

Project 2 – Phase 2

Car Rental Database

CSE 3330-002

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HONOR CODE

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or that I contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Task 1 commands, and if you have any comments to add, e.g., how you decided on specific data types, or constraints etc. [20 points]

```
CREATE TABLE CUSTOMER(
```

```
CustID int(3),
```

```
Name varchar(30) NOT NULL PRIMARY KEY,
```

```
Phone varchar(15));
```

```
CREATE TABLE RENTAL(
```

```
CustID int(3) NOT NULL,
```

```
VehicleID varchar(20) NOT NULL,
```

```
StartDate date,
```

```
OrderDate date,
```

```
RentalType int(1) NOT NULL,
```

```
Qty int(1),
```

```
ReturnDate date,
```

```
TotalAmount int(5),
```

```
PaymentDate date,
```

```
FOREIGN KEY (VehicleID) REFERENCES vehicle(VehicleID)
```

```
FOREIGN KEY (CustID) REFERENCES customer(CustID));
```

```
CREATE TABLE VEHICLE(  
VehicleID char(20) NOT NULL PRIMARY KEY,  
Description varchar(200),  
Year int(4),  
Type int(1),  
Category int(1));  
  
CREATE TABLE RATE(  
Type int(1),  
Category int(1),  
Weekly float,  
Daily float,  
FOREIGN KEY (Type) REFERENCES vehicle(Type)  
FOREIGN KEY (Category) REFERENCES vehicle(Category));
```

For task 2, describe your methodology, paste your commands (text), and let us know if there were any challenges. [20 points]

To load the data into the tables, we used a tool in MySQL Workbench. After creating the schema and the tables, we right clicked on each table and used a tool called “Table Data Import Wizard”. For each table, we had to pick the corresponding .csv file.

For task 3, type the question description, your query text, a screenshot of the query output, and the total number of records returned or affected. Also, let us know if there were any challenges. Note that your query has to be editable. [50 points]

Question 1: Insert yourself as a New Customer. Do not provide the CustomerID in your query. [2 points]

INSERT INTO CUSTOMER

VALUES (NULL, 'A. Nguyen','4692127176');

1 -- Question 1: Insert yourself as a New Customer. Do not provide the CustomerID in your query. [2 points]
2 • INSERT INTO CUSTOMER
3 VALUES (NULL, 'A. Nguyen','(469) 212-7176');

Output

Action Output

#	Time	Action	Message
1	17:42:06	INSERT INTO CUSTOMER VALUES (NULL, 'A. Nguyen','(469) 212-7176')	1 row(s) affected

4
5 • SELECT * FROM customer;

Result Grid

	CustID	Name	Phone
▶	219	A. Crowther	(325) 783-4081
	203	A. Hernandez	(355) 572-5385
	216	A. Hess	(516) 570-6411
	224	A. Mcghee	(838) 610-5802
	NULL	A. Nguyen	(469) 212-7176
	230	A. Odonnell	(439) 536-8929
	201	A. Parks	(214) 555-0127
	215	C. Pearce	(599) 881-5189
	229	D. Kirkpatrick	(773) 696-8009
	204	G. Carver	(753) 763-8656
	210	G. Clarkson	(309) 625-1838
	212	H. Gallegos	(961) 265-8638
	220	H. Mahoney	(212) 262-8829
	222	H. Stokes	(931) 969-7317
	208	I. Whyte	(811) 979-7345
	221	J. Brown	(644) 756-0110
	227	J. Greenaway	(212) 262-8829

customer 8 x

Output

Action Output

#	Time	Action	Message
1	17:47:56	SELECT * FROM customer LIMIT 0, 1000	32 row(s) returned

Question 2: Update your phone number to (837) 721-8965 [2 points]

UPDATE CUSTOMER

SET phone="(837) 721-8965"

WHERE Name="A. Nguyen";

```
11 -- Question 2: Update your phone number to (837) 721-8965 [2 points]
12 • UPDATE CUSTOMER
13 SET phone="(837) 721-8965"
14 WHERE Name="A. Nguyen";
15
16 • SELECT * FROM customer;
```

