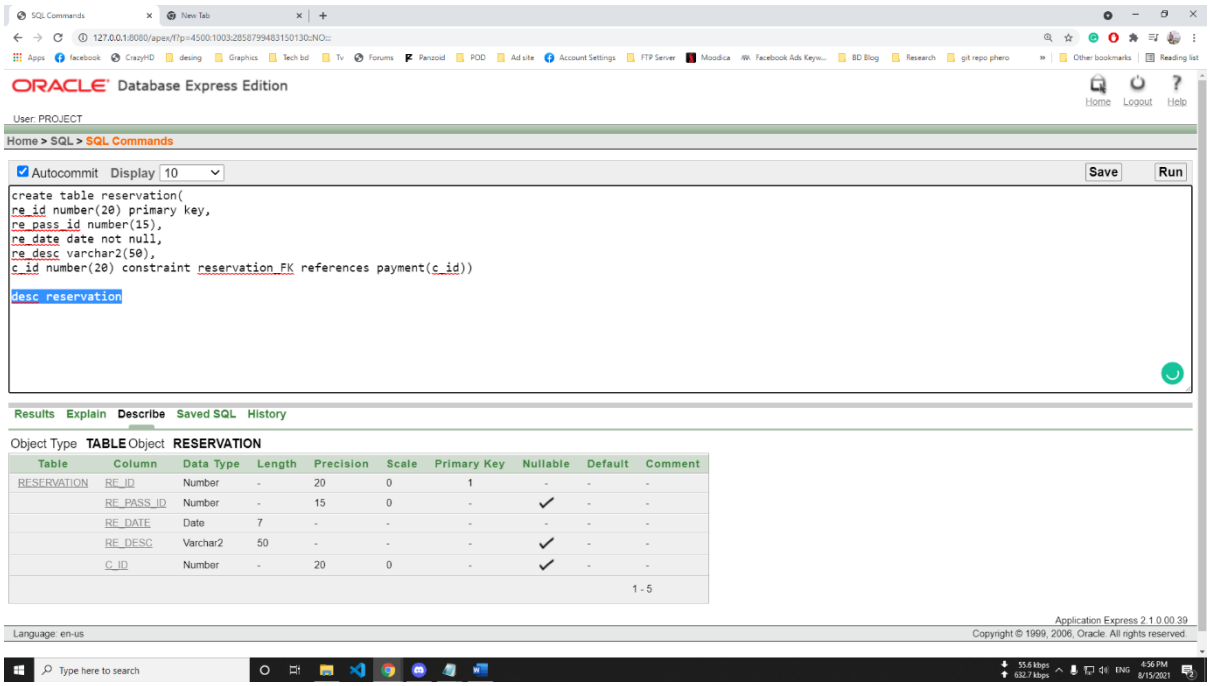
Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
PAYMENT	C_ID	Number	-	20	0	1	-	-	-
	C_NAME	Varchar2	20	-	-	-	✓	-	-
	C_PIN	Number	-	6	0	-	✓	-	-
	T_BOOK_ID	Number	-	10	0	-	✓	-	-

