SEN2104 DATABASE MANAGEMENT SYSTEMS PROJECT

Project Title: Travel Management System

Group Number: 41

Team Members: Ediz Özdil,1906811

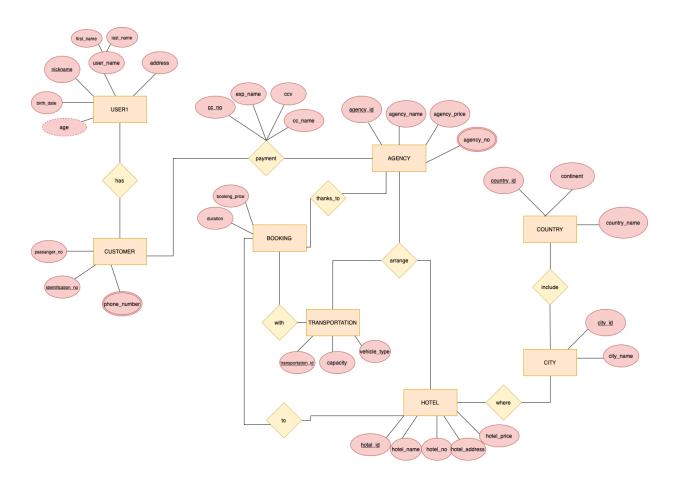
Mehmed Arslan Aras, 1902935

Our project belongs to the database of a travel planning agency. This travel planning includes membership information, payment information, country information, city countries, hotel information, transportation information, and agency information. Users can filter the options as they want by specifying the feature on the name of the trip they plan. Users register to the application with their personal information. When users become a customer, they complete their membership by entering some special information. Users can pay by entering their payment information into the application. Agencies can arrange hotel and transportation information. Transportation companies have agency and hotel information. Reservation information is also presented to the customer with the hotel, transportation, and agency ids.

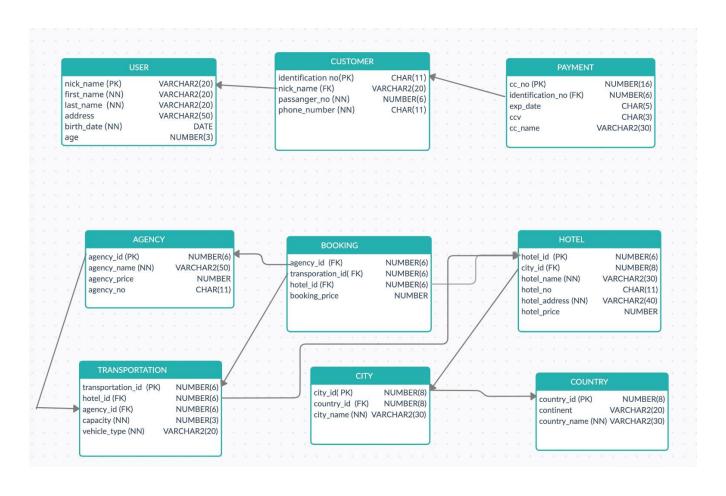
MEMBER-TASK DISTRIBUTION

NAME/SURNAME	STUDENT ID	RESPONSIBILITIES	
Ediz Özdil	1906811	Introduction, E-R	
		Diagram, Boyce-Codd	
		normal form, Create	
		Table and Insert Into	
		Statements	
Mehmed Arslan Aras	1902935	Schema Diagram,	
		Joins, Nested Queries,	
		Set Operations and	
		Aggragate Operations	

E-R DIAGRAM



DATABASE SCHEMA DIAGRAM



BOYCE-CODD NORMAL FORM

R={nickname, user_name, address, birth_date, age, first_name, last_name, identification_no, phone_number, passanger_no, cc_no, exp,name, ccv, cc_name, agency_id, agency_name, agency_price, agency_no, hotel_id, hotel_name, hotel_no, hotel_address, hotel_price, transportation_id, capacity, vehicle_type, duration, booking_price, destination, city_id, city_name, country_id, continent, country_name}

User={nickname -> user_name, address, birth_date, age, first_name, last_name}

Customer={identification_no -> phone_number, passanger_no, nickname}

Payment= {cc_no -> exp,name, ccv, cc_name}

Agency={agency_id -> agency_name, agency_price, agency_no}

Hotel={hotel_id -> hotel_name, hotel_no, hotel_address, hotel_price,city_id}

Transportation={transportation_id -> capacity, vehicle_type, agency_id, hotel_id}

Booking={duration, booking_price, destination, agency_id, transportation_id, hotel_id}

