

SQL CODING CHALLENGE : CAR RENTAL SYSTEM

1. Update vehicle set dailyrate=68 where make='Mercedes';

output:

5	Chevrolet	Malibu	2022	47.00
6	Hyundai	Sonata	2023	49.00
7	BMW	3 Series	2023	60.00
8	Mercedes	C-Class	2022	68.00
9	Audi	A4	2022	55.00

2. Delete p,l,c from customer c left join lease l on
c.customerid=l.customerid left join payment p on
l.leaseid=p.leaseid where c.customerid=3;

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select * from customer where customerid=3;
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Result Grid

customerID	firstName	lastName	email	phoneNumber
NULL	NULL	NULL	NULL	NULL

3. Alter table payment rename column paymentdate to
transactiondate;

Field	Type	Null	Key	Default	Extra
paymentID	int	NO	PRI	NULL	
leaseID	int	YES	MUL	NULL	
transactiondate	date	YES		NULL	
amount	decimal(10,2)	YES		NULL	

4. Select * from customer where email='david@example.com';

customerID	firstName	lastName	email	phoneNumber
5	David	Lee	david@example.com	555-987-6543

5. Select * from leases where customerid=7 and
enddate>=CURRENT_DATE;

Result Grid		Filter Rows:		Edit:		
	leaseID	vehicleID	customerID	startDate	endDate	type
	NULL	NULL	NULL	NULL	NULL	NULL

6. Select p.* from payment p join lease l on p.leaseid=l.leaseid join customer c on l.customerid=c.customerid where c.phonenumber='555-555-5555';

	paymentID	leaseID	transactiondate	amount
▶	1	1	2023-01-03	250.00

7. Select avg(dailyrate) as averagerate from vehicle where available=1;

	averagerate
▶	53.714286

8. Select * from vehicle where dailyrate=(select max(dailyrate) from vehicle);

	vehicleID	make	model	year	dailyRate	status	passengerCapacity	engineCapacity
▶	8	Mercedes	C-Class	2022	68.00	available	8	2599

9. Select v.* from vehicle v join lease l on v.vehicleId=l.vehicleid where l.customerid=5;

	vehicleID	make	model	year	dailyRate	status	passengerCapacity	engineCapacity
▶	5	Chevrolet	Malibu	2022	47.00	available	4	1800

10. Select * from lease order by enddate desc limit 1;

	leaseID	vehicleID	customerID	startDate	endDate	type
▶	10	10	10	2023-10-10	2023-10-31	Monthly

11. Select * from payment where YEAR(transactiondate)=2023;

	paymentID	leaseID	transactiondate	amount
▶	1	1	2023-01-03	250.00
	2	2	2023-02-20	1200.00
	4	4	2023-04-25	1040.00
	5	5	2023-05-07	235.00
	7	7	2023-07-03	600.00

12. Select * from customers where customerid not in(select Distinct l.customerid from lease l join payment p on l.leaseid=p.leaseid);

customerID	firstName	lastName	email	phoneNumber
6	Laura	Hall	laura@example.com	555-234-5678
9	William	Taylor	william@example.com	555-321-6547

13. select v.vehicleid,v.make,v.model,sum(p.amount) as totalpayment from vehicle v join lease l on v.vehicleid=l.vehicleid join payment p on l.leaseid=p.leaseid group by v.vehicleid,v.make,v.model;

	vehicleid	make	model	totalpayment
▶	1	Toyota	Camry	250.00
	2	Honda	Civic	1200.00
	4	Nissan	Altima	1040.00
	5	Chevrolet	Malibu	235.00
	7	BMW	3 Series	600.00

14. Select c.customerid,c.firstname,c.lastname,sum(p.amount) as total from customer c join lease l on c.customerid=l.customerid join payment p on l.leaseid=p.leaseid group by c.customerid,c.firstname,c.lastname;

	customerid	firstname	lastname	total
▶	1	John	Doe	250.00
	2	Jane	Smith	1200.00
	4	Sarah	Brown	1040.00
	5	David	Lee	235.00
	7	Michael	Davis	600.00

15. Select l.leaseid,v.make,v.model,l.startdate,l.enddate,l.type from lease l join vehicle v on l.vehicleid=v.vehicleid;

	leaseid	make	model	startdate	enddate	type
▶	1	Toyota	Camry	2023-01-01	2023-01-05	Daily
	2	Honda	Civic	2023-02-15	2023-02-28	Monthly
	4	Nissan	Altima	2023-04-20	2023-04-30	Monthly
	5	Chevrolet	Malibu	2023-05-05	2023-05-10	Daily
	7	BMW	3 Series	2023-07-01	2023-07-10	Daily

Result 22

16. Select l.leaseid,c.firstname,c.lastname,v.make,v.model,l.startdate,l.enddate from lease l join customer c on l.customerid=c.customerid join vehicle v on l.vehicleid=v.vehicleid where l.enddate>=CURRENT_DATE;

	leaseid	firstname	lastname	make	model	startdate	enddate
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17. Select c.customerid,c.firstname,c.lastname,sum(p.amount) as expense from customer c join lease l on c.customerid=l.customerid join payment p on l.leaseid=p.leaseid group by c.customerid,c.firstname,c.lastname order by expense desc limit 1;

	customerid	firstname	lastname	expense
▶	10	Olivia	Adams	1500.00

18. Select v.vehicleid,v.make,v.model,l.leaseid,l.startdate,l.enddate,c.firstname,c.lastname from vehicle v left join lease l on v.vehicleid=l.vehicleid left join customer c on l.customerid=c.customerid where l.enddate>=CURRENT_DATE or l.leaseid is null;

	vehicleid	make	model	leaseid	startdate	enddate	firstname	lastname
▶	3	Ford	Focus	NULL	NULL	NULL	NULL	NULL
	6	Hyundai	Sonata	NULL	NULL	NULL	NULL	NULL
	9	Audi	A4	NULL	NULL	NULL	NULL	NULL