Result Grid

	CustID	Name	Phone
▶	219	A. Crowther	(325) 783-4081
	203	A. Hernandez	(355) 572-5385
	216	A. Hess	(516) 570-6411
	224	A. Mcghee	(838) 610-5802
	205	A. Nguyen	(837) 721-8965
	230	A. Odonnell	(439) 536-8929
	201	A. Parks	(214) 555-0127
	215	C. Pearce	(599) 881-5189
	229	D. Kirkpatrick	(773) 696-8009
	204	G. Carver	(753) 763-8656

customer 9 x

Output

Action Output

#	Time	Action	Message
✓ 1	17:47:56	SELECT * FROM customer LIMIT 0, 1000	32 row(s) returned
✓ 2	17:49:54	UPDATE CUSTOMER SET phone="(837) 721-8965" WHERE Name="A. Nguyen"	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0
✓ 3	17:50:39	SELECT * FROM customer LIMIT 0, 1000	32 row(s) returned

Question 3: Increase only daily rates for luxury vehicles by 5% [2 points]

UPDATE RATE

SET Daily = Daily*1.05

WHERE Category = 1;

```
65 • UPDATE RATE
66   SET Daily = Daily*1.05
67   WHERE Category = 1;
68
69 • SELECT * FROM carrental.rate;
```

< Result Grid Filter Rows: Export: Wrap Cell Content:

	Type	Category	Weekly	Daily
▶	1	0	480	80
	1	1	600	105
	2	0	530	90
	2	1	660	115.5
	3	0	600	100
	3	1	710	126
	4	0	685	115
	4	1	800	141.75
	5	0	780	130
	6	0	685	115
	5	1	900	157.5
	6	1	800	141.75

rate 10 ×

Output

Action Output

#	Time	Action	Message
✓ 1	18:01:21	UPDATE RATE SET Daily = Daily*1.05 WHERE Category = 1	6 row(s) affected Rows matched: 6 Changed: 6 Warnings: 0
✓ 2	18:02:19	SELECT * FROM carrental.rate LIMIT 0, 1000	12 row(s) returned

Question 4-a: Insert a new luxury van with the following info: Honda Odyssey 2019, vehicle id: 5FNRL6H58KB133711[2 points]

INSERT INTO VEHICLE

VALUES ("5FNRL6H58KB133711", "Honda Odyssey", 2019, 6, 1);

```
8 -- Question 4-a: Insert a new luxury van with the following info: Honda Odyssey 2019, vehicle id: 5FNRL6H58KB133711 [2 points]
9 -- Type: 1:Compact, 2:Medium, 3:Large, 4:SUV, 5:Truck, 6:VAN
10 -- Category: 0:Basic, 1:Luxury
11 • INSERT INTO VEHICLE
12 VALUES ("5FNRL6H58KB133711", "Honda Odyssey", 2019, 6, 1);
13
14 • SELECT * FROM vehicle;
```

Result Grid

VehicleID	Description	Year	Type	Category
4S4BSELC0F3325370	Subaru Outback	2015	4	0
5FNRL6H58KB133711	Honda Odyssey	2019	6	1
5J6RM4H90FL028629	Honda CR-V	2015	4	0
5N1AL0MM8EL549388	Infiniti JX35	2014	4	1
5NPDH4AE2FH565275	Hyundai Elantra	2015	1	0

vehicle 5 x

Output

Action Output

#	Time	Action	Message
✓ 1	16:16:46	INSERT INTO VEHICLE VALUES ("5FNRL6H58KB133711", "Honda Odyssey", 2019, 6, 1)	1 row(s) affected
✓ 2	16:16:46	SELECT * FROM vehicle LIMIT 0, 1000	61 row(s) returned

Question 4-b: You also need to insert the following rates: [1 point]

INSERT INTO RATE

VALUES (5, 1, 900, 150), (6, 1, 800, 135);

```
17 -- Question 4-b: You also need to insert the following rates:
18 • INSERT INTO RATE
19 VALUES (5, 1, 900, 150), (6, 1, 800, 135);
20
21 • SELECT * FROM RATE;
```