1 - 4

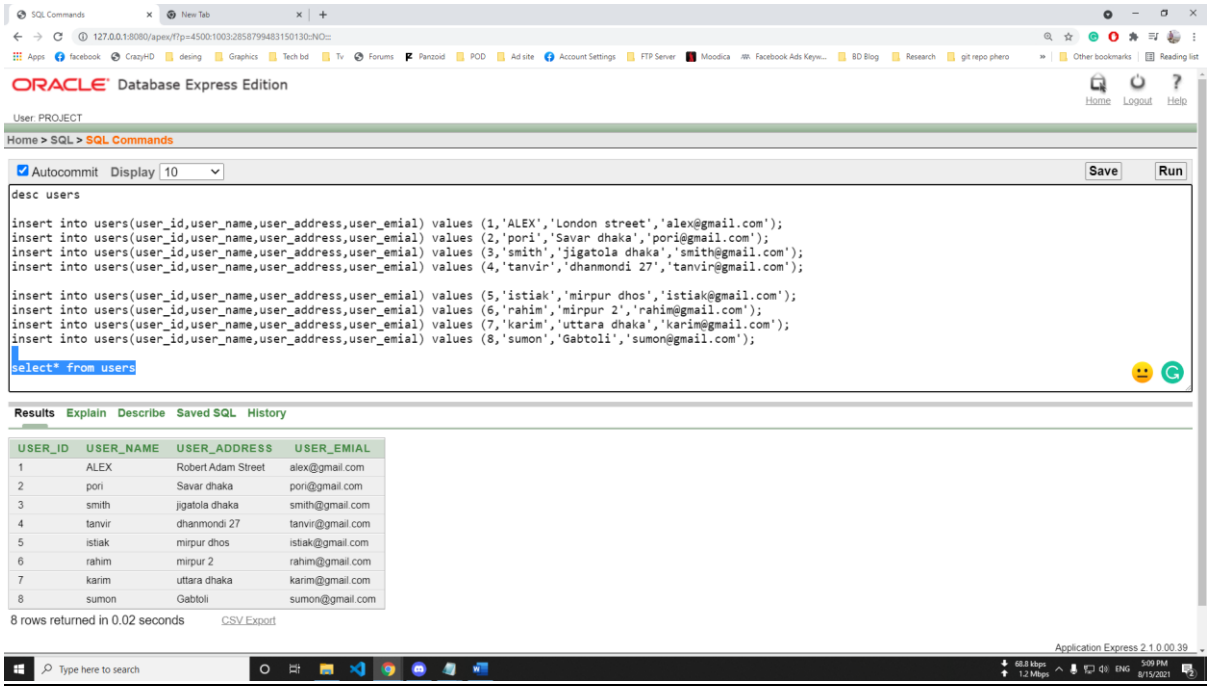
PAYMENT_INFO TABLE

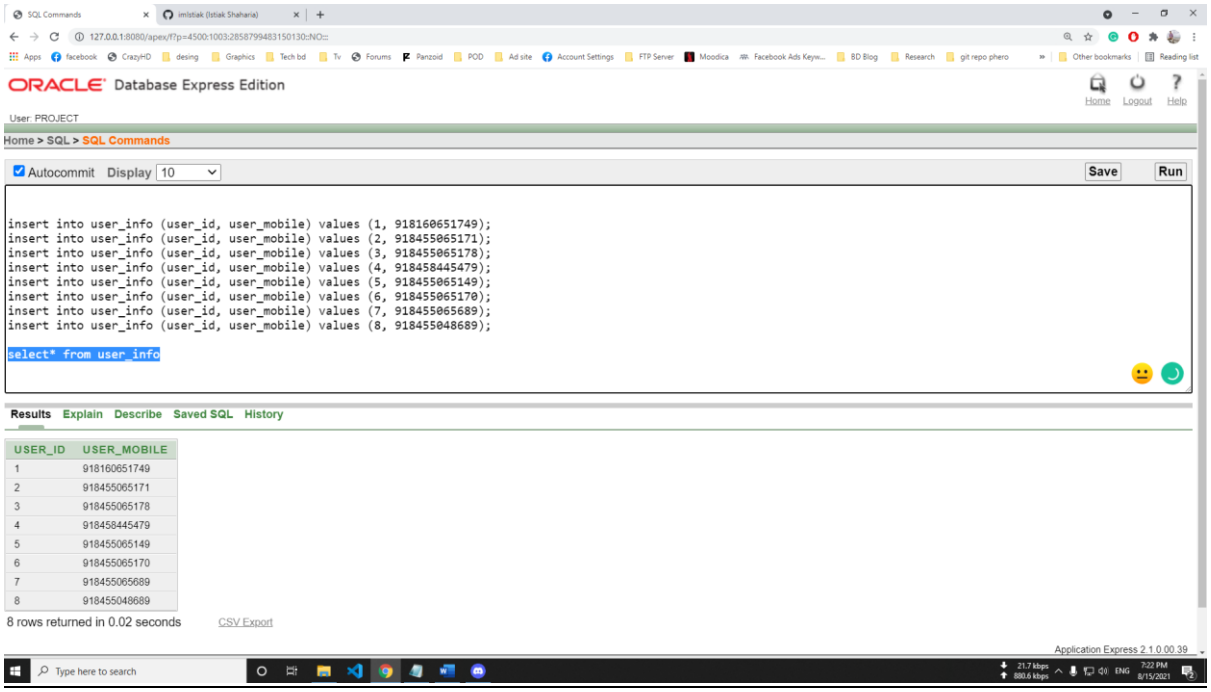


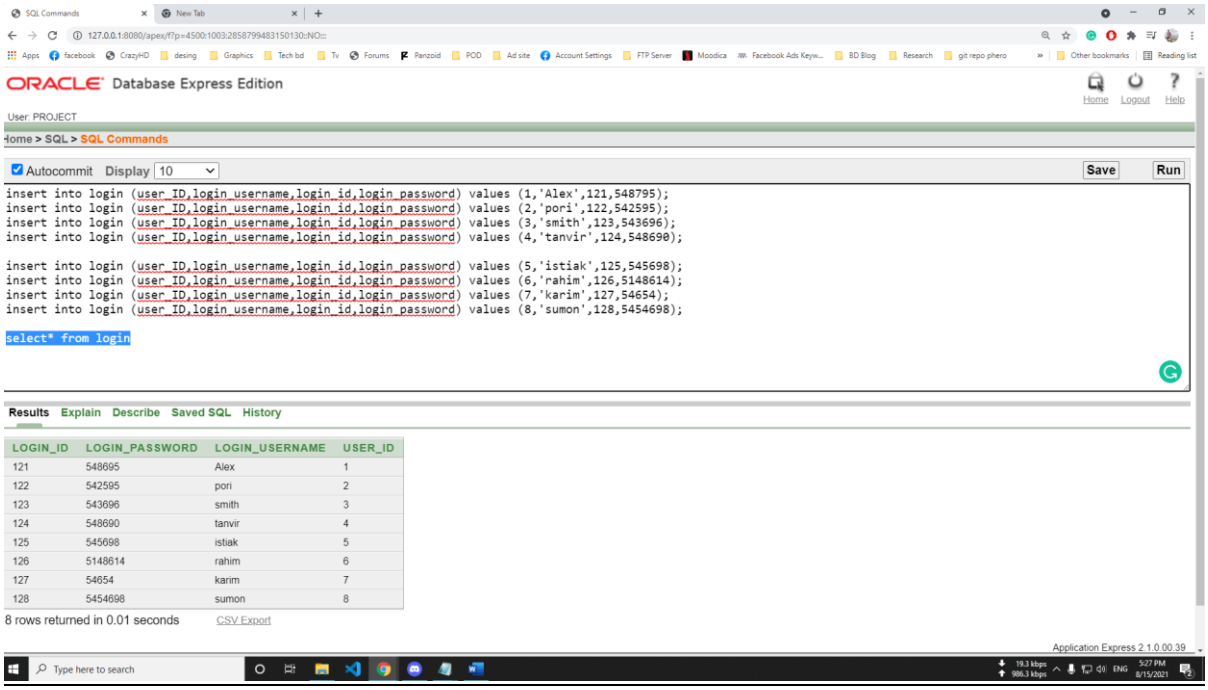
RESERVATION TABLE

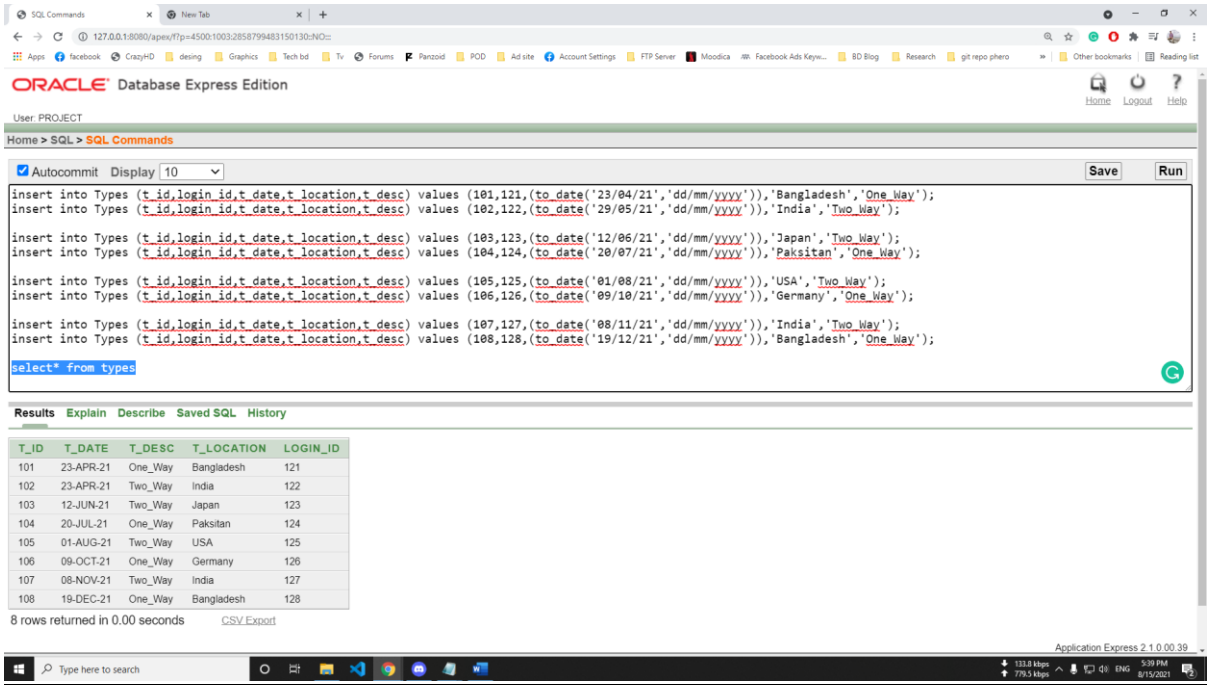


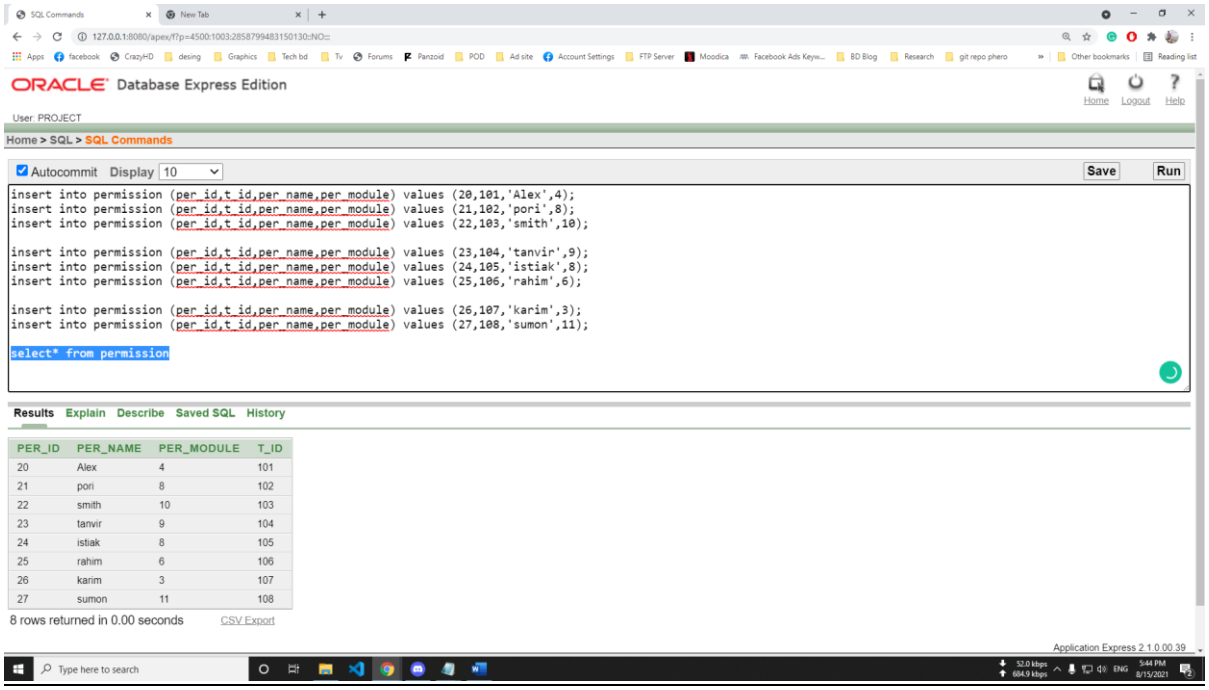
Data insertion






ORACLE Database Express Edition
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save
Run
insert into login (user_ID,login_username,login_id,login_password) values (1,'Alex',121,548795);
insert into login (user_ID,login_username,login_id,login_password) values (2,'pori',122,542595);
insert into login (user_ID,login_username,login_id,login_password) values (3,'smith',123,543696);
insert into login (user_ID,login_username,login_id,login_password) values (4,'tanvir',124,548690);
insert into login (user_ID,login_username,login_id,login_password) values (5,'istiak',125,545698);
insert into login (user_ID,login_username,login_id,login_password) values (6,'rahim',126,5148614);
insert into login (user_ID,login_username,login_id,login_password) values (7,'karim',127,54654);
insert into login (user_ID,login_username,login_id,login_password) values (8,'sumon',128,5454698);
select* from login
Results Explain Describe Saved SQL History
LOGIN_ID LOGIN_PASSWORD LOGIN_USERNAME USER_ID
121 548695 Alex 1
122 542595 pori 2
123 543696 smith 3
124 548690 tanvir 4
125 545698 istiak 5
126 5148614 rahim 6
127 54654 karim 7
128 5454698 sumon 8
8 rows returned in 0.01 seconds
CSV Export
Application Express 2.1.0.00.39


