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**Module Code: IS4S761**

**Module Title: Principles of Computing**

**Module Team: Gaylor Boobyer**

**Submitted By: Tania Rahman (30076078)**

**Peter Darwin’s Estate Agency**

**a) Table definition**

**-- Potential buyer table --**

CREATE TABLE potential\_buyer(

buyer\_no NUMBER GENERATED BY DEFAULT AS IDENTITY,

first\_name VARCHAR2(20) NOT NULL,

last\_name VARCHAR2(20) NOT NULL,

address VARCHAR2(20) NOT NULL,

area VARCHAR2(20) NOT NULL,

minimum\_bedrooms\_no NUMBER NOT NULL,

minimum\_bathrooms\_no NUMBER NOT NULL,

minimum\_reception\_rooms NUMBER NOT NULL,

garage VARCHAR2(20) NOT NULL,

maximum\_price decimal(8, 2) NOT NULL,

PRIMARY KEY(buyer\_no),

CONSTRAINT garage\_preference CHECK(garage IN ('required', 'not required'))

);

**-- Staff member table --**

CREATE TABLE staff\_members(

staff\_id VARCHAR(10),

first\_name VARCHAR(20) NOT NULL,

last\_name VARCHAR(20) NOT NULL,

staff\_manager VARCHAR(10),

PRIMARY KEY(staff\_id)

);

**-- Seller table --**

CREATE TABLE seller(

seller\_id VARCHAR2(10),

first\_name VARCHAR2(20) NOT NULL,

last\_name VARCHAR2(20) NOT NULL,

address VARCHAR2(20) NOT NULL,

contact NUMBER NOT NULL,

PRIMARY KEY (seller\_id)

);

**-- Sale property table --**

CREATE TABLE sale\_property(

property\_code VARCHAR2(20),

property\_type VARCHAR2(20) NOT NULL,

address VARCHAR2(20) NOT NULL,

area VARCHAR2(20) NOT NULL,

no\_of\_bedrooms NUMBER NOT NULL,

no\_of\_bathrooms NUMBER NOT NULL,

no\_of\_reception\_rooms NUMBER NOT NULL,

garage\_available CHAR(1) NOT NULL,

sale\_price DECIMAL(8, 2) NOT NULL,

property\_state VARCHAR2 (10) NOT NULL,

placement\_date DATE NOT NULL,

seller\_id VARCHAR2(10) NOT NULL,

PRIMARY KEY(property\_code),

CONSTRAINT property\_type CHECK(property\_type in ('Detached', 'Semi-detached', 'Terrace', 'Link')),

CONSTRAINT garage\_availability CHECK(garage\_available in ('Y','N')),

CONSTRAINT property\_state CHECK(property\_state IN ('Unsold','Sold')),

FOREIGN KEY(seller\_id) REFERENCES seller (seller\_id)

);

**-- Viewing appointment table --**

CREATE TABLE viewing\_appointment(

appointment\_id VARCHAR2(5),

property\_code VARCHAR2(20) NOT NULL,

buyer\_no NUMBER NOT NULL,

staff\_id VARCHAR2(10) NOT NULL,

PRIMARY KEY(appointment\_id),

FOREIGN KEY (property\_code) REFERENCES sale\_property(property\_code),

FOREIGN KEY (buyer\_no) REFERENCES potential\_buyer(buyer\_no),

FOREIGN KEY (staff\_id) REFERENCES staff\_members(staff\_id)

);

**b) Table population**

**--populate potential buyer table --**

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('John', 'Mike', '22 4th Street', 'Aberdeen',1,1,1,'not required',300);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Kasper', 'Miles', '11th Street', 'Armagh',4,1,1,'required',600);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Kate', 'Micasa', 'North Rd.', 'Bangor',3,2,2,'required',800);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Jack', 'Daniels', 'Abbey Church', 'Bath',5,3,2,'not required',1500);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Shawn', 'Niles', 'Belfast', 'Belfast',4,2,1,'not required',2500);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Martha', 'Mary', '1889 Midlands', 'Birmingham',4,4,1,'required',1500);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Daniel', 'Rush', 'North Street', 'Bradford',5,4,2,'required',3500);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Marcus', 'Garvey', 'Wall Rd.', 'Brighton',4,4,4,'required',3500);

INSERT INTO potential\_buyer(first\_name,last\_name,address,area,minimum\_bedrooms\_no,minimum\_bathrooms\_no,minimum\_reception\_rooms, garage,maximum\_price)