< **Result Grid** Filter Rows: | Export: | Wrap Cell Content:

	Type	Category	Weekly	Daily
▶	1	0	480	80
	1	1	600	100
	2	0	530	90
	2	1	660	110
	3	0	600	100

RATE 6 ×

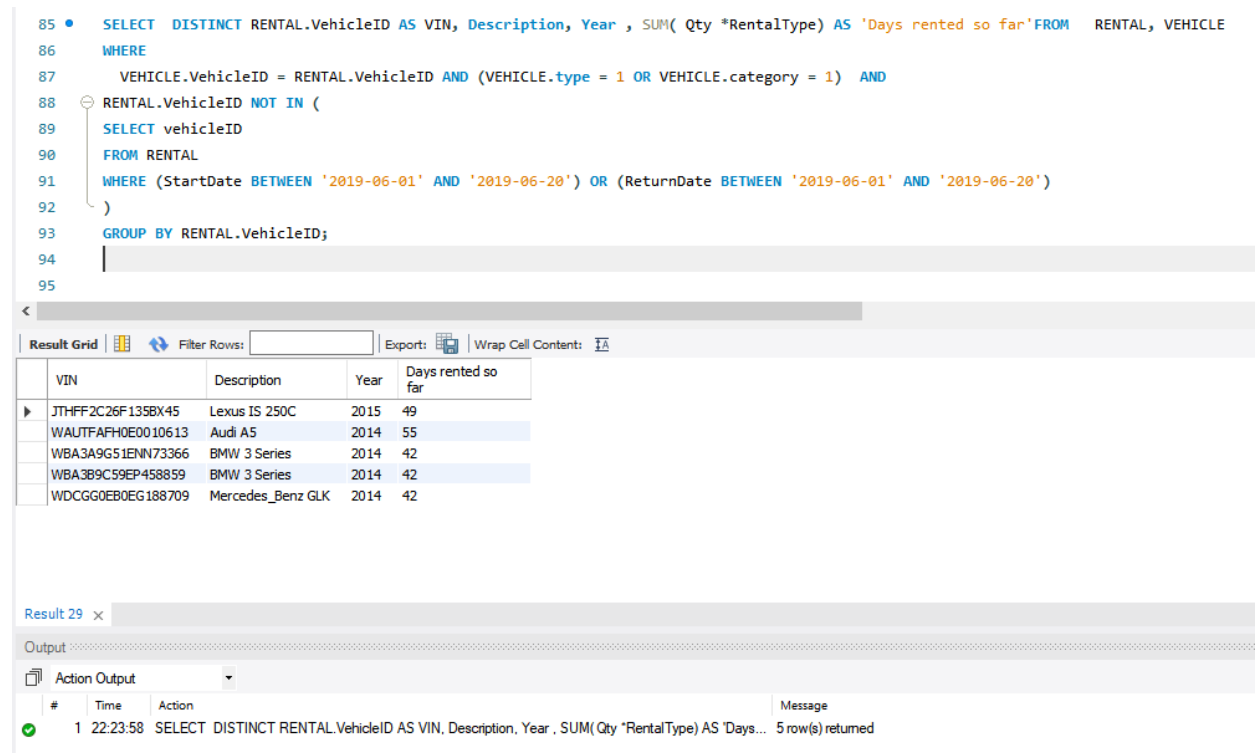
Output

Action Output ▼

#	Time	Action	Message
✓ 1	16:19:45	INSERT INTO RATE VALUES (5, 1, 900, 150), (6, 1, 800, 135)	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0
✓ 2	16:19:45	SELECT * FROM RATE LIMIT 0, 1000	12 row(s) returned

