SQL Project

Contents

Task 1:

create a SQL script that will execute to create given tables in a MySQL database. Be sure to include: all tables and their attributes, primary keys, foreign keys, any constraints. Your script should be able to be executed in one run without errors.

Task 2:

SQL DML commands

Task 3:

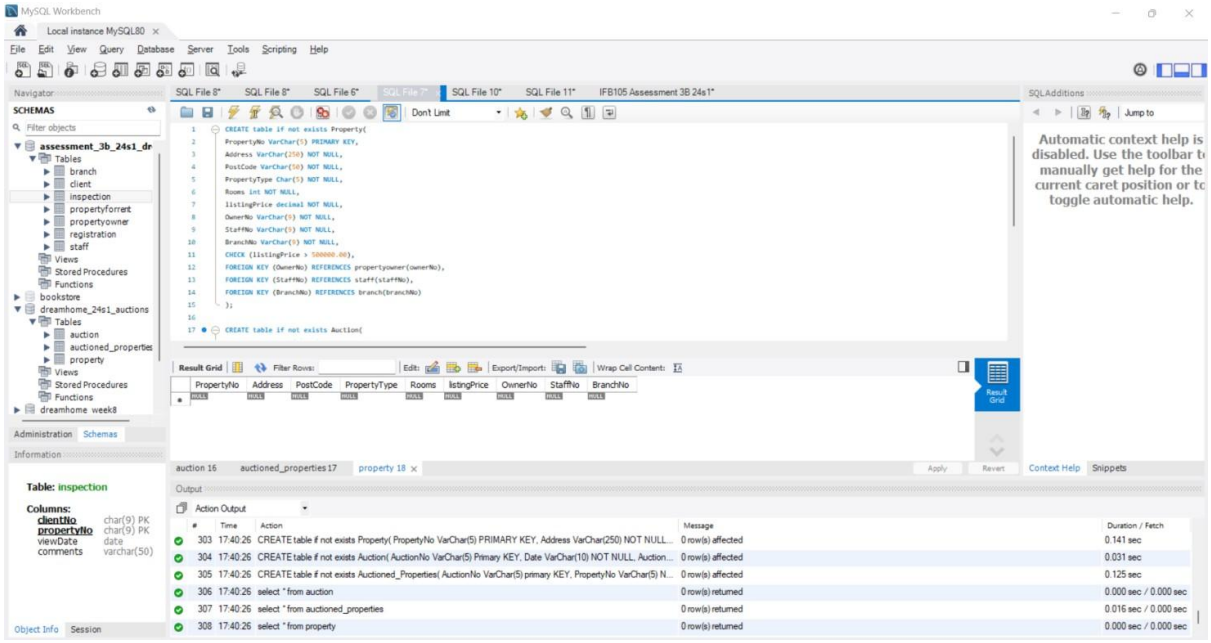
SQL selects requiring joining tables

Task 4:

SQL DCL commands

Task 1:

```
CREATE table if not exists Property(
PropertyNo VarChar(5) PRIMARY KEY,
Address VarChar(250) NOT NULL,
PostCode VarChar(50) NOT NULL,
PropertyType Char(5) NOT NULL, Rooms int NOT NULL, listingPrice decimal NOT NULL,
OwnerNo VarChar(9) NOT NULL,
StaffNo VarChar(9) NOT NULL,
BranchNo VarChar(9) NOT NULL,
CHECK (listingPrice > 500000.00),
FOREIGN KEY (OwnerNo) REFERENCES propertyowner(ownerNo),
FOREIGN KEY (StaffNo) REFERENCES staff(staffNo),
FOREIGN KEY (BranchNo) REFERENCES branch(branchNo)
);
```