VALUES('Chris', 'Newton', '10 Bris', 'Bristol',3,2,1,'not required',1700);

**-- Staff member table population --**

INSERT ALL

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S001','Shree', 'Kaptcha',null)

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S002','John', 'James','S001')

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S003','Anthony', 'Griezzy',null)

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S004','David', 'Gea',null)

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S005','Paulo', 'De Paul','S001')

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S006','Harry', 'Pay',null)

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S007','Martin', 'John','S001')

INTO staff\_members(staff\_id,first\_name,last\_name,staff\_manager) VALUES('S008','Shree', 'Kaptcha',null)

SELECT 1 FROM dual;

**--seller table population --**

INSERT ALL

INTO seller(seller\_id,first\_name,last\_name,address,contact) VALUES ('SE01','Peter','Paul','Rhodes 01',1111111111)

INTO seller(seller\_id,first\_name,last\_name,address,contact) VALUES ('SE02','Sir','Kanlee','NewB',1100011111)

INTO seller(seller\_id,first\_name,last\_name,address,contact) VALUES ('SE03','John','Junior','Lower Valley',1111117681)

INTO seller(seller\_id,first\_name,last\_name,address,contact) VALUES ('SE04','Henry','Thierry','Upper 1',1111111546)

INTO seller(seller\_id,first\_name,last\_name,address,contact) VALUES ('SE05','Pat','Mckinsey','DownTown',9001111111)

SELECT 1 FROM dual;

**-- sale\_property population --**

INSERT ALL

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date, seller\_id)

VALUES ('PS01','Detached','Rhodes 1','London',6,4,3,'Y',700,'Unsold',TO\_DATE('2022-07-02', 'YYYY-MM-DD'), 'SE01')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date, seller\_id)

VALUES ('PS02','Semi-detached','Link Rd.','Bristol',1,1,1,'N',200,'Sold',TO\_DATE('2022-01-02', 'YYYY-MM-DD'), 'SE02')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date, seller\_id)

VALUES ('PS03','Terrace','Main Rd','Canterbury',2,2,1,'Y',800,'Unsold',TO\_DATE('2022-02-02', 'YYYY-MM-DD'), 'SE03')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS04','Link','Air Street','Derby',2,1,0,'Y',350,'Unsold',TO\_DATE('2022-08-02', 'YYYY-MM-DD'), 'SE04')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS05','Terrace','One Way','Leeds',4,2,1,'Y',1000,'Unsold',TO\_DATE('2022-11-02', 'YYYY-MM-DD'), 'SE05')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS06','Detached','London St.','London',8,4,3,'Y',3500,'Unsold',TO\_DATE('2022-10-02', 'YYYY-MM-DD'), 'SE01')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS07','Detached','HallWay','Bristol',3,1,1,'Y',1500,'Sold',TO\_DATE('2022-07-02', 'YYYY-MM-DD'), 'SE04')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS08','Semi-detached','Halal','Canterbury',2,2,1,'Y',1200,'Unsold',TO\_DATE('2022-07-01', 'YYYY-MM-DD'), 'SE02')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS09','Link','Rowan','Leeds',2,1,0,'N',400,'Sold',TO\_DATE('2022-05-02', 'YYYY-MM-DD'), 'SE03')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS10','Link','OneWay','Derby',4,4,1,'Y',2000,'Unsold',TO\_DATE('2022-07-10', 'YYYY-MM-DD'), 'SE01')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS11','Terrace','Two Lane','Bristol',1,1,0,'N',190,'Unsold',TO\_DATE('2022-06-02', 'YYYY-MM-DD'), 'SE04')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS12','Semi-detached','Rhodes 1','London',4,4,1,'Y',1600,'Sold',TO\_DATE('2022-04-02', 'YYYY-MM-DD'), 'SE02')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS13','Terrace','Rhodes 4','Leeds',3,3,0,'Y',500,'Unsold',TO\_DATE('2022-07-02', 'YYYY-MM-DD'), 'SE05')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS14','Link','Miss Rd.','Canterbury',5,2,1,'N',2100,'Sold',TO\_DATE('2022-09-02', 'YYYY-MM-DD'), 'SE01')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS15','Link','Queen St.','Bristol',4,2,2,'Y',2500,'Sold',TO\_DATE('2022-09-10', 'YYYY-MM-DD'), 'SE03')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS16','Detached','Prince Rd.','London',6,4,3,'Y',800,'Unsold',TO\_DATE('2022-07-03', 'YYYY-MM-DD'), 'SE02')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS17','Terrace','Queen 2nd Rd.','Bristol',5,3,1,'Y',750,'Unsold',TO\_DATE('2022-08-08', 'YYYY-MM-DD'), 'SE04')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS18','Detached','New Street','Derby',3,3,2,'Y',300,'Unsold',TO\_DATE('2022-02-01', 'YYYY-MM-DD'), 'SE05')