City={city_id -> city_name, country_id}

Country={country_id -> continent, country_name}

F={identification_no}+={identification_no,first_name,last_name}

 $\textbf{F1} = \{hotel_id\} + = \{hotel_id, city_id, hotel_name, hotel_no, hotel_address, hotel_price\}$

F2 ={agency_id}+= {agency_id,booking_price}

F3={user_id}+=

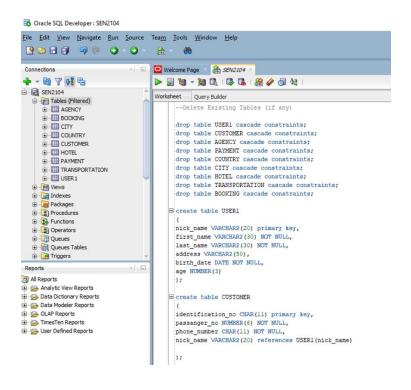
{nick_name,identification_no,first_name,last_name,address,birth_date,age, phone_number,passanger_no}

F4={city_id}+= {city_id,city_name,country_name,continent}

F5={transportation_id}+={transportation_id,vehicle_type,capacity,hotel_name, hotel_address,agency_name,city_name}

SQL CODE SCREENSHOTS

Create Table Statements



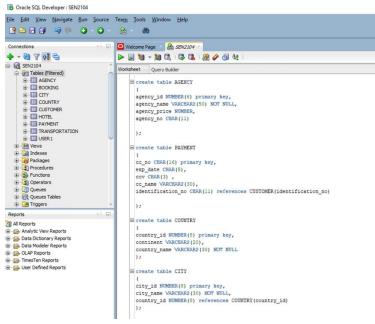


Table USER1 created.

Table CUSTOMER created.

Table AGENCY created.

Table PAYMENT created.

Table COUNTRY created.

Table CITY created.

Table HOTEL created.

Table HOTEL created.

Table BOOKING created.

Insert Into Statements

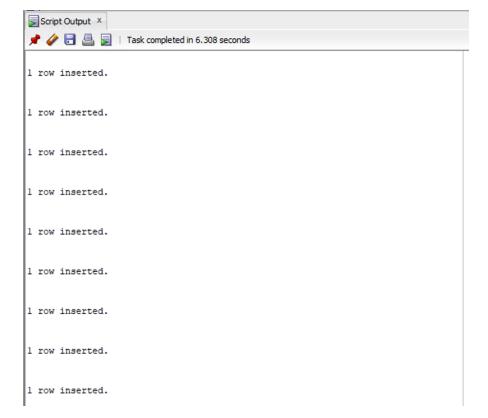
```
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(100, 'Flane', 555, '190280', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(101, 'Tour', 800, '190281', '111112');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(102, 'Tour', 800, '190281', '111112');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(103, 'Flane', 450, '190284', '111113');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(105, 'Tour', 800, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(106, 'Flane', 120, '190286', '111112');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(106, 'Flane', 120, '190286', '111112');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(106, 'Flane', 450, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(106, 'Flane', 450, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(106, 'Flane', 450, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(106, 'Flane', 450, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(110, 'Flane', 450, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(110, 'Flane', 450, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(110, 'Flane', 450, '190286', '111111');
insert into TRANSPORTATION(transportation_id, vehicle_type, capacity, hotel_id, agency_id)values(110, 'Flane', 450, '190286', '1111
```