CREATE table if not exists Auction(

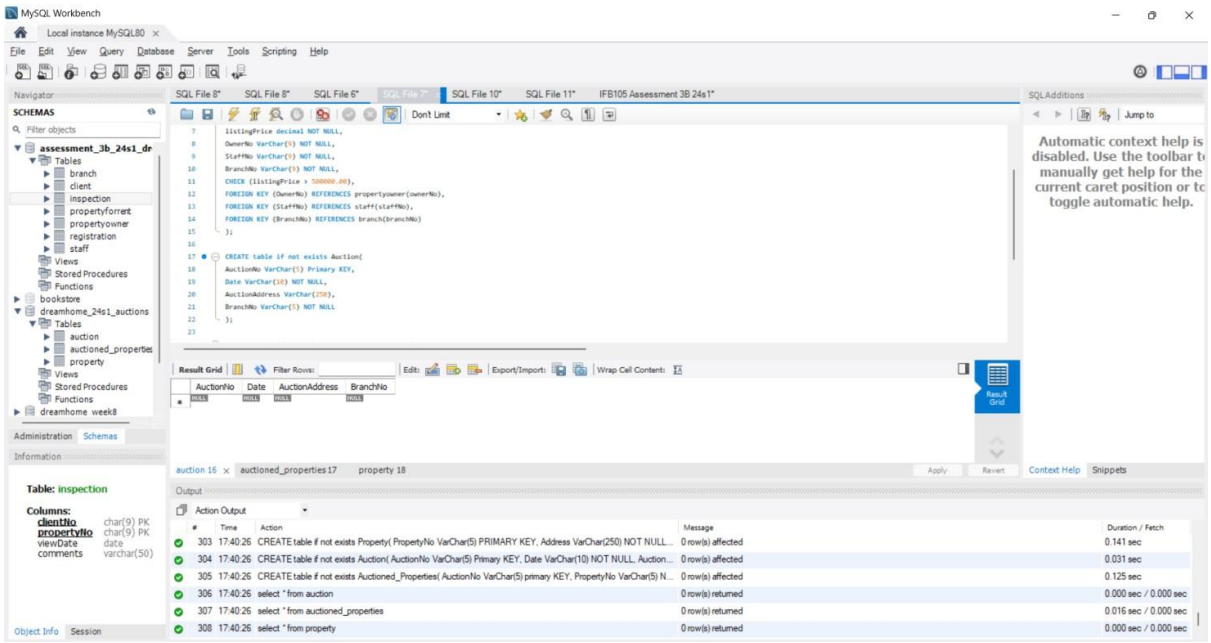
AuctionNo VarChar(5) Primary KEY,

Date VarChar(10) NOT NULL,

AuctionAddress VarChar(250),

BranchNo VarChar(5) NOT NULL

);



CREATE table if not exists Auctioned_Properties(

AuctionNo VarChar(5) primary KEY,

PropertyNo VarChar(5) NOT NULL,

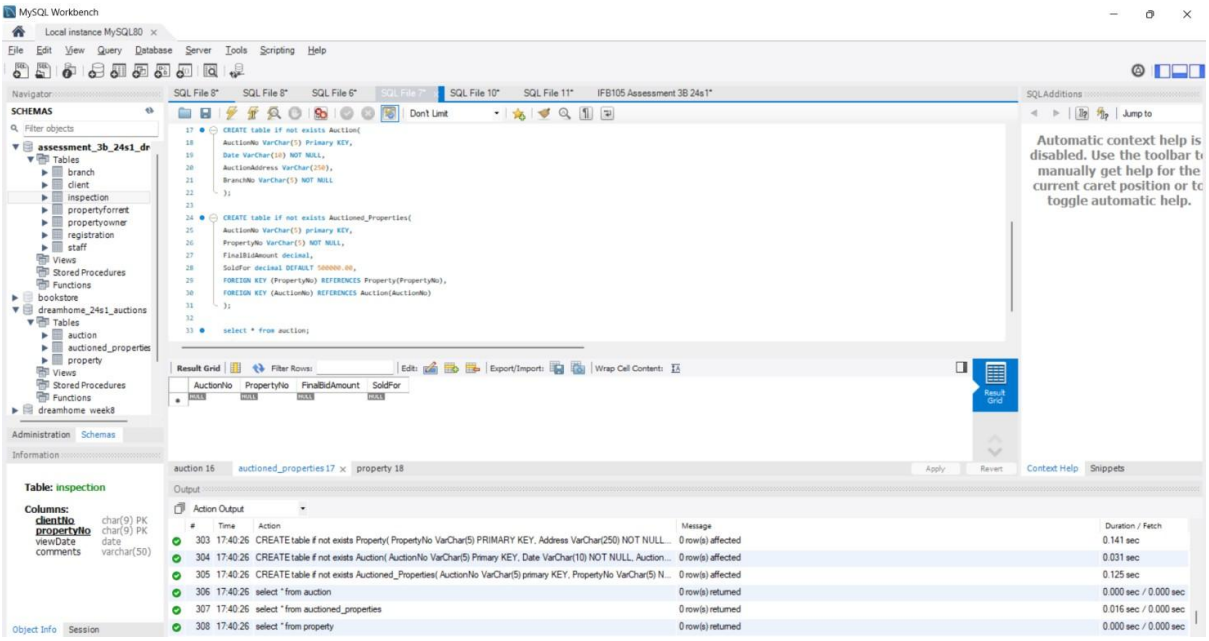
FinalBidAmount decimal,

SoldFor decimal DEFAULT 500000.00,

FOREIGN KEY (PropertyNo) REFERENCES Property(PropertyNo),

FOREIGN KEY (AuctionNo) REFERENCES Auction(AuctionNo)

);