INTO sale\_property(property\_code,property\_type,address,area,no\_of\_bedrooms,no\_of\_bathrooms,no\_of\_reception\_rooms,garage\_available,sale\_price,property\_state,placement\_date,seller\_id)

VALUES ('PS19','Semi-detached','North Rd.','Canterbury',4,2,2,'Y',1350,'Unsold',TO\_DATE('2022-10-10', 'YYYY-MM-DD'), 'SE03')

SELECT 1 FROM dual;

**-- viewing\_appointment table population --**

INSERT ALL

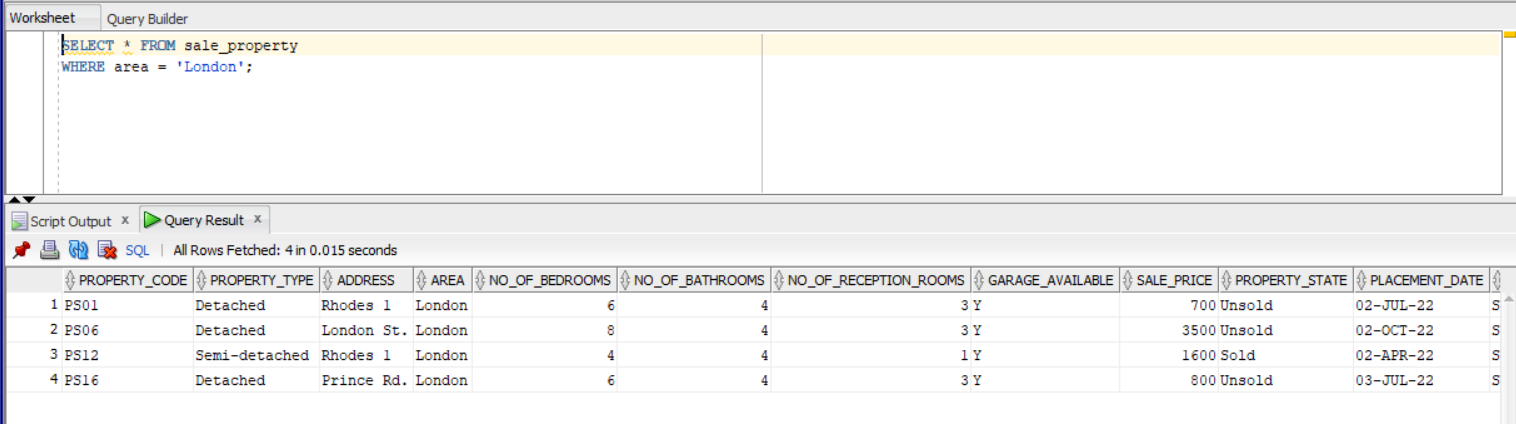
INTO viewing\_appointment(appointment\_id,property\_code,buyer\_no,staff\_id,viewing\_date) VALUES('AP01','PS18',61,'S001',TO\_DATE('2022-12-01', 'YYYY-MM-DD'))

INTO viewing\_appointment(appointment\_id,property\_code,buyer\_no,staff\_id,viewing\_date) VALUES('AP02','PS10',69,'S004',TO\_DATE('2022-12-02', 'YYYY-MM-DD'))

