Laboratory work 6

*Use lab6.sql to create and fill tables*

1. Write a SQL query using Joins:
   1. combine each row of dealer table with each row of client table
   2. find all dealers along with client name, city, grade, sell number, date, and amount
   3. find the dealer and client who belongs to same city
   4. find sell id, amount, client name, city those sells where sell amount exists between 100 and 500
   5. find dealers who works either for one or more client or not yet join under any of the clients
   6. find the dealers and the clients he service, return client name, city, dealer name, commission.
   7. find client name, client city, dealer, commission those dealers who received a commission from the sell more than 12%
   8. make a report with client name, city, sell id, sell date, sell amount, dealer name and commission to find that either any of the existing clients haven’t made a purchase(sell) or made one or more purchase(sell) by their dealer or by own.
   9. find dealers who either work for one or more clients. The client may have made, either one or more purchases, or purchase amount above 2000 and must have a grade, or he may not have made any purchase to the associated dealer. Print client name, client grade, dealer name, sell id, sell amount
2. Create following views:
   1. count the number of unique clients, compute average and total purchase amount of client orders by each date.
   2. find top 5 dates with the greatest total sell amount
   3. count the number of sales, compute average and total amount of all sales of each dealer
   4. compute how much all dealers earned from charge(total sell amount \* charge) in each location
   5. compute number of sales, average and total amount of all sales dealers made in each location
   6. compute number of sales, average and total amount of expenses in each city clients made.
   7. find cities where total expenses more than total amount of sales in locations

-- 1  
-- a  
SELECT \* FROM dealer CROSS JOIN client  
  
-- b  
SELECT \*  
FROM client  
RIGHT OUTER JOIN dealer ON client.dealer\_id = dealer.id  
RIGHT OUTER JOIN sell ON sell.client\_id = client.id  
  
-- C  
SELECT dealer.id, dealer.name, client.id, client.name  
FROM dealer  
INNER JOIN client  
ON dealer.location = client.city  
  
  
--D  
SELECT sell.id, sell.amount, client.name, client.city  
FROM sell  
INNER JOIN client  
ON sell.client\_id = client.id  
WHERE sell.amount BETWEEN 100 AND 500  
  
-- E  
SELECT dealer.id, dealer.name, count(client.id) FROM dealer  
LEFT OUTER JOIN client  
ON dealer.id = client.dealer\_id  
GROUP BY dealer.id, dealer.name  
  
-- F  
SELECT dealer.id, dealer.name, client.id, client.name, client.city, dealer.charge  
FROM dealer  
INNER JOIN client  
ON dealer.id = client.dealer\_id  
  
-- G  
SELECT client.name, client.city, dealer.name, dealer.charge  
FROM dealer  
LEFT OUTER JOIN client  
ON dealer.id = client.dealer\_id  
WHERE dealer.charge > 0.12  
  
-- H  
SELECT client.name, client.city, sell.id, sell.date, sell.amount, dealer.name, dealer.charge FROM client  
LEFT OUTER JOIN sell  
ON client.id = sell.client\_id  
LEFT OUTER JOIN dealer  
ON dealer.id = sell.dealer\_id;  
  
-- I  
SELECT client.name, client.priority, dealer.name,sell.id, sell.amount  
FROM client  
RIGHT OUTER JOIN dealer ON dealer.id = client.dealer\_id  
LEFT OUTER JOIN sell ON sell.client\_id = client.id  
WHERE sell.amount >= 2000 AND client.priority IS NOT NULL;  
  
  
----------------------------------------------------------------  
-- 2  
-- A  
CREATE VIEW V1 AS  
 SELECT sell.date, count(client.id), avg(sell.amount), sum(sell.amount)  
 FROM sell  
 INNER JOIN client ON client.id = sell.client\_id  
 GROUP BY sell.date  
 ORDER BY sell.date;  
SELECT \* FROM V1;  
  
  
-- B  
CREATE VIEW V2 AS  
 SELECT sell.date, sum(sell.amount)  
 FROM sell  
 INNER JOIN client ON client.id = sell.client\_id  
 GROUP BY sell.date  
 ORDER BY sum(-sell.amount);  
SELECT \* FROM V2 LIMIT 5;  
  
  
-- C  
CREATE VIEW V3 AS  
 SELECT dealer.id, count(sell.id), avg(sell.amount), sum(sell.amount)  
 FROM sell  
 INNER JOIN dealer ON sell.dealer\_id = dealer.id  
 GROUP BY dealer.id;  
SELECT \* FROM V3;  
  
  
-- D  
CREATE VIEW V4 AS  
 SELECT dealer.location, count(sell.dealer\_id), sum(sell.amount), avg(sell.amount), sum(sell.amount \* dealer.charge) AS TOTAL  
 FROM sell  
 INNER JOIN dealer ON dealer.id = sell.dealer\_id  
 GROUP BY dealer.location;  
SELECT \* FROM V4;  
DROP VIEW V4;  
  
  
-- E  
CREATE VIEW V5 AS  
 SELECT dealer.location, count(sell.id), avg(sell.amount), sum(sell.amount) AS S1  
 FROM sell  
 INNER JOIN dealer ON dealer.id = sell.dealer\_id  
 GROUP BY dealer.location;  
SELECT \* FROM V5;  
DROP VIEW V5;  
  
  
-- F  
CREATE VIEW V6 AS  
 SELECT client.city, count(sell.id), avg(sell.amount), sum(sell.amount) AS S2  
 FROM sell  
 INNER JOIN client ON client.id = sell.client\_id  
 GROUP BY client.city;  
SELECT \* FROM V6;  
DROP VIEW V6;  
  
-- G  
SELECT \* FROM V5  
RIGHT JOIN V6 ON V5.location = V6.city  
WHERE V5.S1 < V6.S2 OR (V5.location IS NULL AND V6.city IS NOT NULL)