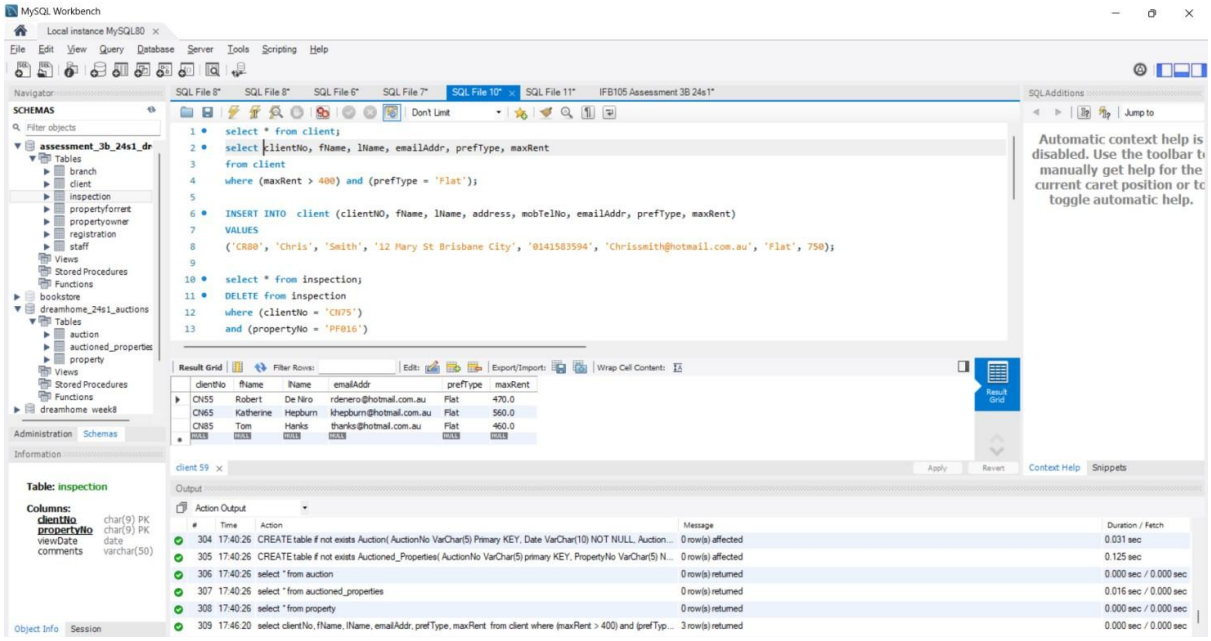


Task 2:

a) Select the client number, first name, last name, email address, preferred type and max rent of all clients that have a prefType of Flat and maxRent greater than $400.

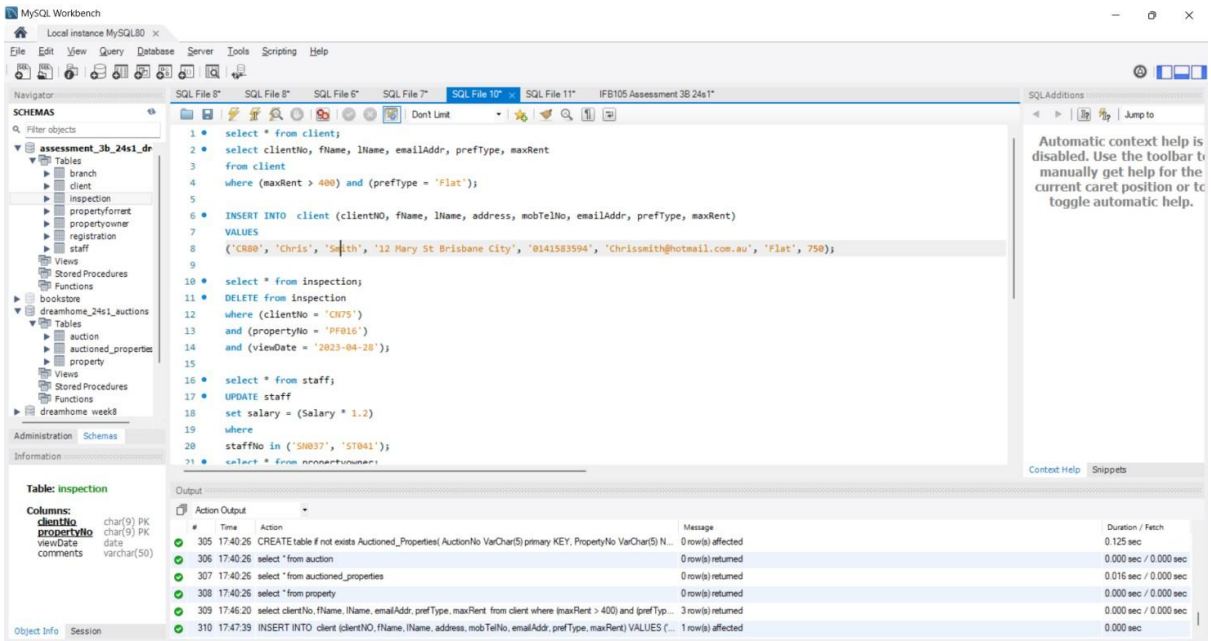
select clientNo, fName, lName, emailAddr, prefType, maxRent from client

where (maxRent > 400) and (prefType = 'Flat');