ORACLE Database Express Edition
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save
Run
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (101,121,(to_date('23/04/21','dd/mm/yyyy')),'Bangladesh','One_Way');
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (102,122,(to_date('29/05/21','dd/mm/yyyy')),'India','Two_Way');
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (103,123,(to_date('12/06/21','dd/mm/yyyy')),'Japan','Two_Way');
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (104,124,(to_date('20/07/21','dd/mm/yyyy')),'Paksitan','One_Way');
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (105,125,(to_date('01/08/21','dd/mm/yyyy')),'USA','Two_Way');
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (106,126,(to_date('09/10/21','dd/mm/yyyy')),'Germany','One_Way');
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (107,127,(to_date('08/11/21','dd/mm/yyyy')),'India','Two_Way');
insert into Types (t_id,login_id,t_date,t_location,t_desc) values (108,128,(to_date('19/12/21','dd/mm/yyyy')),'Bangladesh','One_Way');
select* from types
Results Explain Describe Saved SQL History
T_ID T_DATE T_DESC T_LOCATION LOGIN_ID
101 23-APR-21 One_Way Bangladesh 121
102 23-APR-21 Two_Way India 122
103 12-JUN-21 Two_Way Japan 123
104 20-JUL-21 One_Way Paksitan 124
105 01-AUG-21 Two_Way USA 125
106 09-OCT-21 One_Way Germany 126
107 08-NOV-21 Two_Way India 127
108 19-DEC-21 One_Way Bangladesh 128
8 rows returned in 0.00 seconds
CSV Export
Application Express 2.1.0.00.39


