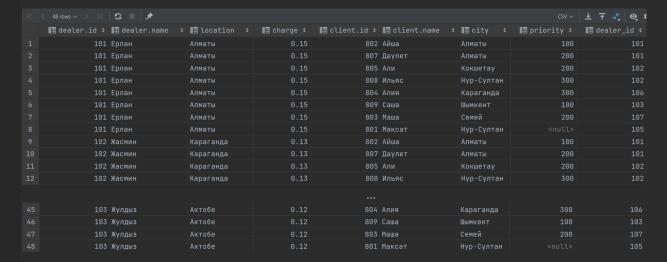
__ 1

-- a.combine each row of dealer table with each row of client table select *

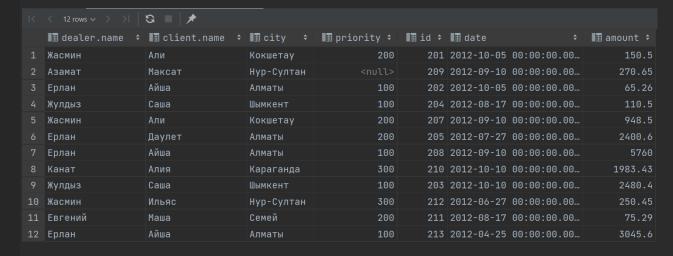
from dealer cross join client;



-- b.find all dealers along with client name, city, grade, sell number, date, and amount

select dealer.name, client.name, client.city, client.priority, sell.id,
sell.date, sell.amount

from dealer inner join client
 on dealer.id = client.dealer_id
inner join sell
 on client.id = sell.client id;



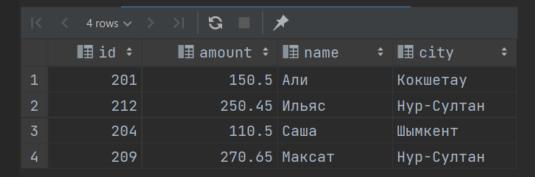
-- c.find the dealer and client who belongs to same city

from dealer cross join client

where dealer.location = client.city;

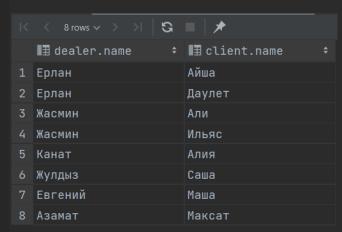
	■ dealer.name	Ⅲ client.name	■ city	
1	Ерлан	Даулет	Алматы	
2	Ерлан	Айша	Алматы	
3	Жасмин	Алия	Караганда	
4	Азамат	Максат	Нур-Султан	
5	Азамат	Ильяс	Нур-Султан	
6	Канат	Алия	Караганда	

-- d.find sell id, amount, client name, city those sells where sell
amount exists between 100 and 500
select sell.id, sell.amount, client.name, client.city
 from sell inner join client
 on sell.client_id = client.id
 where sell.amount > 100 and sell.amount < 500;</pre>



-- e.find dealers who works either for one or more client or not yet join under any of the clients

select dealer.name, client.name
 from dealer left join client
 on dealer.id = client.dealer_id



-- f.find the dealers and the clients he service, return client name city, dealer name, commission

select dealer.name, client.name, client.city, dealer.charge
 from client inner join dealer
 on client.dealer_id = dealer.id

	< 8 rows > > G	■ *		
	■ dealer.name ÷	■ client.name ÷	I city ≎	I ∄ charge ≎
1	Ерлан	Айша	Алматы	0.15
2	Ерлан	Даулет	Алматы	0.15
3	Жасмин	Али	Кокшетау	0.13
4	Жасмин	Ильяс	Нур-Султан	0.13
5	Канат	Алия	Караганда	0.14
6	Жулдыз	Саша	Шымкент	0.12
7	Евгений	Маша	Семей	0.13
8	Азамат	Максат	Нур-Султан	0.11

- $\mbox{--}$ g.find client name, client city, dealer, commission those dealers who received a
- -- commission from the sell more than 12%
- select client.name, client.city, dealer.name, dealer.charge
 from dealer inner join client
 on dealer.id = client.dealer_id
 where dealer.charge > 0.12;

	< 6 rows > > S	= *		
	I client.name \$	I≣ city ÷	dealer.name ≎	∎ charge ≎
1	Айша	Алматы	Ерлан	0.15
2	Даулет	Алматы	Ерлан	0.15
3	Али	Кокшетау	Жасмин	0.13
4	Ильяс	Нур-Султан	Жасмин	0.13
5	Алия	Караганда	Канат	0.14
6	Маша	Семей	Евгений	0.13

- -- 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, 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 client.dealer id = dealer.id

	< 12 rows > > G	■ *						CSV ∨ <u>↓</u>
	■ client.name ÷	I≣ city ÷	II id ≎	I date		I I amo∪nt ≎	I⊞ dealer.name	III charge ≎
	Али	Кокшетау	201	2012-10-05	00:00:00.000000	150.5	Жасмин	0.13
	Максат	Нур-Султан	209	2012-09-10	00:00:00.000000	270.65	Азамат	0.11
	Айша	Алматы	202	2012-10-05	00:00:00.000000	65.26	Ерлан	0.15
	Саша	Шымкент	204	2012-08-17	00:00:00.000000	110.5	Жулдыз	0.12
	Али	Кокшетау	207	2012-09-10	00:00:00.000000	948.5	Жасмин	0.13
	Даулет	Алматы	205	2012-07-27	00:00:00.000000	2400.6	Ерлан	0.15
	Айша	Алматы	208	2012-09-10	00:00:00.000000	5760	Ерлан	0.15
	Алия	Караганда	210	2012-10-10	00:00:00.000000	1983.43	Канат	0.14
	Саша	Шымкент	203	2012-10-10	00:00:00.000000	2480.4	Жулдыз	0.12
10	Ильяс	Нур-Султан	212	2012-06-27	00:00:00.000000	250.45	Жасмин	0.13
11	Маша	Семей	211	2012-08-17	00:00:00.000000	75.29	Евгений	0.13
12	Айша	Алматы	213	2012-04-25	00:00:00.000000	3045.6	Ерлан	0.15

