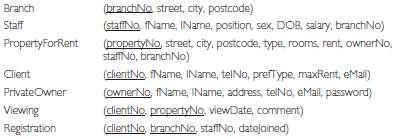
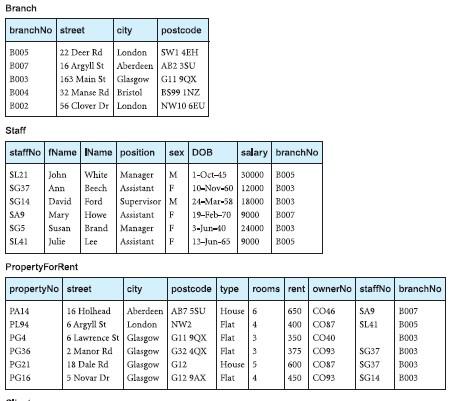
**W1D3 – LESSON2, Part 2 ASSIGNMENT:**

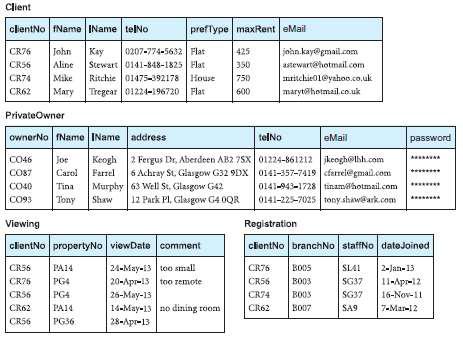
**In this assignment, you are required to do the following:**

1. **Name the four basic SQL DML statements and briefly explain the use of each.**
2. **Given below, is the relational schema for the DreamHome Property Management Agency database:**



**Also given below, are the seven (7) database tables and the data for each table:**





**For this question 2, you are required to do the following:**

* 1. **Create a new schema (i.e. database) named, dreamhome-db, in your MySQL**

**RDBMS.**

* 1. **In the dreamhome-db database, create the seven (7) tables, including all the necessary database Integrity Constraints (i.e. primary keys, foreign keys, null/not null constraints, check constraints etc.)**

CREATE TABLE `dreamhome`.`property\_for\_rent` (

`propertyNo` VARCHAR(4) NOT NULL,

`street` VARCHAR(45) NOT NULL,

`city` VARCHAR(45) NOT NULL,

`postcode` VARCHAR(20) NOT NULL,

`type` VARCHAR(20) NOT NULL,

`rooms` INT NOT NULL,

`rent` DECIMAL(5,2) NOT NULL,

`ownerNo` CHAR(4) NOT NULL,

`staffNo` CHAR(4) NULL,

`branchNo` CHAR(4) NOT NULL,

PRIMARY KEY (`propertyNo`));

ALTER TABLE `dreamhome`.`property\_for\_rent`

ADD INDEX `FK\_branch\_propertyForRent\_idx` (`branchNo` ASC) VISIBLE;

;

ALTER TABLE `dreamhome`.`property\_for\_rent`

ADD CONSTRAINT `FK\_branch\_propertyForRent`

FOREIGN KEY (`branchNo`)

REFERENCES `dreamhome`.`branch` (`branchNo`)

ON DELETE NO ACTION

ON UPDATE NO ACTION;

ALTER TABLE `dreamhome`.`property\_for\_rent`

ADD INDEX `FK\_privateOwner\_property\_for\_Rent\_idx` (`ownerNo` ASC) VISIBLE;

;

ALTER TABLE `dreamhome`.`property\_for\_rent`

ADD CONSTRAINT `FK\_privateOwner\_property\_for\_Rent`

FOREIGN KEY (`ownerNo`)

REFERENCES `dreamhome`.`privateowner` (`ownerNo`)

ON DELETE NO ACTION

ON UPDATE NO ACTION;

CREATE TABLE `dreamhome`.`privateOwner` (

`ownerNo` CHAR(4) NOT NULL,

`fname` VARCHAR(45) NOT NULL,

`lname` VARCHAR(45) NOT NULL,

`address` VARCHAR(45) NOT NULL,

`telNo` VARCHAR(20) NOT NULL,

`email` VARCHAR(25) NOT NULL,

`password` VARCHAR(20) NOT NULL,

PRIMARY KEY (`ownerNo`));