SQL Commands
New Tab
127.0.0.1:8080/apex/f?p=4500:1003:28587994831501 30::NO::
ORACLE Database Express Edition
Home Logout Help
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save Run
insert into permission (per_id,t_id,per_name,per_module) values (20,101,'Alex',4);
insert into permission (per_id,t_id,per_name,per_module) values (21,102,'pori',8);
insert into permission (per_id,t_id,per_name,per_module) values (22,103,'smith',10);
insert into permission (per_id,t_id,per_name,per_module) values (23,104,'tanvir',9);
insert into permission (per_id,t_id,per_name,per_module) values (24,105,'istiak',8);
insert into permission (per_id,t_id,per_name,per_module) values (25,106,'rahim',6);
insert into permission (per_id,t_id,per_name,per_module) values (26,107,'karim',3);
insert into permission (per_id,t_id,per_name,per_module) values (27,108,'sumon',11);
select* from permission
Results Explain Describe Saved SQL History
PER_ID PER_NAME PER_MODULE T_ID
20 Alex 4 101
21 pori 8 102
22 smith 10 103
23 tanvir 9 104
24 istiak 8 105
25 rahim 6 106
26 karim 3 107
27 sumon 11 108
8 rows returned in 0.00 seconds CSV Export
Application Express 2.1.0.00.39
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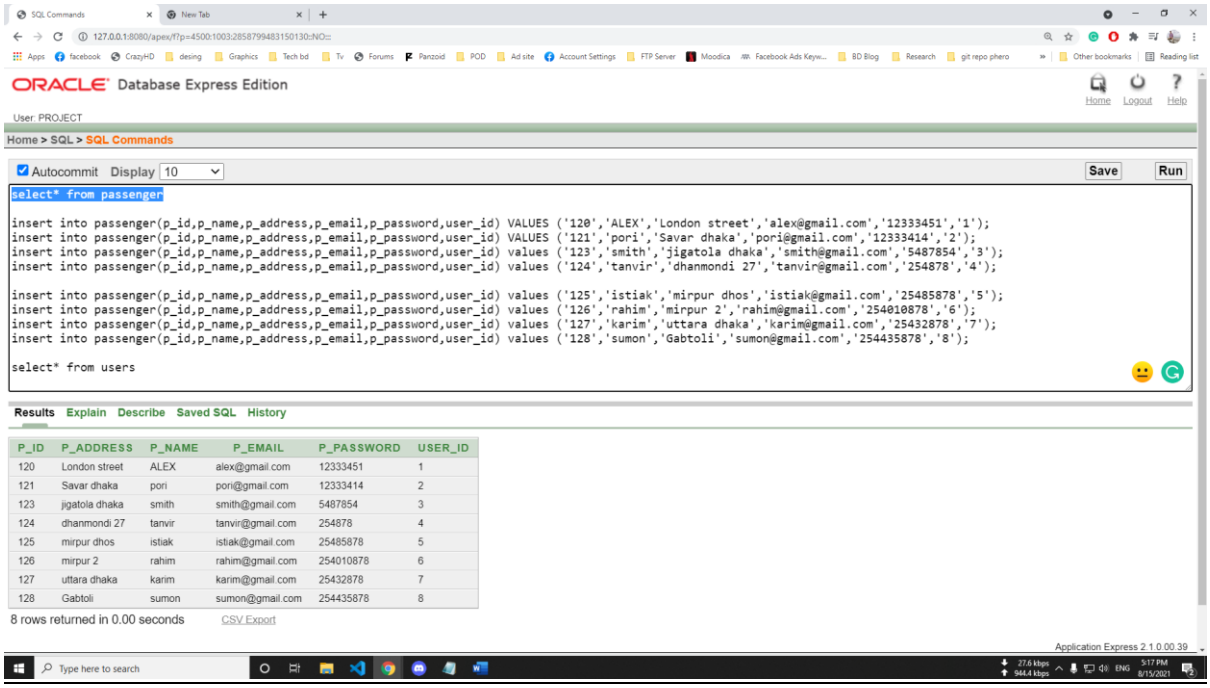
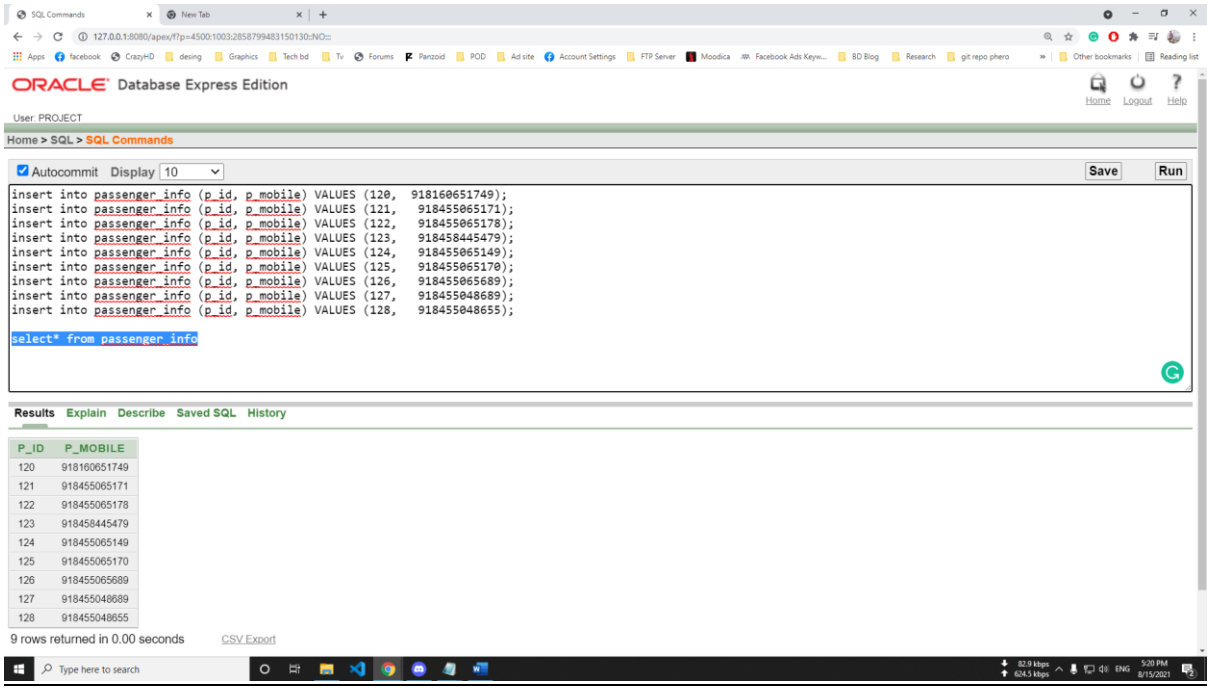
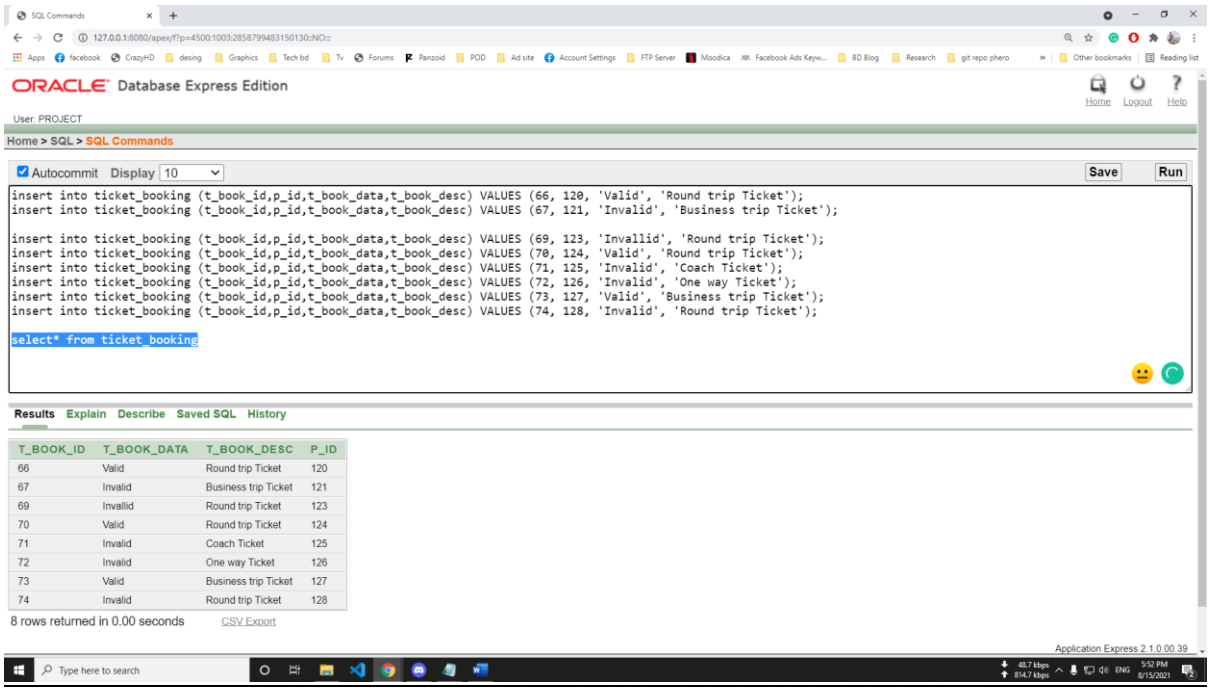
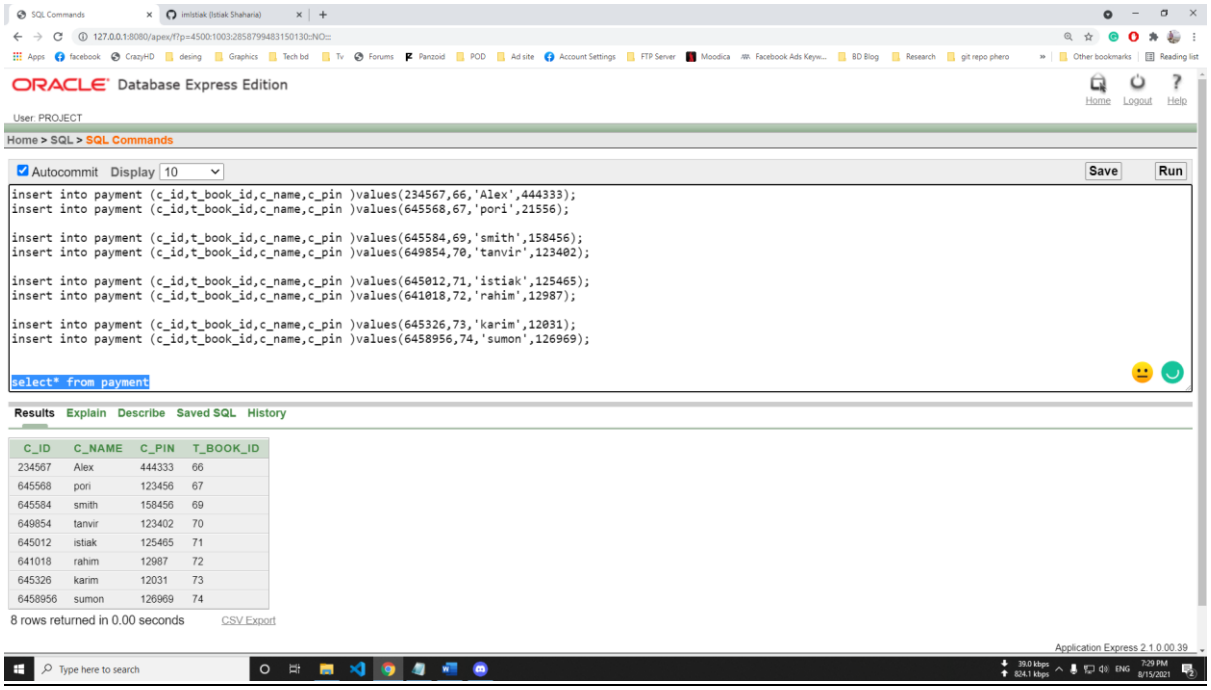