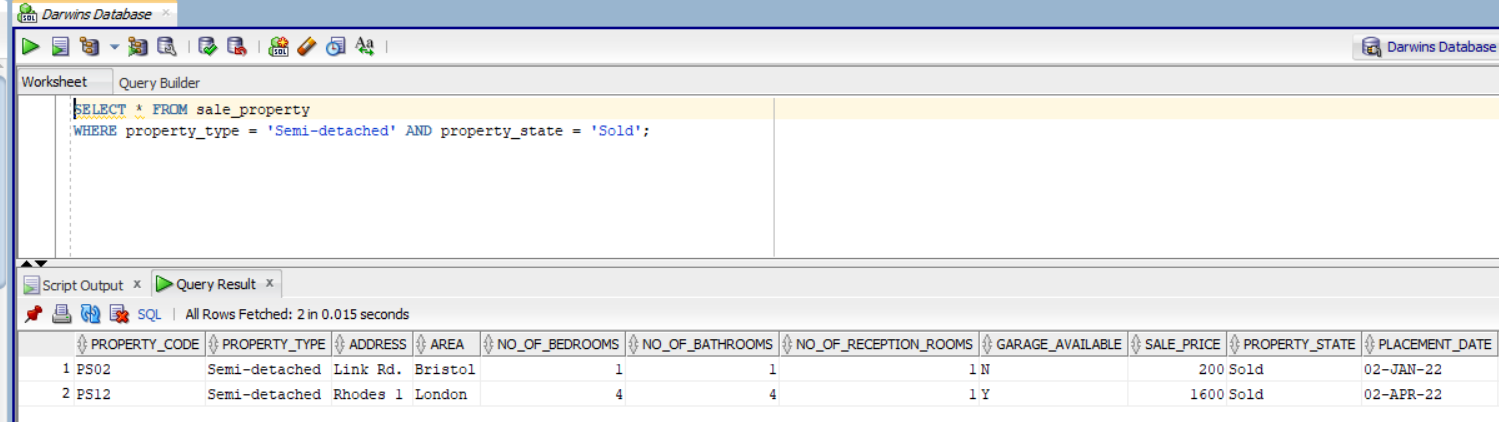
INTO viewing\_appointment(appointment\_id,property\_code,buyer\_no,staff\_id,viewing\_date) VALUES('AP03','PS05',65,'S003',TO\_DATE('2022-12-03', 'YYYY-MM-DD'))

SELECT 1 FROM dual;

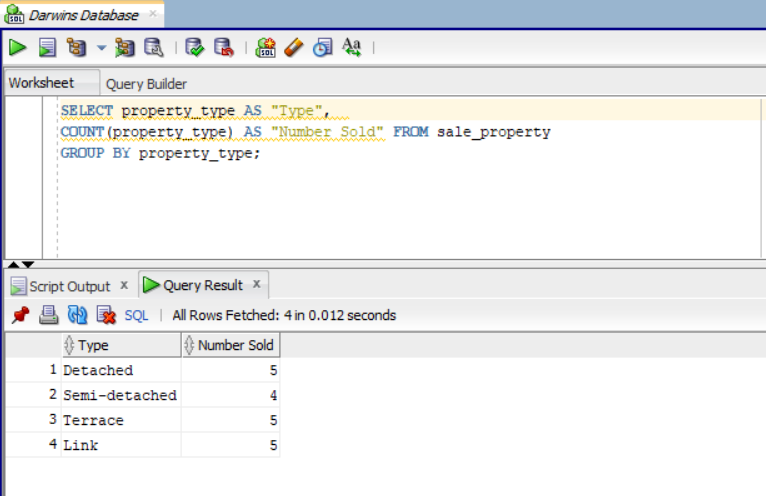
**c) (1) List of properties in particular area**



