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| --- |
| Task1 |
|  |  |
|  | -- a. combine each row of dealer table with each row of client table |
|  | select \* from dealer |
|  | inner join client c on dealer.id = c.dealer\_id; |
|  |  |
|  | -- b. find all dealers along with client name, city, grade, sell number, date, and amount |
|  | select ds.id, ds.name, location, charge, c.name as client\_name, city, priority as grade, sell\_number, date, amount from (select d.id, name, location, charge, s.id as sell\_number, date, amount, client\_id |
|  | from dealer as d |
|  | left join sell as s on d.id = s.dealer\_id) as ds |
|  | left join client as c on c.id = ds.client\_id; |
|  |  |
|  | -- c. find the dealer and client who belongs to same city |
|  | select \* from dealer as d |
|  | inner join client as c on d.id = c.dealer\_id |
|  | where d.location = c.city; |
|  |  |
|  | /\* d. find sell id, amount, client name, city those sells |
|  | where sell amount exists between 100 and 500 \*/ |
|  | select s.id as sell\_id, amount, name as client\_name, city from sell as s |
|  | left join client as c on s.client\_id = c.id |
|  | where amount >= 100 and amount <= 500; |
|  |  |
|  | /\* e. find dealers who works either for one or more client |
|  | or not yet join under any of the clients \*/ |
|  | select \* from dealer |
|  | full outer join client c on dealer.id = c.dealer\_id; |
|  |  |
|  | /\* f. find the dealers and the clients he service, |
|  | return client name, city, dealer name, commission. \*/ |
|  | select c.name as client\_name, city, d.name as dealer\_name, charge as commission from dealer as d |
|  | inner join client as c on d.id = c.dealer\_id; |
|  |  |
|  | /\* g. find client name, client city, dealer, commission |
|  | those dealers who received a commission from the sell more than 12% \*/ |
|  | select c.name as client\_name, city as client\_city, d.name as dealer, charge as commission from dealer as d |
|  | inner join client as c on d.id = c.dealer\_id |
|  | where charge > 0.12; |
|  |  |
|  | /\* h. 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. \*/ |
|  | select client\_name, city, sell\_id, sell\_date, sell\_amount, name as dealer\_name, charge as commission |
|  | from ( |
|  | select name as client\_name, city, s.id as sell\_id, date as sell\_date, |
|  | amount as sell\_amount, c.dealer\_id from client as c |
|  | full outer join sell as s on c.id = s.client\_id |
|  | ) as cs |
|  | full outer join dealer as d on cs.dealer\_id = d.id; |
|  |  |
|  |  |
|  | /\* i. 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 |
|  | \*/ |
|  | select c.name as client\_name, c.priority as client\_grade, d.name as dealer\_name, |
|  | s.id as sell\_id, s.amount as sell\_amount from dealer as d |
|  | left join client c on d.id = c.dealer\_id |
|  | left join sell s on c.id = s.client\_id |
|  | where s.amount > 2000 and c.priority is not null; |
|  |  |
| Task2 |  |
|  |  |
|  | /\* a. count the number of unique clients, compute average |
|  | and total purchase amount of client orders by each date. \*/ |
|  | drop view IF EXISTS charge\_earned; |
|  |  |
|  | create or replace view client\_view as |
|  | select count(distinct (name)) as num\_of\_uniq\_clients, |
|  | avg(amount) as avg\_amount, |
|  | sum(amount) as total\_amount, |
|  | s.date as date |
|  | from client as c |
|  | left join sell s on c.id = s.client\_id |
|  | group by s.date |
|  | order by s.date; |
|  |  |
|  | select num\_of\_uniq\_clients, avg\_amount, total\_amount |
|  | from client\_view; |
|  |  |
|  | /\* b. find top 5 dates with the greatest total sell amount \*/ |
|  | create view date\_tot\_sell as |
|  | select sum(amount) as total\_sell, date |
|  | from sell |
|  | group by date |
|  | order by total\_sell desc; |
|  |  |
|  | select date, total\_sell |
|  | from date\_tot\_sell |
|  | limit 5; |
|  |  |
|  | /\* c. count the number of sales, compute average and total amount |
|  | of all sales of each dealer \*/ |
|  | create view dealer\_info as |
|  | select count(id) as num\_sales, |
|  | avg(amount) as avg\_amt, |
|  | sum(amount) as tot\_amt, |
|  | dealer\_id |
|  | from sell |
|  | group by dealer\_id; |
|  |  |
|  | select num\_sales, avg\_amt, tot\_amt, name |
|  | from dealer\_info as di |
|  | inner join dealer d on d.id = di.dealer\_id; |
|  |  |
|  | /\* d. compute how much all dealers |
|  | earned from charge(total sell amount \* charge) in each location \*/ |
|  | create or replace view charge\_earned as |
|  | select sum(earned) as all\_earnings |
|  | from (select d.id as id, name, location, charge, amount, charge \* amount as earned |
|  | from dealer as d |
|  | inner join sell as s on s.dealer\_id = d.id) as dealer\_sell |
|  | group by location; |
|  |  |
|  | select \* |
|  | from charge\_earned; |
|  |  |
|  | /\* e. compute number of sales, |
|  | average and total amount of all sales dealers made in each location \*/ |
|  | create or replace view sale\_by\_loc as |
|  | select count(s.id) as num\_sales, avg(amount) as avg\_amt, sum(amount) as tot\_amt |
|  | from sell as s |
|  | inner join dealer d on s.dealer\_id = d.id |
|  | group by location; |
|  |  |
|  | select \* |
|  | from sale\_by\_loc; |
|  |  |
|  | /\* f. compute number of sales, |
|  | average and total amount of expenses in each city clients made. \*/ |
|  | create view client\_purchase as |
|  | select count(s.id) as num\_of\_sale, avg(amount) as avg\_exps, sum(amount) as tot\_exps, city |
|  | from client as c |
|  | inner join sell s on c.id = s.client\_id |
|  | group by city; |
|  |  |
|  | select \* |
|  | from client\_purchase; |
|  |  |
|  | /\* g. find cities where total expenses more than total amount of sales in locations \*/ |
|  | select distinct(city) from client\_purchase as cp, sale\_by\_loc as sl |
|  | where cp.tot\_exps > sl.tot\_amt; |