Question 5: Return all Compact(1) & Luxury(1) vehicles that were available for rent from June 01, 2019 until June 20, 2019. List VehicleID as VIN, Description, year, and how many days have been rented so far. You need to change the weeks into days.[15 points]

```
SELECT DISTINCT RENTAL.VehicleID AS VIN, Description, Year , SUM( Qty *RentalType) AS
'Days rented so far'FROM  RENTAL, VEHICLE
WHERE
    VEHICLE.VehicleID = RENTAL.VehicleID AND (VEHICLE.type = 1 OR VEHICLE.category = 1)
AND
    RENTAL.VehicleID NOT IN (
    SELECT vehicleID
    FROM RENTAL
    WHERE (StartDate BETWEEN '2019-06-01' AND '2019-06-20') OR (ReturnDate BETWEEN '2019-06-
01' AND '2019-06-20')
    )
GROUP BY RENTAL.VehicleID;
```



The screenshot shows a SQL query editor with the following code:

```
85 • SELECT DISTINCT RENTAL.VehicleID AS VIN, Description, Year , SUM( Qty *RentalType) AS 'Days rented so far'FROM  RENTAL, VEHICLE
86 WHERE
87     VEHICLE.VehicleID = RENTAL.VehicleID AND (VEHICLE.type = 1 OR VEHICLE.category = 1) AND
88     RENTAL.VehicleID NOT IN (
89     SELECT vehicleID
90     FROM RENTAL
91     WHERE (StartDate BETWEEN '2019-06-01' AND '2019-06-20') OR (ReturnDate BETWEEN '2019-06-01' AND '2019-06-20')
92     )
93 GROUP BY RENTAL.VehicleID;
94
95
```

Below the query editor is a "Result Grid" showing the results of the query. The grid has 5 columns: VIN, Description, Year, and Days rented so far. The results are as follows:

VIN	Description	Year	Days rented so far
JTHFF2C26F135BX45	Lexus IS 250C	2015	49
WAUTFAFH0E0010613	Audi A5	2014	55
WBA3A9G51EN73366	BMW 3 Series	2014	42
WBA3B9C59EP458859	BMW 3 Series	2014	42
WDCGG0E0EG188709	Mercedes-Benz GLK	2014	42

Below the result grid is an "Output" section showing the execution of the query. The output is as follows:

#	Time	Action	Message
1	22:23:58	SELECT DISTINCT RENTAL.VehicleID AS VIN, Description, Year , SUM(Qty *RentalType) AS 'Days...	5 row(s) returned

Question 6: Return a list with the remaining balance for the customer with the id '221'.

List customer name, and the balance.[3 points]



```
SELECT CUSTOMER.Name, SUM(TotalAmount) AS Remaining_Balance
```

```
FROM CUSTOMER, RENTAL
```

```
WHERE CUSTOMER.CustID=221 AND CUSTOMER.CustID=RENTAL.CustID AND
```

```
PaymentDate IS NULL;
```

```
20 -- Question 6: Return a list with the remaining balance for the customer with the id '221'.
21 • SELECT CUSTOMER.Name, SUM(TotalAmount) AS Remaining_Balance
22 FROM CUSTOMER, RENTAL
23 WHERE CUSTOMER.CustID=221 AND CUSTOMER.CustID=RENTAL.CustID AND PaymentDate IS NULL;
24
25
```

<	
Result Grid	
Filter Rows: <input type="text"/>	
Export: 	
Wrap Cell Content: 	
Name	Remaining_Balance
J. Brown	14400

Result 1 x

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Question 7: Create a report that will return all vehicles. List the VehicleID as VIN, Description, Year, Type, Category, and Weekly and Daily rates. For the vehicle Type and Category, you need to use the SQL Case statement to substitute the numbers with text. Order your results based on Category (first Luxury and then Basic) and Type based on the Type number, not the text. [4 points]

```
SELECT DISTINCT VehicleID AS VIN, Description, Year, Weekly, Daily,  
    CASE V.Category  
        WHEN 1 THEN 'Luxury'  
        WHEN 0 THEN 'Basic'  
    END AS Category,  
    CASE V.Type  
        WHEN 1 THEN 'Compact'  
        WHEN 2 THEN 'Medium'  
        WHEN 3 THEN 'Large'  
        WHEN 4 THEN 'SUV'  
        WHEN 5 THEN 'Truck'  
        WHEN 6 THEN 'VAN'  
    END AS VehicleType  
FROM VEHICLE AS V JOIN RATE AS R  
ON V.Type = R.Type AND V.Category = R.Category  
ORDER BY V.Category DESC, V.Type ASC;
```