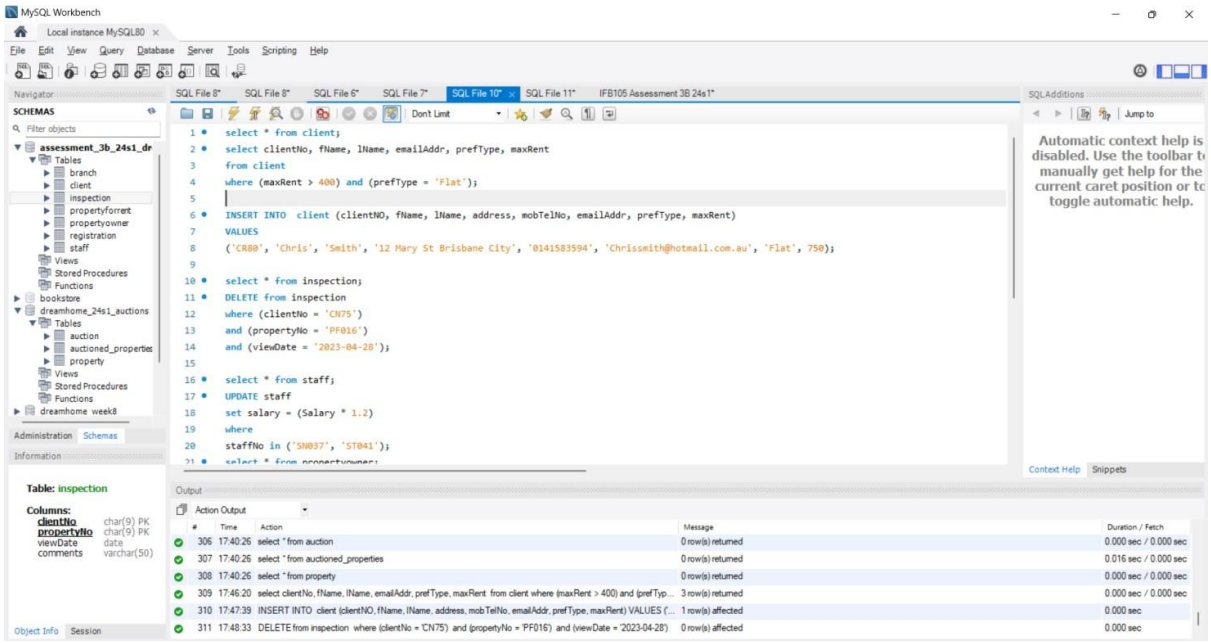
b) *DreamHome* has a new client, Chris Smith, his address is 12 Mary St Brisbane city, telephone number 0141583594, email address chrissmith@hotmail.com.au, preference type is a Flat, and he is willing to pay a max rent of $750. Assign him the client number 'CR80'. Write a SQL statement that will add his record to the database.

```
INSERT INTO  client (clientNO, fName, lName, address, mobTelNo, emailAddr, prefType,
maxRent)

VALUES

('CR80', 'Chris', 'Smith', '12 Mary St Brisbane City', '0141583594', 'Chrissmith@hotmail.com.au',
'Flat', 750);
```



c) Write a SQL statement to DELETE the inspection record for client 'CN75' who inspected property 'PF016' on '2023-04-20'.

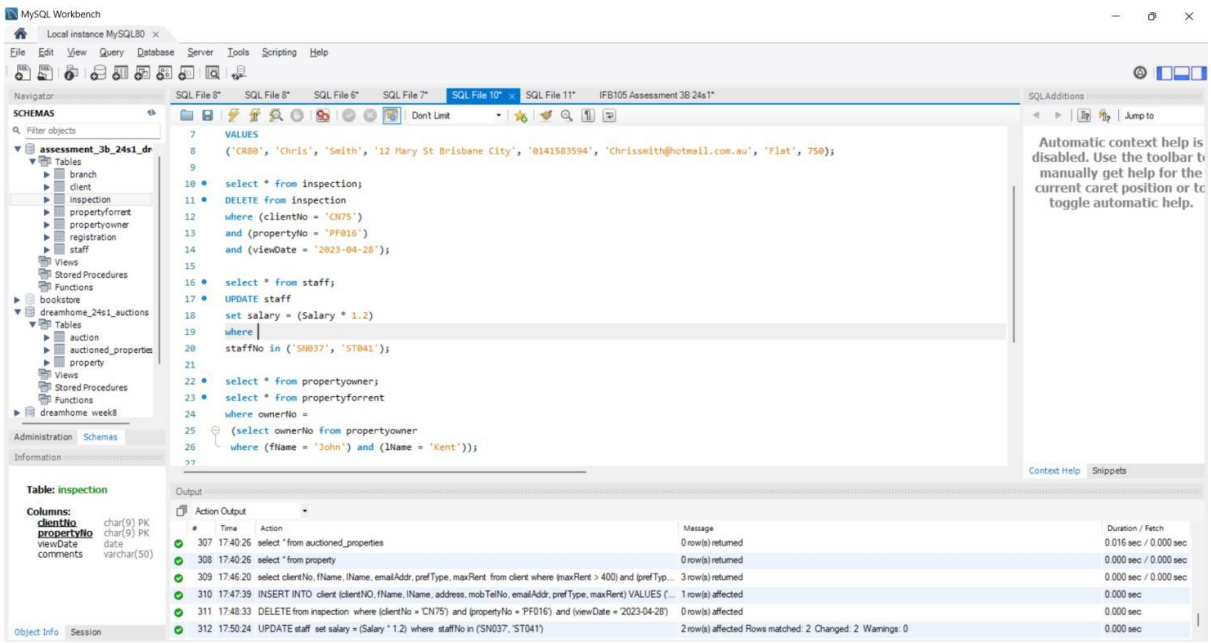
DELETE from inspection where (clientNo = 'CN75') and (propertyNo = 'PF016') and (viewDate = '2023-04-28');



d) Increase the salary of staff with staff numbers SN037 and ST041 by 20% using the IN operator.