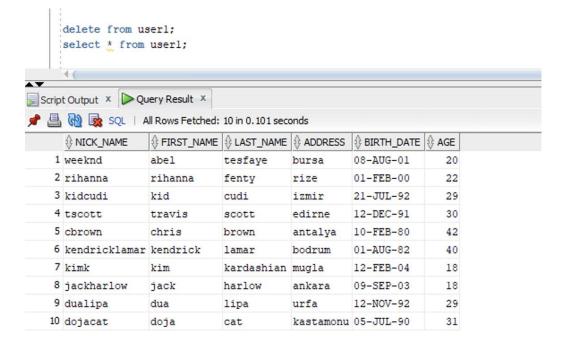
```
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("weeknd', 'abel', 'tesfaye', 'bursa', '08/Awg/2001', 20);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("tishanna', 'fenty', 'tire', 'l/Feb/2000', 22);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("tishound', 'kid', 'equi', 'imir', 'l/Ju/1/592', 29);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("toott', 'travis', 'soott', 'editne', '12/Bec/1981', 30);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("toott', 'travis', 'soott', 'editne', '12/Bec/1981', 30);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("tondicklamer", 'kendrick', 'lamar', 'bodrum', '01/Awg/1982', 40);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("todicklamer", 'kendrick', 'lamar', 'bodrum', '01/Awg/1982', 40);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("todicklamer", 'wendrick', 'lamar', 'sofey) 2003', 'insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("todicklamer", 'wendrick', 'lamar', 'valuer', '12/Rov/1992', 30);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("dolaripa', 'dua', 'lipa', 'urfa', 'lz/Rov/1992', 30);
insert into USER1 (nick_name, first_name, last_name, address, birth_date, age) values ("dolaripa', 'dua', 'lipa', 'urfa', 'lz/Rov/1992', 30);
insert into USER1 (nick_name, first_name, last_name, agenomy no values ("lill111, 'CACUTS TOUR", '02011234323);
insert into USER1 (nick_name, first_name, last_name, agenomy no values (lill111, 'CACUTS TOUR', '02011234321);
insert into USER1 (nick_name, last_name, agenomy probee, number, nick_name) values ("lill14, 'CLOCK TOUR, '1200, 0201123431);
insert into USER1 (nick_name, last_name, agenomy probee, number, nick_name) values ("lill14, 'CLOCK TOU
```