****Screenshots on next pages**

Question 7 Continued

```
101 • SELECT DISTINCT VehicleID AS VIN, Description, Year, Weekly, Daily,  
102     CASE V.Category  
103         WHEN 1 THEN 'Luxury'  
104         WHEN 0 THEN 'Basic'  
105     END AS Category,  
106     CASE V.Type  
107         WHEN 1 THEN 'Compact'  
108         WHEN 2 THEN 'Medium'  
109         WHEN 3 THEN 'Large'  
110         WHEN 4 THEN 'SUV'  
111         WHEN 5 THEN 'Truck'  
112         WHEN 6 THEN 'VAN'  
113     END AS VehicleType  
114 FROM VEHICLE AS V JOIN RATE AS R  
115 ON V.Type = R.Type AND V.Category = R.Category  
116 ORDER BY V.Category DESC, V.Type ASC;  
117  
118
```

Result Grid							
		Filter Rows:			Export:	Wrap Cell Content:	
	VIN	Description	Year	Weekly	Daily	Category	VehicleType
▶	19VDE1F3XEE414842	Acura ILX	2014	600	105	Luxury	Compact
	WAUTFAFH0E0010613	Audi A5	2014	600	105	Luxury	Compact
	JTHFF2C26F135BX45	Lexus IS 250C	2015	600	105	Luxury	Compact
	WDCGG0EB0EG188709	Mercedes-Benz GLK	2014	600	105	Luxury	Compact
	WBA3B9C59EP458859	BMW 3 Series	2014	600	105	Luxury	Compact
	WBA3A9G51ENN73366	BMW 3 Series	2014	600	105	Luxury	Compact

Question 7 Continued

JTHCE1BL3F151DE04	Lexus GS 350	2015	660	115.5	Luxury	Medium
JTHBW1GG1F120DU53	Lexus ES 300h	2015	660	115.5	Luxury	Medium
1VWCH7A3XEC037969	Volkswagen Passat	2014	660	115.5	Luxury	Medium
WAU32AFD8FN005740	Audi A8	2015	710	126	Luxury	Large
JTHDL5EF9F5007221	Lexus LS 460	2015	710	126	Luxury	Large
JH4KC1F56EC000095	Acura RLX	2014	710	126	Luxury	Large
JH4KC1F50EC800004	Acura RLX	2014	710	126	Luxury	Large
WBAVL1C57EVR93286	BMW X1	2014	800	141.75	Luxury	SUV
YV440MDD6F2617077	Volvo XC60	2015	800	141.75	Luxury	SUV
5N1AL0MM8EL549388	Infiniti JX35	2014	800	141.75	Luxury	SUV
YV4940NB5F1191453	Volvo XC70	2015	800	141.75	Luxury	SUV
JTJHY7AX2F120EA11	Lexus LX 570	2015	800	141.75	Luxury	SUV
JTJ3M7FX2E152CD75	Lexus GX460	2014	800	141.75	Luxury	SUV
WA1LGAFE8ED001506	Audi Q7	2014	800	141.75	Luxury	SUV
5FNRL6H58KB133711	Honda Odyssey	2019	800	141.75	Luxury	VAN
JM1BM1V35E1210570	Mazda 3	2014	480	80	Basic	Compact
1G1JD5SB3E4240835	Chevrolet Optra	2014	480	80	Basic	Compact
KNAFZ4A86E5195895	KIA Forte	2014	480	80	Basic	Compact
KMHTC6AD8EU998631	Hyundai Veloster	2014	480	80	Basic	Compact
2HGFB2F94FH501940	Honda Civic	2015	480	80	Basic	Compact
5NPDH4AE2FH565275	Hyundai Elantra	2015	480	80	Basic	Compact