UPDATE staff

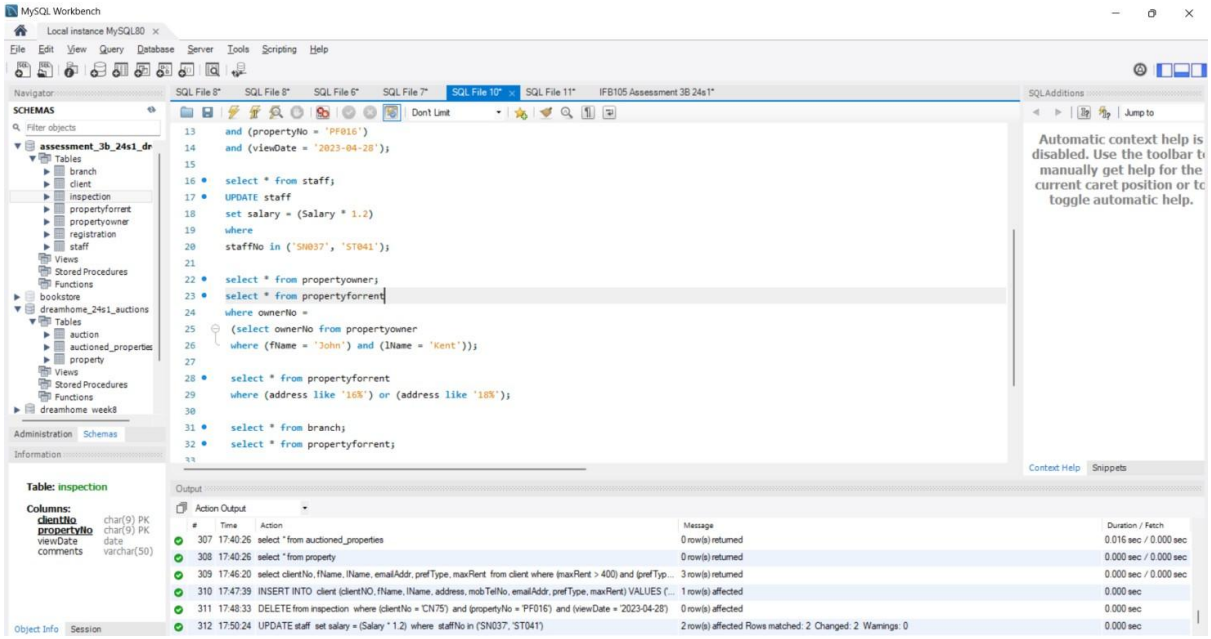
set salary = (Salary * 1.2) where staffNo in ('SN037', 'ST041');



e) How many properties does John Kent (PO046) currently have listed for rent?

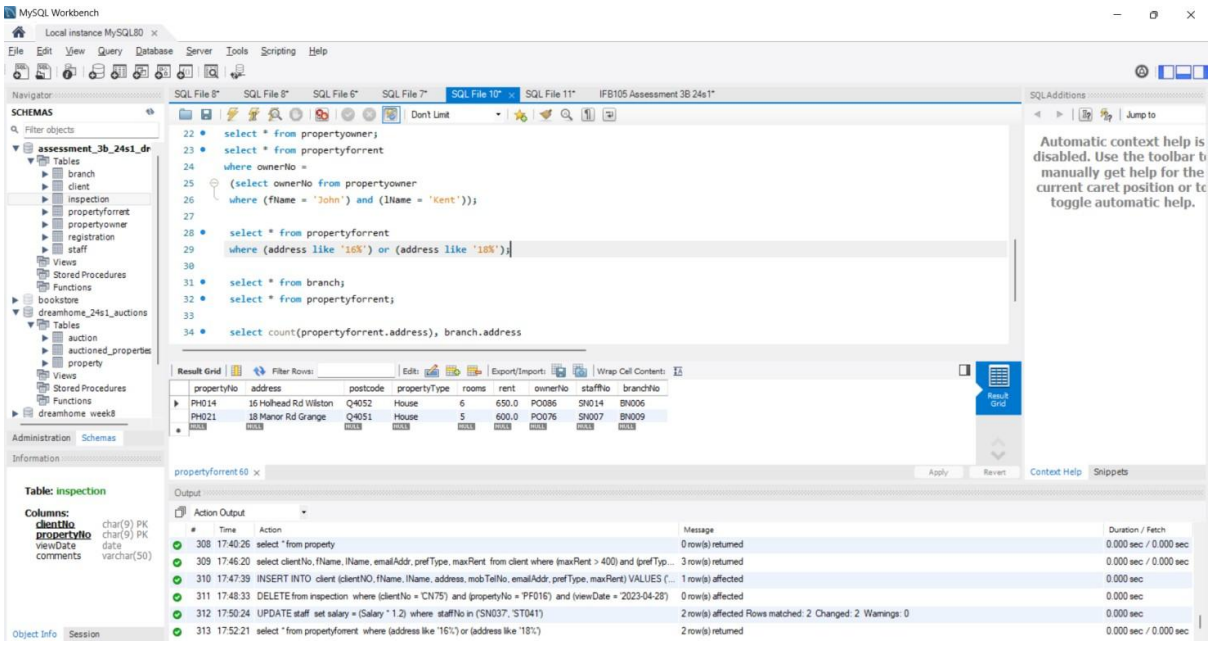
where ownerNo =

(select ownerNo from propertyowner where (fName = 'John') and (lName = 'Kent'));