CREATE TABLE `dreamhome`.`client` (

`clientNo` CHAR(4) NOT NULL,

`fname` VARCHAR(45) NOT NULL,

`lname` VARCHAR(45) NOT NULL,

`telNo` VARCHAR(20) NOT NULL,

`prefType` VARCHAR(20) NOT NULL,

`maxRent` DECIMAL(5,2) NOT NULL,

`email` VARCHAR(25) NOT NULL,

PRIMARY KEY (`clientNo`));

CREATE TABLE `dreamhome`.`viewing` (

`clientNo` CHAR(4) NOT NULL,

`propertyNo` VARCHAR(4) NOT NULL,

`viewDate` DATE NOT NULL,

`comment` VARCHAR(45) NOT NULL,

PRIMARY KEY (`clientNo`, ` propertyNo`));

ALTER TABLE `dreamhome`.`viewing`

ADD INDEX `FK\_client\_viewing\_idx` (`clientNo` ASC) VISIBLE;

;

ALTER TABLE `dreamhome`.`viewing`

ADD CONSTRAINT `FK\_client\_viewing`

FOREIGN KEY (`clientNo`)

REFERENCES `dreamhome`.`client` (`clientNo`)

ON DELETE NO ACTION

ON UPDATE NO ACTION;

ALTER TABLE `dreamhome`.`viewing`

ADD INDEX `FK\_property\_for\_Rent\_viewing\_idx` (`propertyNo` ASC) VISIBLE;

;

ALTER TABLE `dreamhome`.`viewing`

ADD CONSTRAINT `FK\_property\_for\_Rent\_viewing`

FOREIGN KEY (`propertyNo`)

REFERENCES `dreamhome`.`property\_for\_rent` (`propertyNo`)

ON DELETE NO ACTION

ON UPDATE NO ACTION;

CREATE TABLE `dreamhome`.`registration` (

`clientNo` CHAR(4) NOT NULL,

`branchNo` CHAR(4) NOT NULL,

`staffNo` VARCHAR(4) NOT NULL,

`dateJoined` DATE NOT NULL,

PRIMARY KEY (`clientNo`,`branchNo`));

ALTER TABLE `dreamhome`.`registration`

ADD INDEX `FK\_branch\_registration\_idx` (`branchNo` ASC) VISIBLE;

;

ALTER TABLE `dreamhome`.`registration`

ADD CONSTRAINT `FK\_branch\_registration`

FOREIGN KEY (`branchNo`)

REFERENCES `dreamhome`.`branch` (`branchNo`)

ON DELETE NO ACTION

ON UPDATE NO ACTION;

ALTER TABLE `dreamhome`.`registration`

ADD INDEX `FK\_client\_registration\_idx` (`clientNo` ASC) VISIBLE;

;

ALTER TABLE `dreamhome`.`registration`

ADD CONSTRAINT `FK\_client\_registration`

FOREIGN KEY (`clientNo`)

REFERENCES `dreamhome`.`client` (`clientNo`)

ON DELETE NO ACTION

ON UPDATE NO ACTION;

ALTER TABLE `dreamhome`.`registration`

ADD INDEX `FK\_staff\_registration\_idx` (`staffNo` ASC) VISIBLE;

;

ALTER TABLE `dreamhome`.`registration`

ADD CONSTRAINT `FK\_staff\_registration`

FOREIGN KEY (`staffNo`)

REFERENCES `dreamhome`.`staffs` (`staffNo`)

ON DELETE NO ACTION

ON UPDATE NO ACTION;

* 1. **Populate all the seven (7) tables with their data, as given above.**

**(Recommendation: For each table’s data, write a script containing SQL DML INSERT statements and execute using either MySQL shell or Workbench).**

INSERT INTO `dreamhome`.`branch` (`branchNo`, `street`, `city`, `postCode`) VALUES ('B007', '16 Argyll St', 'Abardeen', 'AB2 3SU');

insert into `dreamhome`.`branch`(`branchNo`, `street`, `city`, `postCode`) values ('B003', '163 Main St', 'Glasgow', 'GI1 92X');

insert into `dreamhome`.`branch`(`branchNo`, `street`, `city`, `postCode`) values ('B004', '32 Manse Rd', 'Bristol', 'BS99 1NZ');

insert into `dreamhome`.`branch`(`branchNo`, `street`, `city`, `postCode`) values ('B002', '56 clover Dr', 'London', 'NW10 6EW');

INSERT INTO `dreamhome`.`staffs` (`staffNo`, `fname`, `lname`, `position`,`sex`,`dob`,`salary`,`branchNo`) VALUES ('SL21', 'John', 'White', 'Manager','M','2045-10-01',30000,'B005');