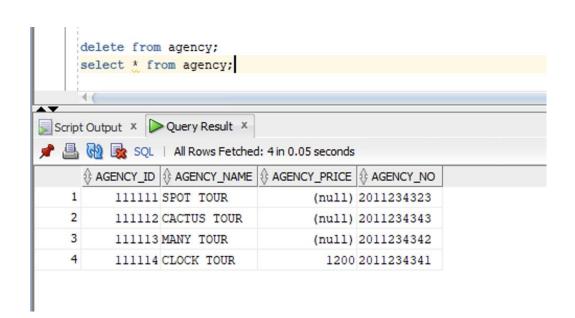
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insert into COUNTRY(country_id,continent,country_name) values(900900, 'America', 'USA');
insert into COUNTRY(country_id,continent,country_name) values(900903, 'Europe', 'French');
insert into COUNTRY(country_id,continent,country_name) values(900904, 'Europe', 'Germany');
insert into COUNTRY(country_id,continent,country_name) values(900906, 'America', 'Brazil');
insert into COUNTRY(country_id,continent,country_name) values(900906, 'America', 'Brazil');
insert into COUNTRY(country_id,continent,country_name) values(9009010, 'Africa', 'Migeria');
insert into COUNTRY(country_id,continent,country_name) values(900911, 'Africa', 'Egypt');
insert into COUNTRY(country_id,continent,country_name) values(900911, 'Africa', 'Egypt');
insert into COUNTRY(country_id,country_id) values(9100900, 'Washington',900900);
insert into CITY(city_id,city_name,country_id) values(9100900, 'Baril',900903);
insert into CITY(city_id,city_name,country_id) values(9100900, 'Barzil',900908);
insert into CITY(city_id,city_name,country_id) values(9100900, 'Barzil',900908);
insert into CITY(city_id,city_name,country_id) values(9100900, 'Barzil',900910);
insert into CITY(city_id,city_name,country_id) values(9200900, 'Barzil',900910);
```

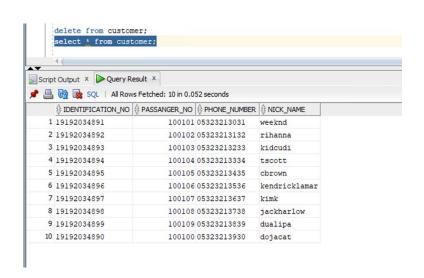
insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190280, 'Lost Hotel', 11003352121,10000, 'Capital Hall ND:80134',8100960; insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190281, 'Mirjeveti', 0999003123, 800000, 'Main idiatrict ND:85',8100960); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190281, 'Mother Mary Concept Hotel', 5664733814, 969, 'Reitin', 8100960); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190281, 'Mother Mary Concept Hotel', 5664733814, 969, 'Reitin', 8100960); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190281, 'Factor Hings', 80012232121, 9010, 'Marvatelre street', 9109600); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190285, 'Mac Cas de Hotel', 90014556578, 1200, 'Le Papel attreet ND:10',9180960); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190285, 'Bert Bail', 9021232121, 9100, 'Marvatel' Hall ND:19,1910900); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190285, 'Bert Bail', 9021232121, 1000, 'Marvatel' Hall ND:19,1910900); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190285, 'Bert Bail', 90012324322, 19300, 'Locde street ND:19,1910900); insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190285, 'Summer in LONGON', 90011243977, 1250, 'Locdon attreet ND:10', 91305 insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190285, 'Summer in LONGON', 90011243977, 1250, 'Locdon attreet ND:10', 91305 insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_id) values(190285, 'Summer in LONGON', 90011243972, 19000, 'Capital Hall ND:19, 19009000', insert into HOTEL(hotel_id_hotel_name,hotel_no,hotel_price,hotel_address_city_i

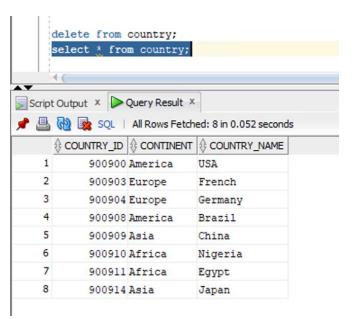
```
insert into BOOKING (duration, booking price, transportation_id, hotel_id, agency_id) values (5,10000,100, '190280', '111111'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (4,12000,101, '190281', '111112'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (5,12000,103, '190284', '111113'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (2,9000,104, '190285', '111113'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (3,9000,105, '190286', '111113'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (3,9000,106, '190287', '111112'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (3,9000,106, '190288', '111113'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (4,10000,108, '190288', '111113'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (4,1000,100, '190291', '111113'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (4,1000,110, '190291', '111113'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (5,1000,111, '190292', '111111'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (6,3000,113, '190294', '111114'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (7,9000,114, '190295', '111114'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (8,1000,116, '190297', '111114'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (8,1000,118, '190296', '111114'); insert into BOOKING (duration, booking_price, transportation_id, hotel_id, agency_id) values (8,1000,118, '190296', '111111'); insert int
```

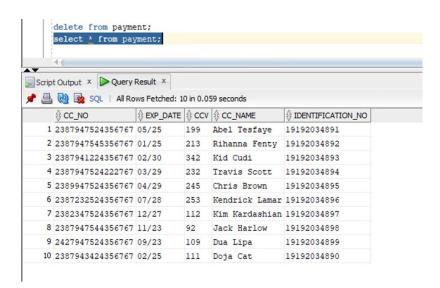


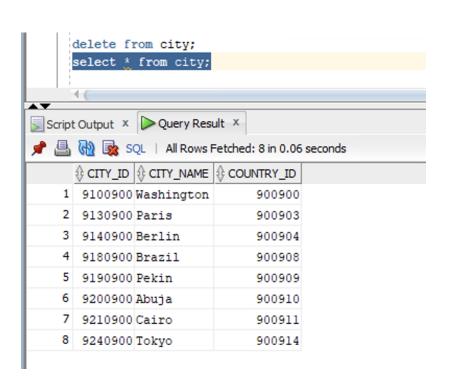




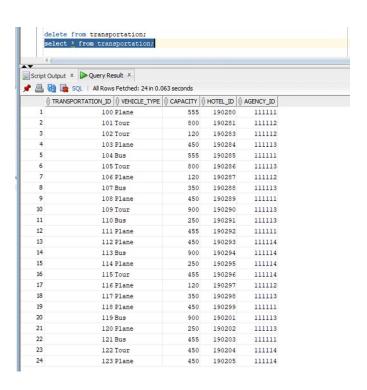


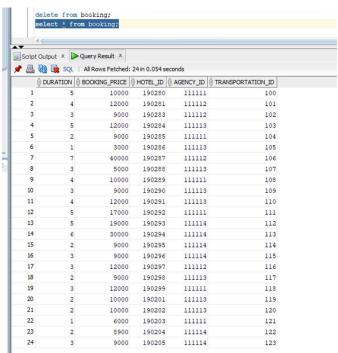




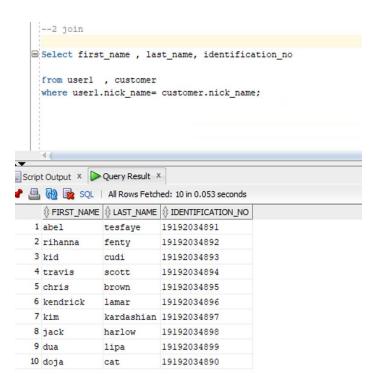


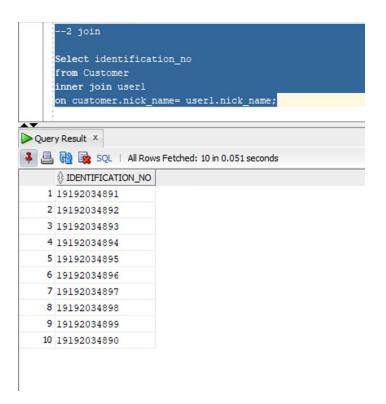
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Scrint C	Output × Query Result ×				
4		conde			
	HOTEL ID A HOTEL NAME	1.	∯ HOTEL_ADDRESS	A HOTEL PRICE	⊕ CITY ID
1	190280 Lost Hotel	_	Capital Hall NO:90234	· -	9100900
2	190281 Mirjevski		Mail district NO:45		9100900
3	190283 Mother Mary Concept Hotel				9100900
4	190284 Stranger Things		Akaretler street		9130900
5	190285 La Casa de Hotel		La Papel street NO:10		9130900
6	190286 Papa Lord		Capital Hall NO:5		9130900
7	190287 Old Wine Factory		Ata street NO:1		9180900
8	190288 Beer Hall		Survivor Hall NO:21	31000	9180900
9	190289 Hotel de More	90011243422	Loose street NO:929	23900	9180900
10	190290 Suit Mitra	90011243424	Star street NO:10	12090	9190900
11	190291 Summer in LONDON	90011243477	London street NO:10	1290	9190900
12	190292 Suva Nights	90002228372	Capital Suva street NO:2	9000	9190900
13	190293 Agent in Apartments	9872829922	Pekin Central Hall NO:1	99000	9200900
14	190294 Aquapark USA	1235467789	Don district NO:65	900	9200900
15	190295 Street Design	34567772142	Risque street NO:11	860	9200900
16	190296 Kan de Pale	77703233282	Rihanna street NO:1	4300	9140900
17	190297 Streetsing Hotel	90011243422	Dolma district NO:1001	92000	9140900
18	190298 Anxiety Hotel	90011246666	Brain street NO:1	120	9140900
19	190299 Mood Booster Night Hotel	90011245555	IGO district NO:10	760	9210900
20	190201 Boossss Night Hotel	90012344323	All Star street NO:22220	450	9210900
21	190202 Boo Night Hotel	90229877676	Garlic Bread district NO:90	1230	9210900
22	190203 QNB BANK HOTEL	9872829922	Laugh Central Hall NO:31	99000	9240900
23	190204 Believer Nights	1235467789	Diren district NO:6335	90000	9240900
24	190205 Money Design	34567772142	Another Round street NO:181	340	9240900



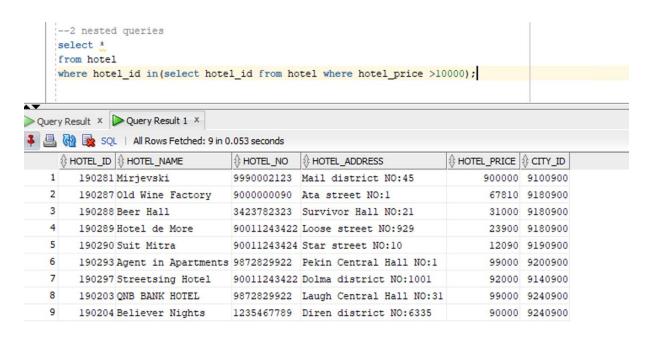


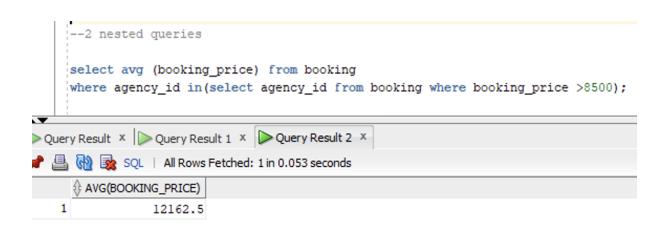
2 JOIN WITH CONDITIONS





2 NESTED QUERIES





2 SET OPERATION

```
--2 set operations
   select * from(
     select nick name from userl
     select nick_name from customer);
Query Result X Query Result 1 X Query Result 2 X
📌 🖺 🙌 🗽 SQL | All Rows Fetched: 10 in 0.049 seconds

⊕ NICK_NAME

    1 cbrown
    2 dojacat
    3 dualipa
    4 jackharlow
    5 kendricklamar
    6 kidcudi
    7 kimk
    8 rihanna
    9 tscott
   10 weeknd
```

```
select * from (
select agency_id from agency
intersect
select agency_id from transportation);

Query Result × Query Result 1 × Query Result 2 ×

Query Result × AGENCY_ID

1 111111
2 111112
3 111113
4 111114
```

2 AGGREGATE OPERATION INCLUDE JOIN