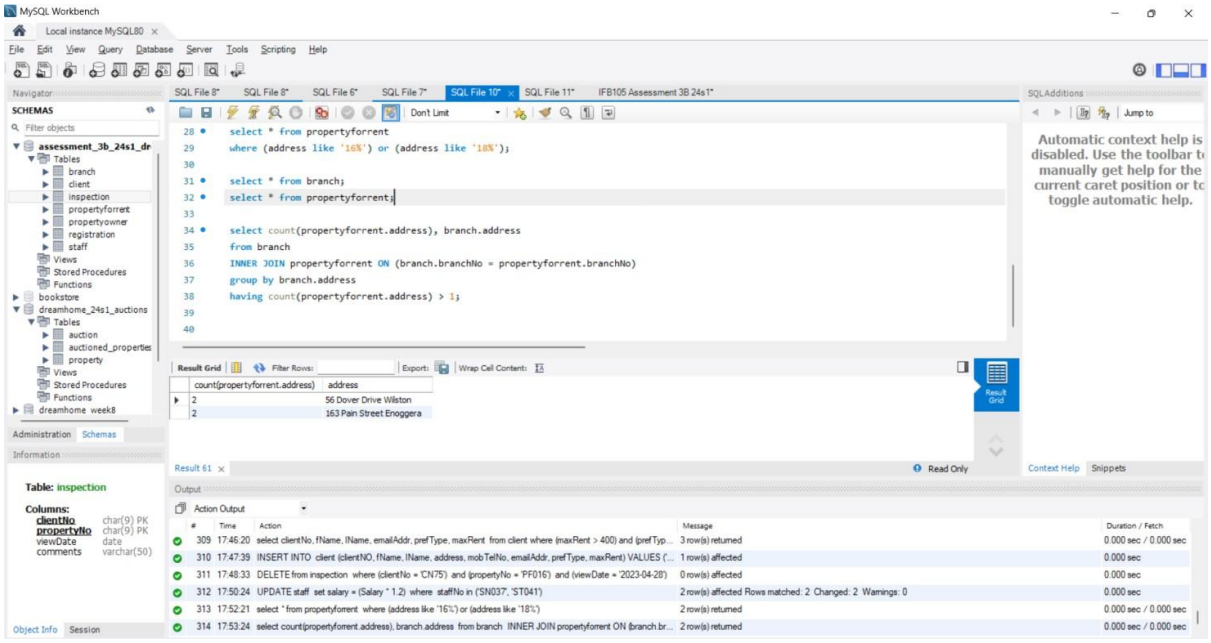
f) Find all properties listed for rent with addresses starting with "16" or "18".

```
select * from propertyforrent
 where (address like '16%') or (address like '18%');
```



g) Find all branch addresses and total properties listed at each branch where more than 1 properties are currently listed for rent.

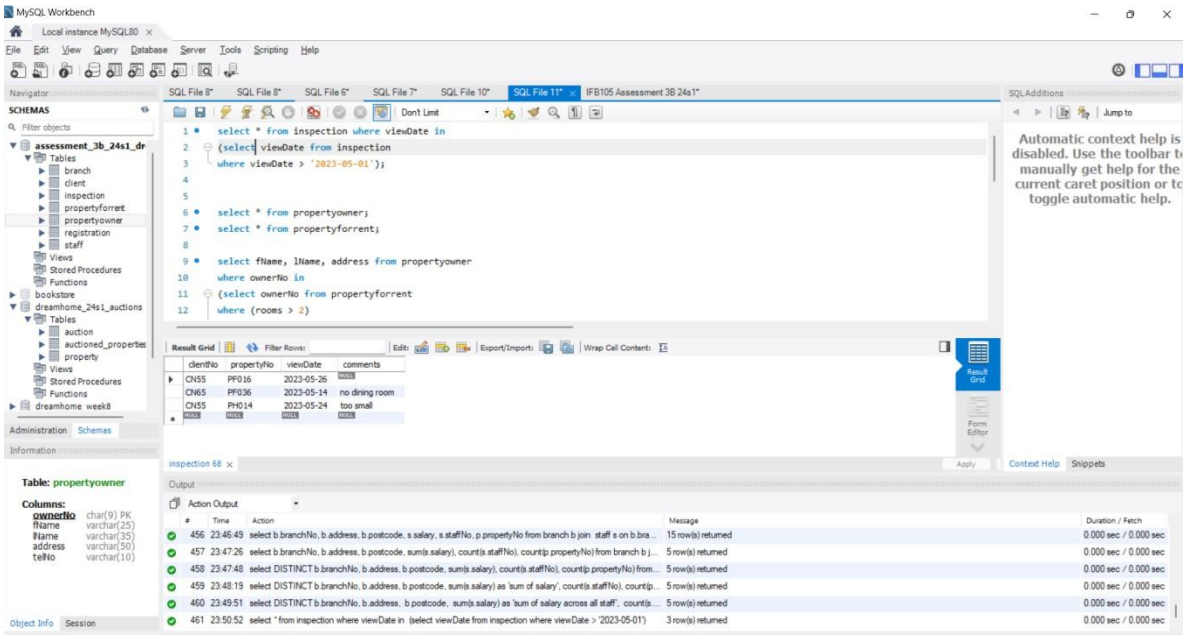
```
select count(propertyforrent.address), branch.address  from branch
 INNER JOIN propertyforrent ON (branch.branchNo = propertyforrent.branchNo)  group by
branch.address  having count(propertyforrent.address) > 1;
```