SQL Commands
New Tab
127.0.0.1:8080/apex/f?p=4500:1003:28587994831501 30::NO::
ORACLE Database Express Edition
Home Logout Help
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save Run
select* from passenger
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) VALUES ('120','ALEX','London street','alex@gmail.com','12333451','1');
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) VALUES ('121','pori','Savar dhaka','pori@gmail.com','12333414','2');
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) values ('123','smith','jigatola dhaka','smith@gmail.com','5487854','3');
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) values ('124','tanvir','dhanmondi 27','tanvir@gmail.com','254878','4');
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) values ('125','istiak','mirpur dhos','istiak@gmail.com','25485878','5');
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) values ('126','rahim','mirpur 2','rahim@gmail.com','254010878','6');
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) values ('127','karim','uttara dhaka','karim@gmail.com','25432878','7');
insert into passenger(p_id,p_name,p_address,p_email,p_password,user_id) values ('128','sumon','Gabtoli','sumon@gmail.com','254435878','8');
select* from users
Results Explain Describe Saved SQL History
P_ID P_ADDRESS P_NAME P_EMAIL P_PASSWORD USER_ID
120 London street ALEX alex@gmail.com 12333451 1
121 Savar dhaka pori pori@gmail.com 12333414 2
123 jigatola dhaka smith smith@gmail.com 5487854 3
124 dhanmondi 27 tanvir tanvir@gmail.com 254878 4
125 mirpur dhos istiak istiak@gmail.com 25485878 5
126 mirpur 2 rahim rahim@gmail.com 254010878 6
127 uttara dhaka karim karim@gmail.com 25432878 7
128 Gabtoli sumon sumon@gmail.com 254435878 8
8 rows returned in 0.00 seconds CSV Export
Application Express 2.1.0.00.39
Type here to search


ORACLE Database Express Edition
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save
Run
insert into passenger_info (p_id, p_mobile) VALUES (120, 918160651749);
insert into passenger_info (p_id, p_mobile) VALUES (121, 918455065171);
insert into passenger_info (p_id, p_mobile) VALUES (122, 918455065178);
insert into passenger_info (p_id, p_mobile) VALUES (123, 918458445479);
insert into passenger_info (p_id, p_mobile) VALUES (124, 918455065149);
insert into passenger_info (p_id, p_mobile) VALUES (125, 918455065170);
insert into passenger_info (p_id, p_mobile) VALUES (126, 918455065689);
insert into passenger_info (p_id, p_mobile) VALUES (127, 918455048689);
insert into passenger_info (p_id, p_mobile) VALUES (128, 918455048655);
select* from passenger_info
Results Explain Describe Saved SQL History
P_ID P_MOBILE
120 918160651749
121 918455065171
122 918455065178
123 918458445479
124 918455065149
125 918455065170
126 918455065689
127 918455048689
128 918455048655
9 rows returned in 0.00 seconds
CSV Export