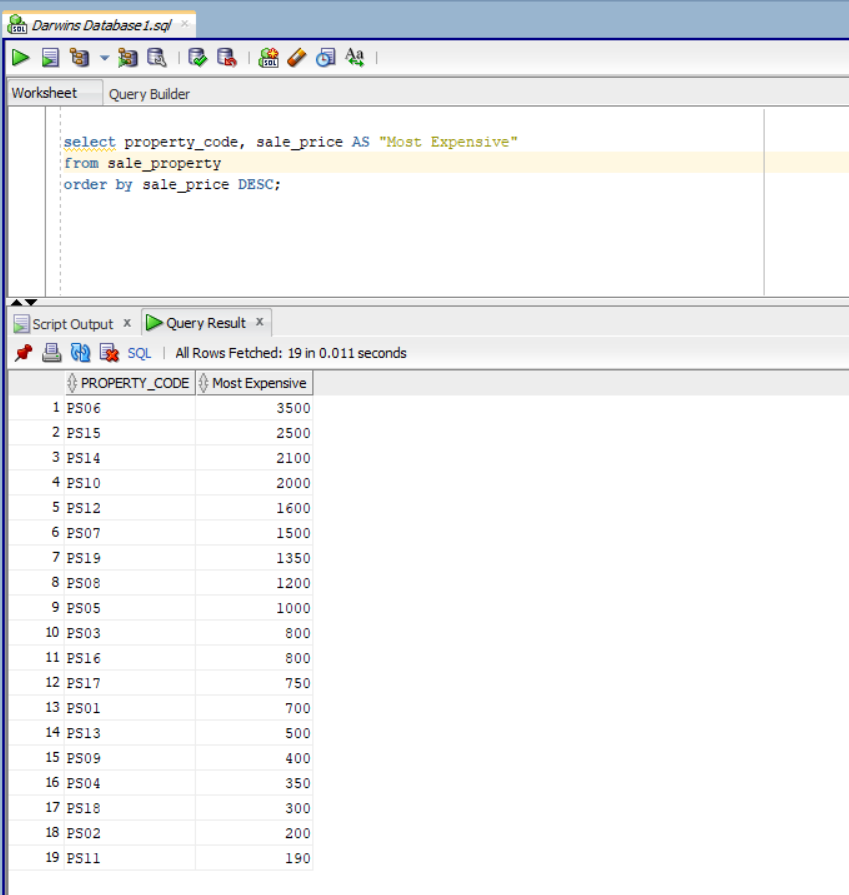
**(2) All Semi-detached properties that have been sold**