Task 3:

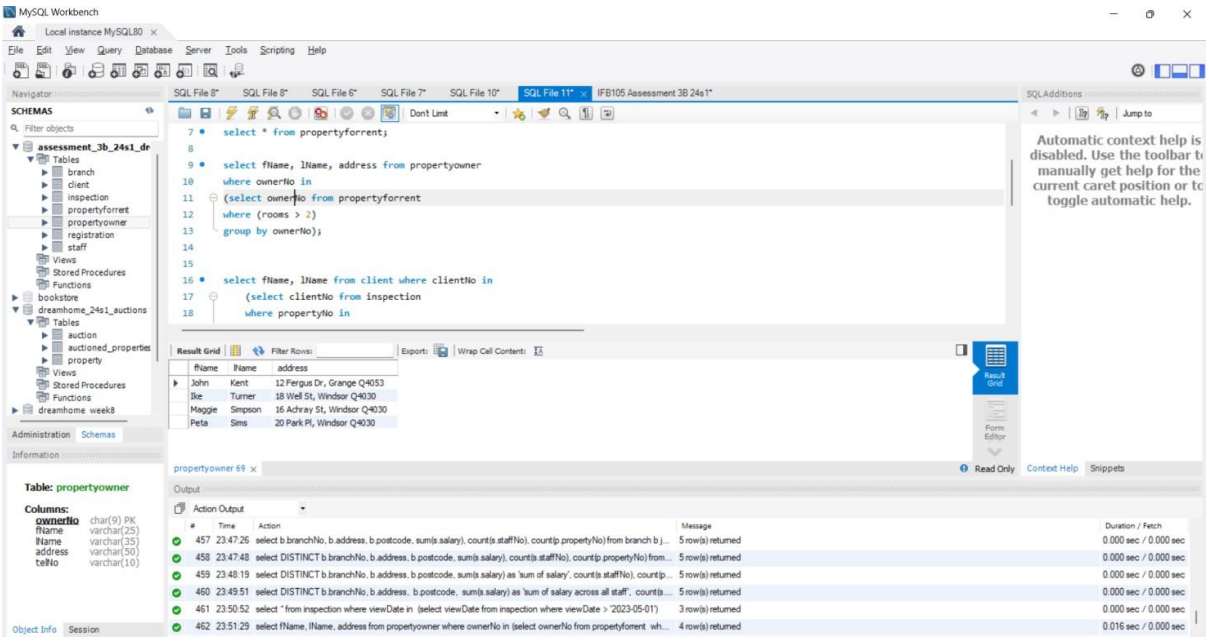
a) Select all the attributes in the Client table regarding clients that have a house viewing date after the 1st May 2023 using a subquery.

```
select * from inspection where viewDate in
(select viewDate from inspection where viewDate > '2023-05-01');
```



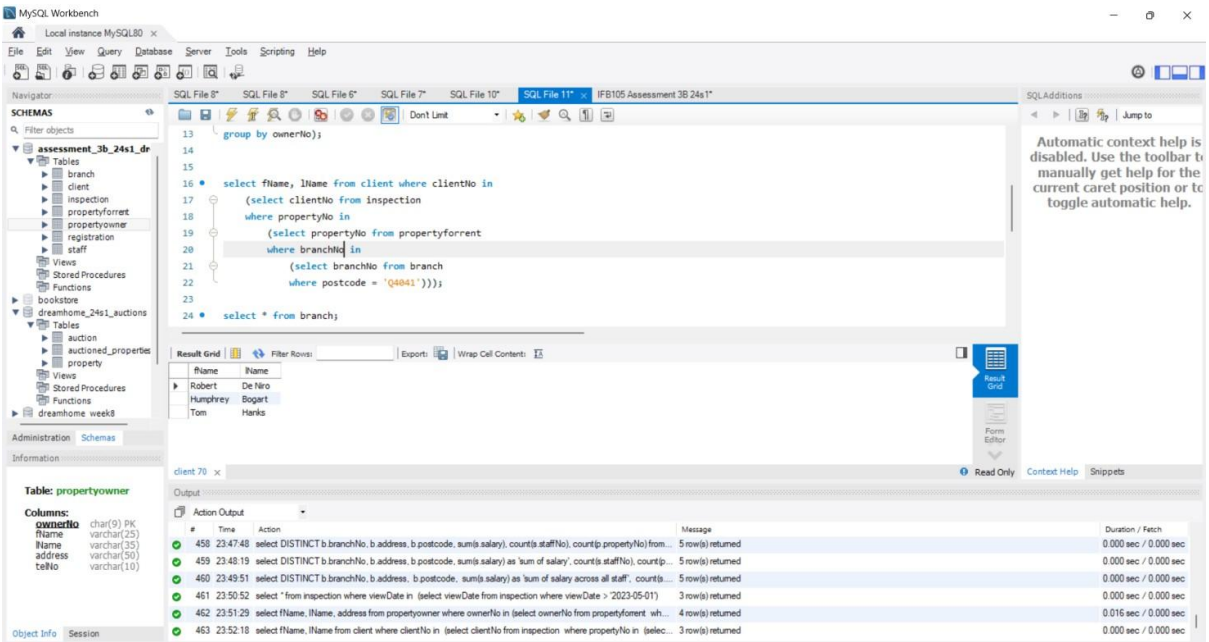
b) What are the names and addresses of all the property owners who own properties with more than 2 rooms?

```
select fName, lName, address from propertyowner where ownerNo in
(select ownerNo from propertyforrent where (rooms > 2) group by ownerNo);
```