ORACLE Database Express Edition
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save
Run
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (66, 120, 'Valid', 'Round trip Ticket');
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (67, 121, 'Invalid', 'Business trip Ticket');
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (69, 123, 'Invallid', 'Round trip Ticket');
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (70, 124, 'Valid', 'Round trip Ticket');
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (71, 125, 'Invalid', 'Coach Ticket');
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (72, 126, 'Invalid', 'One way Ticket');
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (73, 127, 'Valid', 'Business trip Ticket');
insert into ticket_booking (t_book_id,p_id,t_book_data,t_book_desc) VALUES (74, 128, 'Invalid', 'Round trip Ticket');
select* from ticket_booking
Results Explain Describe Saved SQL History
T_BOOK_ID T_BOOK_DATA T_BOOK_DESC P_ID
66 Valid Round trip Ticket 120
67 Invalid Business trip Ticket 121
69 Invallid Round trip Ticket 123
70 Valid Round trip Ticket 124
71 Invalid Coach Ticket 125
72 Invalid One way Ticket 126
73 Valid Business trip Ticket 127
74 Invalid Round trip Ticket 128
8 rows returned in 0.00 seconds
CSV Export
Application Express 2.1.0.00.39


SQL Commands
127.0.0.1:8080/apex/f?p=4500:1003:28587994831501 30::NO::
ORACLE Database Express Edition
Home Logout Help
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save Run
insert into payment (c_id,t_book_id,c_name,c_pin)values(234567,66,'Alex',444333);
insert into payment (c_id,t_book_id,c_name,c_pin)values(645568,67,'pori',21556);
insert into payment (c_id,t_book_id,c_name,c_pin)values(645584,69,'smith',158456);
insert into payment (c_id,t_book_id,c_name,c_pin)values(649854,70,'tanvir',123402);
insert into payment (c_id,t_book_id,c_name,c_pin)values(645012,71,'istiak',125465);
insert into payment (c_id,t_book_id,c_name,c_pin)values(641018,72,'rahim',12987);
insert into payment (c_id,t_book_id,c_name,c_pin)values(645326,73,'karim',12031);
insert into payment (c_id,t_book_id,c_name,c_pin)values(6458956,74,'sumon',126969);
select* from payment
Results Explain Describe Saved SQL History
C_ID C_NAME C_PIN T_BOOK_ID
234567 Alex 444333 66
645568 pori 123456 67
645584 smith 158456 69
649854 tanvir 123402 70
645012 istiak 125465 71
641018 rahim 12987 72
645326 karim 12031 73
6458956 sumon 126969 74
8 rows returned in 0.00 seconds CSV Export
Application Express 2.1.0.00.39
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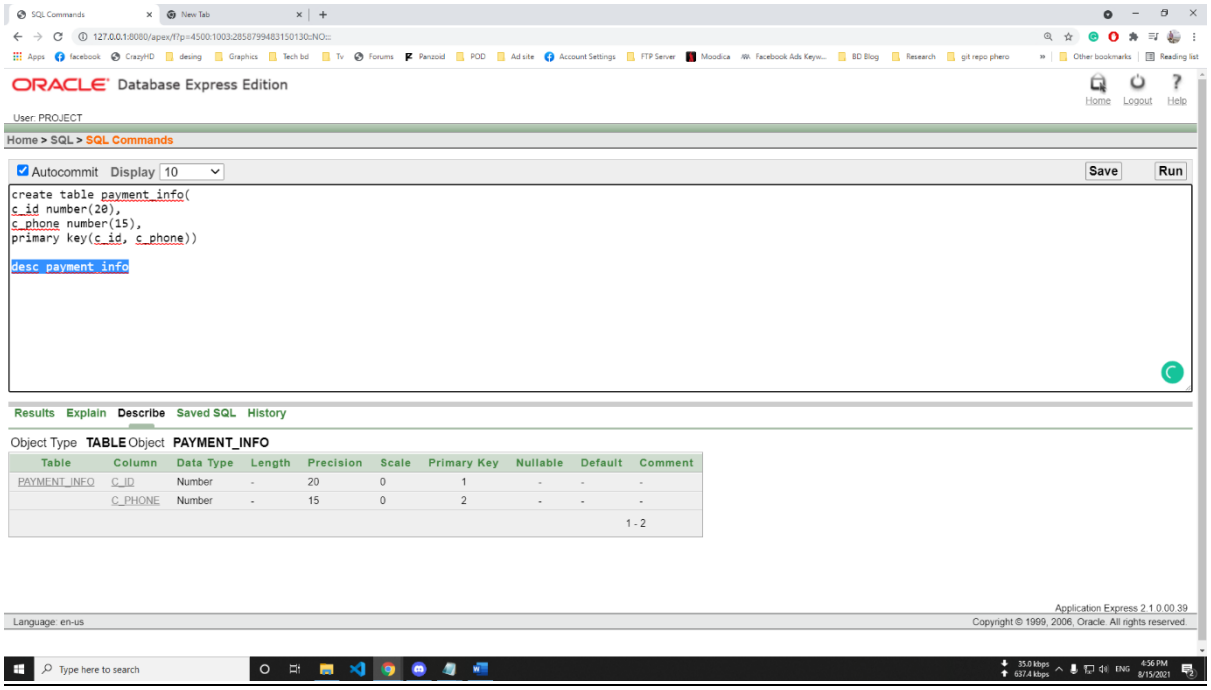
SQL Commands
New Tab
127.0.0.1:8080/apex/f?p=4500:1003:28587994831501 30::NO::
ORACLE Database Express Edition
Home Logout Help
User: PROJECT
Home > SQL > SQL Commands
Autocommit Display 10
Save Run
create table payment_info(
c_id number(20),
c_phone number(15),
primary key(c_id, c_phone))
desc payment_info
Results Explain Describe Saved SQL History
Object Type TABLE Object PAYMENT_INFO
Table Column Data Type Length Precision Scale Primary Key Nullable Default Comment
PAYMENT_INFO C_ID Number - 20 0 1 - - -
C_PHONE Number - 15 0 2 - - -
1 - 2
Application Express 2.1.0.00.39
Language: en-us
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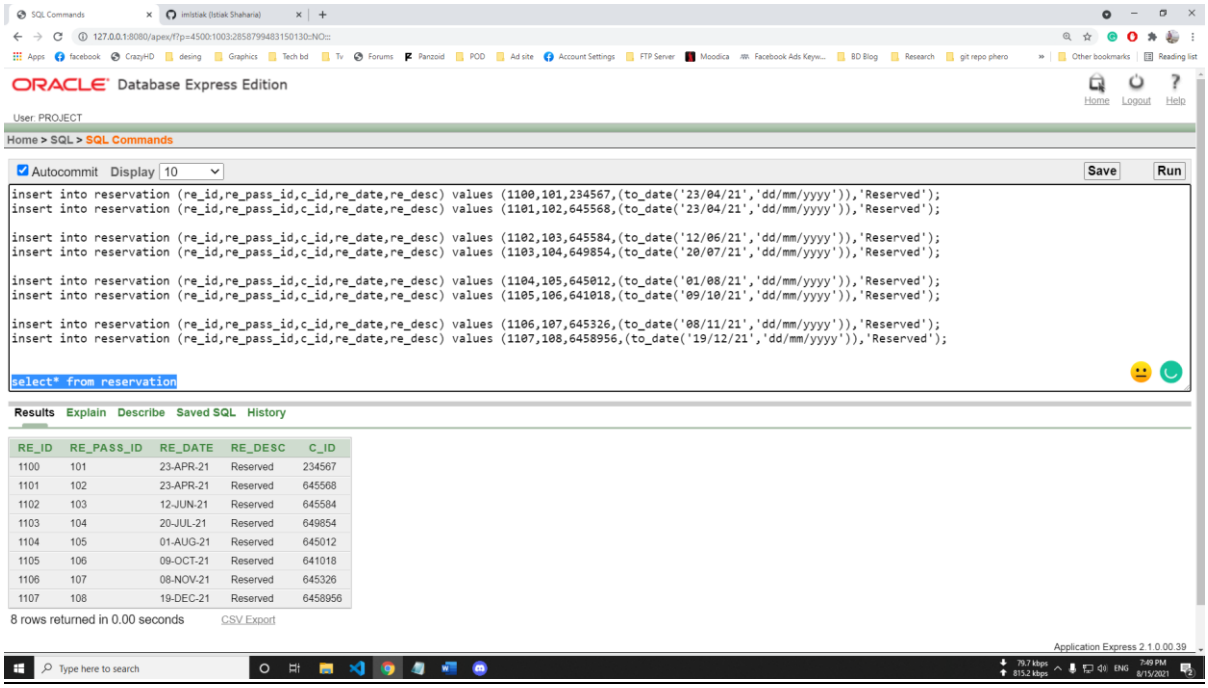
SQL Commands
imlistiak (Istiak Shaharia)
127.0.0.1:8080/apex/f?p=4500:1003:28587994831501 30::NO::
Database Express Edition
User: PROJECT
Home
Logout
Help
Home > SQL > SQL Commands
Autocommit
Display 10
Save
Run
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1100,101,234567,(to_date('23/04/21','dd/mm/yyyy')),'Reserved');
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1101,102,645568,(to_date('23/04/21','dd/mm/yyyy')),'Reserved');
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1102,103,645584,(to_date('12/06/21','dd/mm/yyyy')),'Reserved');
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1103,104,649854,(to_date('20/07/21','dd/mm/yyyy')),'Reserved');
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1104,105,645012,(to_date('01/08/21','dd/mm/yyyy')),'Reserved');
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1105,106,641018,(to_date('09/10/21','dd/mm/yyyy')),'Reserved');
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1106,107,645326,(to_date('08/11/21','dd/mm/yyyy')),'Reserved');
insert into reservation (re_id,re_pass_id,c_id,re_date,re_desc) values (1107,108,6458956,(to_date('19/12/21','dd/mm/yyyy')),'Reserved');
select* from reservation
Results
Explain
Describe
Saved SQL
History
RE_ID RE_PASS_ID RE_DATE RE_DESC C_ID
1100 101 23-APR-21 Reserved 234567
1101 102 23-APR-21 Reserved 645568
1102 103 12-JUN-21 Reserved 645584
1103 104 20-JUL-21 Reserved 649854
1104 105 01-AUG-21 Reserved 645012
1105 106 09-OCT-21 Reserved 641018
1106 107 08-NOV-21 Reserved 645326
1107 108 19-DEC-21 Reserved 6458956
8 rows returned in 0.00 seconds
CSV Export
Application Express 2.1.0.00.39
Type here to search
7:49 PM
8/15/2021

Question & Answer

1. Find all the passenger (Re_ID) and their Reservation_date who are reserved the ticket after the Re_ID 1104.

2. Display the Login_ID,T_date of the Types is from india.

3. Referring to the table Users,user id, display all the User_name,User_address user_emial who's User ID is above than 5

4.Write a query to get the difference between the highest and lowest Reservation ID(Re_ID).

5.Display the p_name and concat all the p_name of the passengers and their p_email by joining the column using concat function and show the length of p_name.

6.create view psk that contains details of c_name='istiak'

7.create view, payment_cvu that contains details of c_name='istiak'

8. Display the name of passengers who bought Round trip Ticket.

9. Display name and p_id of that person who lives in dhanmondi 27 Road.

10. Display name, and reservation date of those people whose re_desc status is reserved.