INSERT INTO `dreamhome`.`staffs` (`staffNo`, `fname`, `lname`, `position`,`sex`,`dob`,`salary`,`branchNo`) VALUES ('SG37', 'Ann', 'Beech', 'Assistant','F','2060-11-10',12000,'B003');

INSERT INTO `dreamhome`.`staffs` (`staffNo`, `fname`, `lname`, `position`,`sex`,`dob`,`salary`,`branchNo`) VALUES ('SG14', 'David', 'Ford', 'Supervisor','M','2058-03-24',18000,'B003');

INSERT INTO `dreamhome`.`staffs` (`staffNo`, `fname`, `lname`, `position`,`sex`,`dob`,`salary`,`branchNo`) VALUES ('SA9', 'Mary', 'Howe', 'Assistant','F','2070-02-19',9000,'B007');

INSERT INTO `dreamhome`.`staffs` (`staffNo`, `fname`, `lname`, `position`,`sex`,`dob`,`salary`,`branchNo`) VALUES ('SG5', 'Susan', 'Brand', 'Manager','F','2040-06-03',24000,'B003');

INSERT INTO `dreamhome`.`staffs` (`staffNo`, `fname`, `lname`, `position`,`sex`,`dob`,`salary`,`branchNo`) VALUES ('SL41', 'Julie', 'Lee', 'Assistant','f','2065-06-13',9000,'B005');

INSERT INTO `dreamhome`.`privateowner` (`ownerNo`, `fname`, `lname`, `address`,`telNo`,`email`,`password`) VALUES ('CO46', 'Joe', 'Keogh', '2 fergus Dr, Aberdeen','01224-861212','jkeogh@miu.edu','\*\*\*\*\*\*\*\*\*');

INSERT INTO `dreamhome`.`privateowner` (`ownerNo`, `fname`, `lname`, `address`,`telNo`,`email`,`password`) VALUES ('CO87', 'Carol', 'Farrel', '6 fergus Dr, Glasgow','01224-861212','cfarrel@miu.edu','\*\*\*\*\*\*\*\*\*');

INSERT INTO `dreamhome`.`privateowner` (`ownerNo`, `fname`, `lname`, `address`,`telNo`,`email`,`password`) VALUES ('CO40', 'tina', 'murphy', '63 fergus Dr, Glasgow','01224-861212','tmurphy@miu.edu','\*\*\*\*\*\*\*\*\*');

INSERT INTO `dreamhome`.`privateowner` (`ownerNo`, `fname`, `lname`, `address`,`telNo`,`email`,`password`) VALUES ('CO93', 'tony', 'shaw', '12 fergus Dr, Glasgow','01224-861212','tshaw@miu.edu','\*\*\*\*\*\*\*\*\*');

INSERT INTO `dreamhome`.`client` (`clientNo`, `fname`, `lname`, `telNo`,`prefType`,`maxRent`,`email`) VALUES ('CR76', 'John', 'Kay', '0207-774-5632', 'Flat',425,'jkay@miu.edu');

INSERT INTO `dreamhome`.`client` (`clientNo`, `fname`, `lname`, `telNo`,`prefType`,`maxRent`,`email`) VALUES ('CR56', 'Aline', 'Stewart', '0207-774-5632', 'Flat',350,'ajkay@miu.edu');

INSERT INTO `dreamhome`.`client` (`clientNo`, `fname`, `lname`, `telNo`,`prefType`,`maxRent`,`email`) VALUES ('CR74', 'Mike', 'Richie', '0207-774-5632', 'House',750,'mjkay@miu.edu');

INSERT INTO `dreamhome`.`client` (`clientNo`, `fname`, `lname`, `telNo`,`prefType`,`maxRent`,`email`) VALUES ('CR62', 'Mary', 'Tregear', '0207-774-5632', 'Flat',600,'mtjkay@miu.edu');

INSERT INTO `dreamhome`.`property\_for\_rent` (`propertyNo`, `street`, `city`, `postcode`,`type`,`rooms`,`rent`,`ownerNo`,`staffNo`,`branchNo`) VALUES ('PA14', '16 Holhead', 'Abardeen', 'AB7 5SU', 'House',6,650,'CO46','SA9','B007');

INSERT INTO `dreamhome`.`property\_for\_rent` (`propertyNo`, `street`, `city`, `postcode`,`type`,`rooms`,`rent`,`ownerNo`,`staffNo`,`branchNo`) VALUES ('PL94', '6 Argyl St', 'London', 'G12 5SU', 'Flat',4,400,'CO87','SL41','B005');