3MZBM1L74EM109736	Mazda 3	2014	480	80	Basic	Compact
3N1CE2CP0FL409472	Nissan Versa Note	2015	480	80	Basic	Compact
3N1CN7APXEK444458	Nissan Versa	2014	480	80	Basic	Compact
3W2A7AU1FM012211	Volkswagen Golf	2015	480	80	Basic	Compact
JF1GPAA61F8314971	Subaru Impreza	2015	480	80	Basic	Compact
1N4AB7AP2EN855026	Nissan Sentra	2014	480	80	Basic	Compact
KNAGN4AD2F5084324	Kia Optima Hybrid	2015	530	90	Basic	Medium
1HGCR2E3XEA305302	Honda Accord	2014	530	90	Basic	Medium
KNALU4D42F6025717	Kia K900	2015	600	100	Basic	Large
KNALN4D75E5A57351	Kia Cadenza	2014	600	100	Basic	Large
4S4BSBF39F3261064	Subaru Outback	2015	685	115	Basic	SUV
5XYKUJDA77EG449709	Kia Sorento	2014	685	115	Basic	SUV
5XYKU4A7XFG622415	Kia Sorento	2015	685	115	Basic	SUV
KNAFZ4A86E5195865	KIA Sportage	2014	685	115	Basic	SUV
JM3KE4DY4F0441471	Mazda CX5	2015	685	115	Basic	SUV
JTMBFREV1FJ019885	Toyota RAV4	2015	685	115	Basic	SUV
KM8SN4HF0FU107203	Hyundai Santa Fe	2015	685	115	Basic	SUV
KMHJT3AF1FU028211	Hyundai Tucson	2015	685	115	Basic	SUV
5XYKT4A75FG610224	Kia Sorento	2015	685	115	Basic	SUV
KNDPCCA65F7791085	KIA Sportage	2015	685	115	Basic	SUV
JM3TB3DV0E0015742	Mazda CX9	2014	685	115	Basic	SUV
ZT3DFREV0FW317743	Toyota RAV4	2015	685	115	Basic	SUV
5TDBKRFH4ES26D590	Toyota Highlander	2014	685	115	Basic	SUV

Question 7 Continued

5J6RM4H90FL028629	Honda CR-V	2015	685	115	Basic	SUV
4S48RCFC1E3203823	Subaru Outback	2014	685	115	Basic	SUV
JN8AS5MV0FW760408	Nissan Rogue Select	2015	685	115	Basic	SUV
4S48SELC0F3325370	Subaru Outback	2015	685	115	Basic	SUV
JTEZUEJR7E5081641	Toyota 4Runner	2014	685	115	Basic	SUV
1FDRF3B61FEA87469	Ford Super Duty Pi...	2015	780	130	Basic	Truck
1N6BA0EJ9EN516565	Nissan Titan	2014	780	130	Basic	Truck
1GB3KZCG1EF117132	Chevrolet Silverado	2014	780	130	Basic	Truck
1FTNF1CF2EKE54305	Ford F Series Pickup	2014	780	130	Basic	Truck
1N6BF0KM0EN101134	Nissan NV	2014	685	115	Basic	VAN
1FDEE3FL6EDA29122	Ford E 350	2014	685	115	Basic	VAN

Result 5 ×

Output



Action Output

#	Time	Action	Message
1	19:50:07	SELECT DISTINCT VehicleID AS VIN, Description, Year, Weekly, Daily, CASE V.Category WHEN 1 ...	61 row(s) returned



Question 8: What is the total of money that customers paid to us until today? [2 points]

```
SELECT SUM(TotalAmount) AS Total_Money_Paid
```

```
FROM RENTAL
```

```
WHERE PaymentDate IS NOT NULL;
```

```
26  -- Question 8: What is the total of money that customers paid to us until today? [2 points]
27  •  SELECT SUM(TotalAmount) AS Total_Money_Paid
28      FROM RENTAL
29      WHERE PaymentDate IS NOT NULL;
30
```