1. **Number of properties sold for each type**

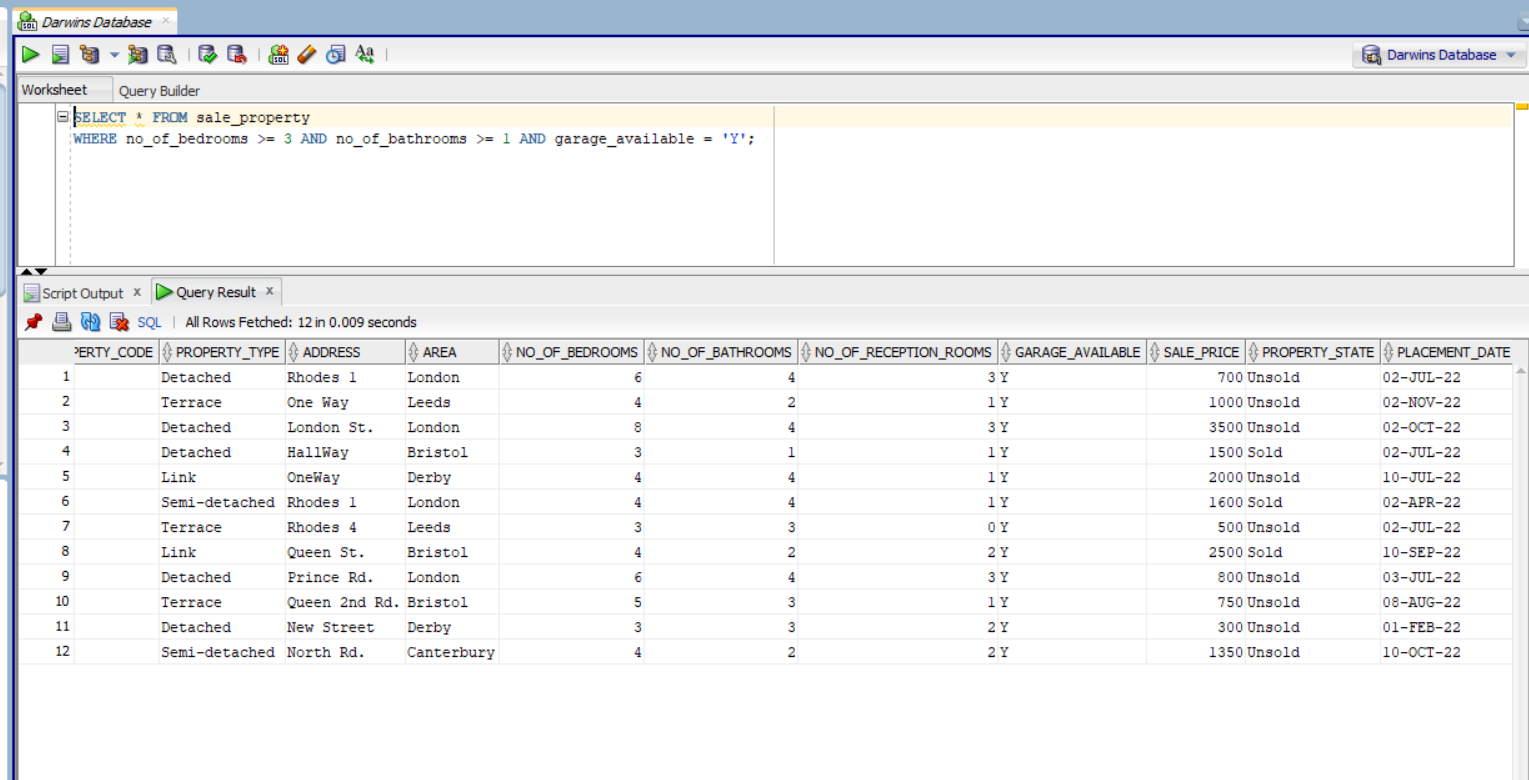


(**4) Most expensive and least expensive properties**

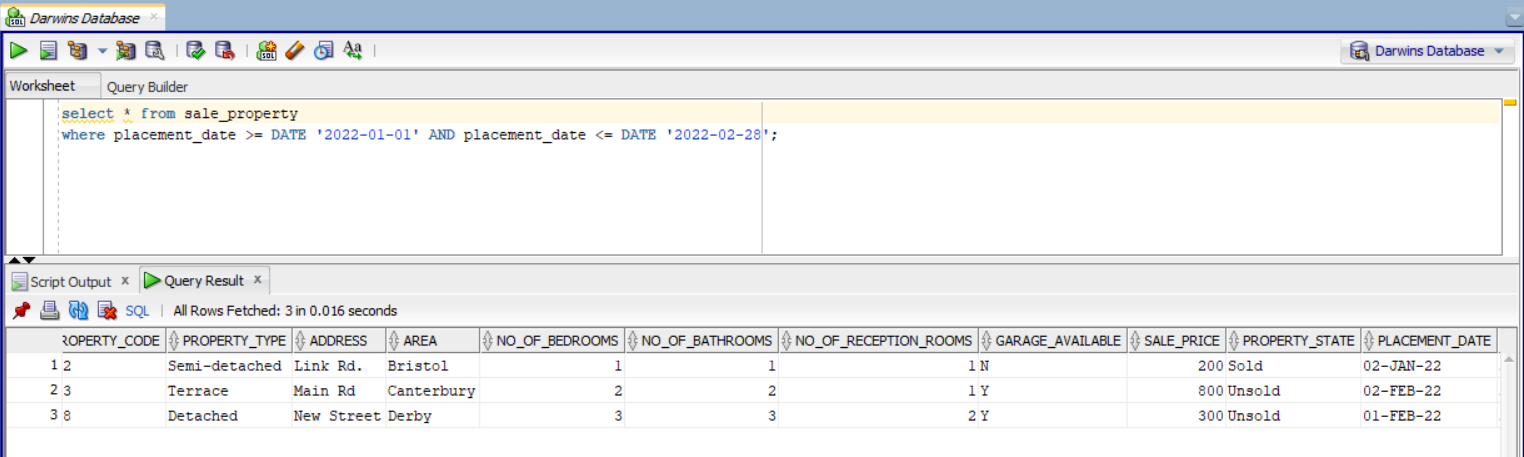


**(5) Produce a list of properties that satisfy the following requirements:**

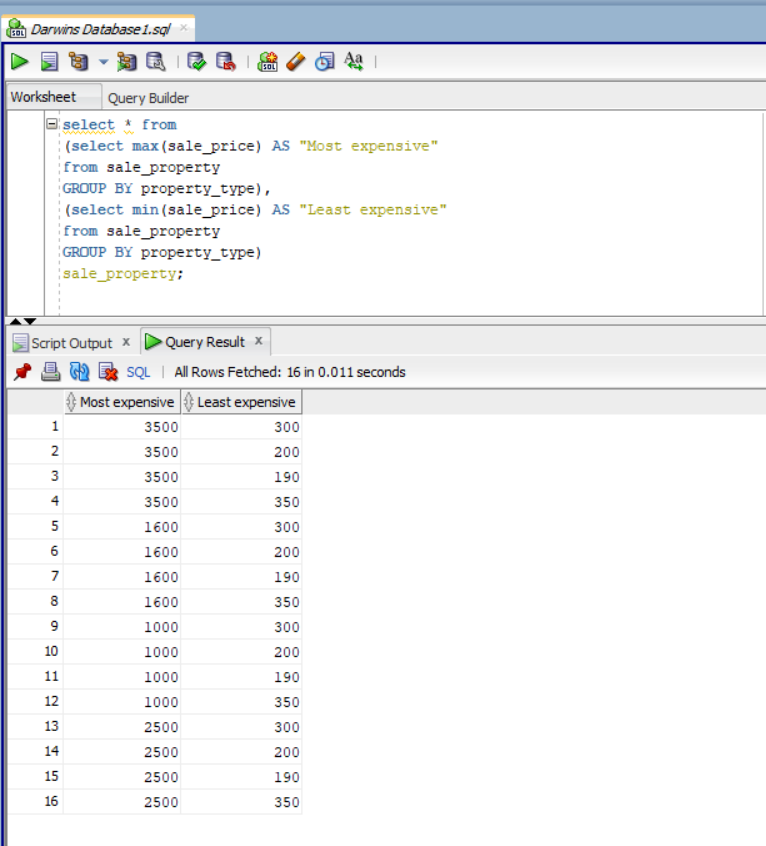
***At least 3 bedrooms, at least 1 bathroom, has a garage***



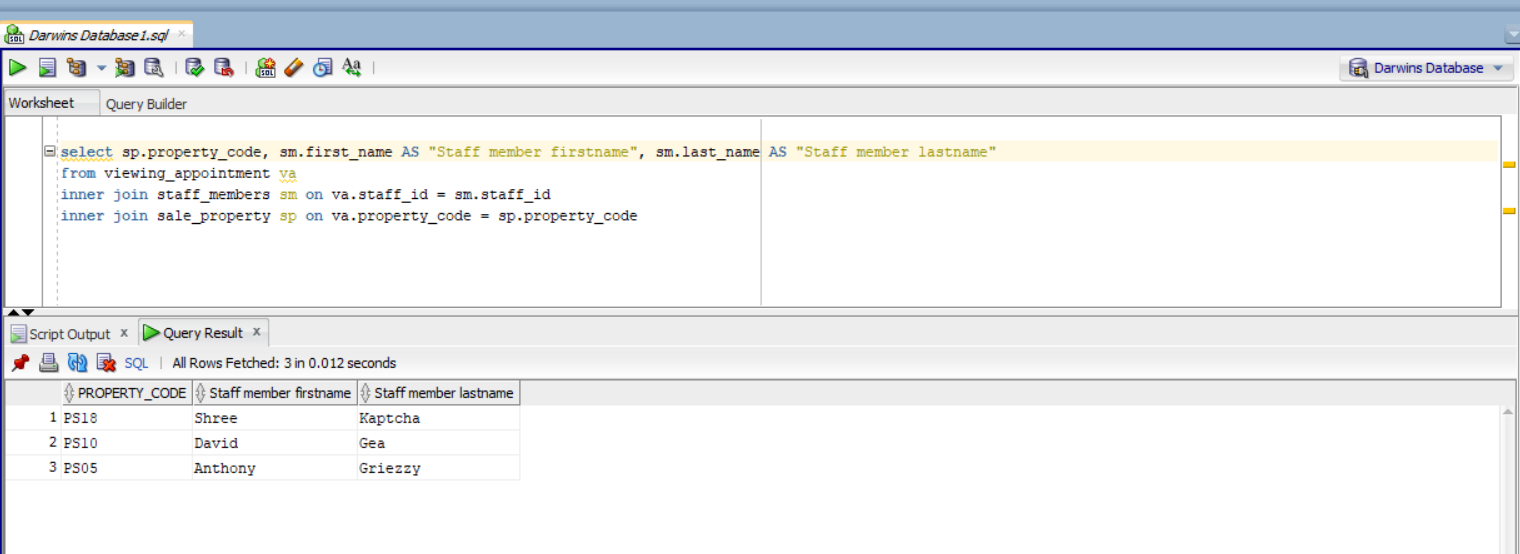
**(6) List of the properties put on market in January and February of 2022**



**(7) Most expensive and least expensive property type**



**(8) Produce a list of properties where viewing appointments will be supervised by a particular member of staff**



**(9) Produce a list of viewing appointments to include the potential buyer’s name, the seller’s name, the property’s address, the staff member’s name and the date and time of the appointment**