c) What are the names of all the clients who have viewed a property managed by a branch located in post code Q4041?

```
select fName, lName from client where clientNo in
(select clientNo from inspection where propertyNo in
(select propertyNo from propertyforrent where branchNo in
(select branchNo from branch where postcode = 'Q4041')));
```



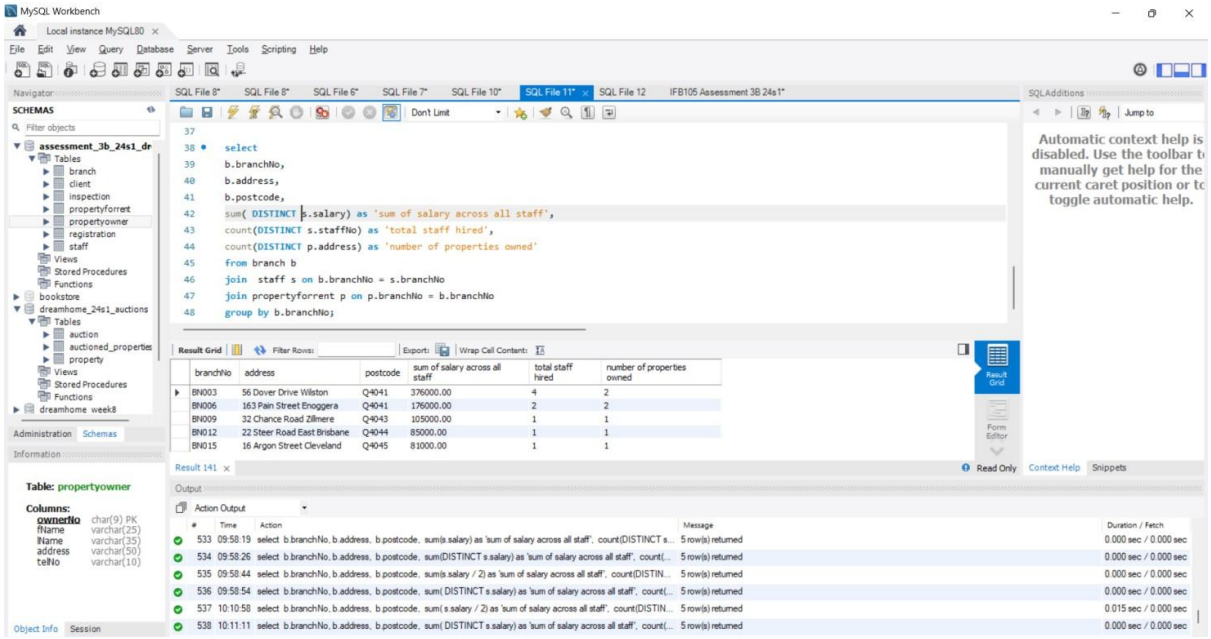
d) For each branch, produce a report that details: the address and postcode of where the branch is located, sum of the salary of all staff that work at that branch, number of distinct employees at the branch, and how many distinct properties belong to that branch.

```
select
```

b.branchNo,

b.address,

b.postcode, sum(DISTINCT s.salary) as 'sum of salary across all staff', count(DISTINCT s.staffNo) as 'total staff hired', count(DISTINCT p.address) as 'number of properties owned' from branch b join staff s on b.branchNo = s.branchNo join propertyforrent p on p.branchNo = b.branchNo group by b.branchNo;



Task 4:

a) Create a user with the name Jake with the password Jake123x.

CREATE USER if not exists ‘Jake’ identified by 'Jake123x'@localhost password expire;

b) Grant the previously created user (Jake) access to update data in the Registration table.

GRANT update on assessment_3b_24s1_dreamhome.registration

To 'Jake'@localhost;

c) Create a view called ActiveClients with the given query:

SELECT c.clientNo, c.fName, c.lName, r.dateJoined

FROM Client c

INNER JOIN Registration r ON c.clientNo = r.clientNo;

Grant permission to select this view to Manav (submit both SQL statements).

CREATE VIEW ActiveClients as SELECT c.clientNo, c.fName, c.lName, r.dateJoined

FROM Client c

INNER JOIN Registration r ON c.clientNo = r.clientNo;

GRANT SELECT on assessment_3b_24s1_dreamhome.ActiveClients To 'Jake'@localhost;