INSERT INTO `dreamhome`.`property\_for\_rent` (`propertyNo`, `street`, `city`, `postcode`,`type`,`rooms`,`rent`,`ownerNo`,`staffNo`,`branchNo`) VALUES ('PG4', '6 Lawrence', 'Glasgow', 'NW2 5SU', 'Flat',3,350,'CO40','','B003');

INSERT INTO `dreamhome`.`property\_for\_rent` (`propertyNo`, `street`, `city`, `postcode`,`type`,`rooms`,`rent`,`ownerNo`,`staffNo`,`branchNo`) VALUES ('PG36', '2 Manor', 'Glasgow', 'G11 5SU', 'Flat',3,375,'CO93','SG37','B003');

INSERT INTO `dreamhome`.`property\_for\_rent` (`propertyNo`, `street`, `city`, `postcode`,`type`,`rooms`,`rent`,`ownerNo`,`staffNo`,`branchNo`) VALUES ('PG21', '18 Dale', 'Glasgow', 'G32 5SU', 'House',5,600,'CO87','SG37','B003');

INSERT INTO `dreamhome`.`property\_for\_rent` (`propertyNo`, `street`, `city`, `postcode`,`type`,`rooms`,`rent`,`ownerNo`,`staffNo`,`branchNo`) VALUES ('PG16', '5 Novar', 'Glasgow', 'G12 5SU', 'Flat',4,450,'CO93','SG14','B003');

INSERT INTO `dreamhome`.`viewing` (`clientNo`, `propertyNo`, `viewDate`, `comment`) VALUES ('CR56', 'PA14', '2013-05-24', 'too small');

INSERT INTO `dreamhome`.`viewing` (`clientNo`, `propertyNo`, `viewDate`, `comment`) VALUES ('CR76', 'PG4', '2013-04-20', 'too remote');

INSERT INTO `dreamhome`.`viewing` (`clientNo`, `propertyNo`, `viewDate`, `comment`) VALUES ('CR56', 'PG4', '2013-05-26', '');

INSERT INTO `dreamhome`.`viewing` (`clientNo`, `propertyNo`, `viewDate`, `comment`) VALUES ('CR62', 'PA14', '2013-05-14', 'no dining room');

INSERT INTO `dreamhome`.`viewing` (`clientNo`, `propertyNo`, `viewDate`, `comment`) VALUES ('CR56', 'PG36', '2013-04-28', '');

INSERT INTO `dreamhome`.`registration` (`clientNo`, `branchNo`, `staffNo`, `dateJoined`) VALUES ('CR76', 'B005', 'SL41', '2013-01-02');

INSERT INTO `dreamhome`.`registration` (`clientNo`, `branchNo`, `staffNo`, `dateJoined`) VALUES ('CR56', 'B003', 'SG37', '2012-04-11');

INSERT INTO `dreamhome`.`registration` (`clientNo`, `branchNo`, `staffNo`, `dateJoined`) VALUES ('CR74', 'B003', 'SG37', '2011-11-16');

INSERT INTO `dreamhome`.`registration` (`clientNo`, `branchNo`, `staffNo`, `dateJoined`) VALUES ('CR62', 'B007', 'SA9', '2012-03-07');

1. **With your database now populated with data, write and execute appropriate queries for the following:**
   1. **List the full details of all Staff, sorted by their firstName in ascending order.**

select \*

from `dreamhome`.`staffs`

order by `dreamhome`.`staffs`.`fName`;

* 1. **Produce a list of salaries for all staff, showing only the staff number, the first and last names, and the salary.**

select staffNo,fName,lName,salary

from `dreamhome`.`staffs`;

* 1. **Produce a list of all properties that have been viewed (at least once), showing only the property number.**

select propertyNo,viewDate

from `dreamhome`.`viewing`;

1. **Produce a list of monthly salaries for all staff, showing the staff number, the first and last names, and the monthly\_salary. Note: Include some necessary SQL code in your query to make the monthly\_salary data be displayed under a column-heading named, monthly\_salary.**

select staffNo,fName,lName,salary/12 as monthly\_salary

from `dreamhome`.`staffs`;

1. **List all staff whose salary is more than 10,000. Display the list sorted, beginning from the highest earner to the lowest.**

select \*

from `dreamhome`.`staffs`

where salary >10000;

1. **List the data of all branch offices which are located in either London or Bristol**

select \*

from `dreamhome`.`branch`

where city = 'London' or city = 'Bristol';

1. **…**