-- 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 dealer.name, client.name, sell.amount, client.priority
 from client
 right outer join dealer on dealer.id = client.dealer_id
 left outer join sell on client.id = sell.client_id
 where sell.amount > 2000 and priority is not NULL;

	< 4 rows > > 😘	■ *		
	■ dealer.name ÷	I client.name ≎	I≣ amount ≎	■ priority ≎
1	Ерлан	Даулет	2400.6	200
2	Ерлан	Айша	5760	100
3	Жулдыз	Саша	2480.4	100
4	Ерлан	Айша	3045.6	100

--2

-- a.count the number of unique clients, compute average and total purchase amount of client orders by each date.

create view avg purchase

as select date, count (distinct client_id) as client_id, avg(amount)
as average_amount, sum(amount) as total_amount
 from sell

	■ date	■ client_id ≎	∎ average_amount ≎	ा total_amount ≎
1	2012-04-25 00:00:00.000000	1	3045.6	3045.6
2	2012-06-27 00:00:00.000000	1	250.45	250.45
3	2012-07-27 00:00:00.000000	1	2400.6	2400.6
	2012-08-17 00:00:00.000000	2	92.89500000000001	185.79000000000000
5	2012-09-10 00:00:00.000000	3	2326.383333333333	6979.15
6	2012-10-05 00:00:00.000000	2	107.88	215.76
7	2012-10-10 00:00:00.000000	2	2231.915	4463.83

-- b.find top 5 dates with the greatest total sell amount
select date, total_amount from avg_purchase
 order by total_amount desc
 limit 5

	■ date		\$	■ total_amount ÷
1	2012-09-10	00:00:00.000000		6979.15
2	2012-10-10	00:00:00.000000		4463.83
3	2012-04-25	00:00:00.000000		3045.6
4	2012-07-27	00:00:00.000000		2400.6
5	2012-06-27	00:00:00.000000		250.45

-- c.count the number of sales, compute average and total amount of all sales of each dealer

```
create view dealer_sales as
    select dealer_id, count(dealer_id) as numb_of_sales, avg(amount) as
average_amount, sum(amount) as total_amount
    from sell
    group by dealer_id
```

	I⊞ dealer_id ▲ 1	∎ numb_of_sales ≎	■ average_amount ≎	■ total_amount ≎
1	101	4	2817.8650000000002	11271.4600000000001
2	102	3	449.8166666666666	1349.45
3	103	2	1295.45	2590.9
4	105	1	270.65	270.65
5	106	1	1983.43	1983.43
6	107	1	75.29	75.29

-- d.compute how much all dealers earned from charge(total sell amount *charge) in each location

create view earnings as

select dealer.id, dealer.name, round(sum(sell.amount *
dealer.charge)) as earned, location

from dealer inner join sell on dealer.id = sell.dealer_id
group by dealer.id, dealer.name, location

	■ id ÷	I≣ name	∎ earned ≎	■ location ÷
1	105	Азамат	30	Нур-Султан
2	107	Евгений	10	Атырау
3	101	Ерлан	1691	Алматы
4	102	Жасмин	175	Караганда
5	103	Жулдыз	311	Актобе
6	106	Канат	278	Караганда

-- e.compute number of sales, average and total amount of all sales dealers made in each location

create view sale as

select dealer.location, count(dealer.location), avg(amount) as
average amount, sum(amount) as total amount

from sell inner join dealer on sell.dealer_id = dealer.id
group by dealer.location

	I location ▲ 1	III count ≎	∎ average_amount ≎	■ total_amount ÷
1	Актобе	2	1295.45	2590.9
2	Алматы	4	2817.8650000000002	11271.4600000000001
3	Атырау	1	75.29	75.29
4	Караганда	4	833.22	3332.88
5	Нур-Султан	1	270.65	270.65

-- f.compute number of sales, average and total amount of expenses in each city clients made.

create view expenses as

select count(client.city), client.city, avg(amount) as
average amount, sum(amount) as total amount

from sell inner join client on sell.client_id = client.id
group by client.city

	■ city	I≣ count ≎	∎ average_amount ≎	■ total_amount ÷
1	Караганда	1	1983.43	1983.43
2	Алматы	4	2817.8650000000002	11271.460000000001
3	Шымкент	2	1295.45	2590.9
4	Нур-Султан	2	260.54999999999995	521.0999999999999
5	Семей	1	75.29	75.29
6	Кокшетау	2	549.5	1099

-- g.find cities where total expenses more than total amount of sales in locations

select expenses.total_amount, sale.total_amount, location, city from
sale full outer join expenses on sale.location = expenses.city
 where expenses.total amount > sale.total amount

	■ expenses.total_amount ÷	■ sale.total_amount ≎	■ location ÷	I city	
1	521.0999999999999	270.65	Нур-Султан	Нур-Султан	