<	
Result Grid	
Filter Rows: <input type="text"/>	
Export:  Wrap Cell Content: 	
	Total_Money_Paid
▶	8230

Result 3 x			
Output			
Action Output			
#	Time	Action	Message
✓ 1	15:02:44	SELECT SUM(TotalAmount) AS Total_Money_Paid FROM RENTAL W...	1 row(s) returned

Question 9-a: Create a report for the J. Brown customer with all vehicles he rented. List the description, year, type, and category. Also, calculate the unit price for every rental, the total duration mention if it is on weeks or days, the total amount, and if there is any payment. Similarly, as in Question 7, you need to change the numeric values to the corresponding text. Order the results by the StartDate. [6 points]

```
SELECT Description, Year, Rental.TotalAmount, DATEDIFF(ReturnDate, StartDate) AS
Duration_In_Days,
    CASE V.Category
        WHEN 1 THEN 'Luxury'
        WHEN 0 THEN 'Basic'
    END AS Category,
    CASE V.Type
        WHEN 1 THEN 'Compact'
        WHEN 2 THEN 'Medium'
        WHEN 3 THEN 'Large'
        WHEN 4 THEN 'SUV'
        WHEN 5 THEN 'Truck'
        WHEN 6 THEN 'VAN'
    END AS Type,
    CASE
        WHEN Rental.PaymentDate IS NULL THEN 'Not Paid'
        ELSE "Paid"
    END AS Payment,
    CASE
        WHEN Rental.RentalType=7 THEN TotalAmount/DATEDIFF(ReturnDate, StartDate)
        ELSE TotalAmount/DATEDIFF(ReturnDate, StartDate)
    END AS Unit_Price
FROM VEHICLE AS V, RATE, RENTAL, CUSTOMER AS C
WHERE C.Name="J. Brown" AND C.CustID="221" AND V.Type=RATE.Type AND
V.Category=RATE.Category AND C.CustID=RENTAL.CustID AND Rental.VehicleID=V.VehicleID
ORDER BY RENTAL.StartDate;
```

** Screenshot on next page

```

148  /* Question 9-a: Create a report for the J. Brown customer with all vehicles he rented.
149  List the description, year, type, and category. Also, calculate the unit price for every rental,
150  the total duration mention if it is on weeks or days, the total amount, and if there is any payment.
151  Similarly, as in Question 7, you need to change the numeric values to the corresponding text.
152  Order the results by the StartDate. [6 points] */

```

```

153  • SELECT Description, Year, Rental.TotalAmount, DATEDIFF(ReturnDate, StartDate) AS Duration_In_Days,
154         CASE V.Category
155             WHEN 1 THEN 'Luxury'
156             WHEN 0 THEN 'Basic'
157         END AS Category,
158         CASE V.Type

```

Result Grid								
Filter Rows: <input type="text"/> Export: Wrap Cell Content:								
	Description	Year	TotalAmount	Duration_In_Days	Category	Type	Payment	Unit_Price
▶	Audi A5	2014	600	7	Luxury	Compact	Paid	85.7143
	Acura ILX	2014	600	7	Luxury	Compact	Paid	85.7143
	Audi A5	2014	200	2	Luxury	Compact	Paid	100.0000
	Acura ILX	2014	200	2	Luxury	Compact	Paid	100.0000
	Mercedes-Benz GLK	2014	2400	28	Luxury	Compact	Not Paid	85.7143
	BMW 3 Series	2014	2400	28	Luxury	Compact	Not Paid	85.7143
	BMW 3 Series	2014	2400	28	Luxury	Compact	Not Paid	85.7143
	Audi A5	2014	2400	28	Luxury	Compact	Not Paid	85.7143
	Lexus IS 250C	2015	2400	28	Luxury	Compact	Not Paid	85.7143
	Acura ILX	2014	2400	28	Luxury	Compact	Not Paid	85.7143

Result 34 ×

Output

Action Output

#	Time	Action	Message
✓ 1	23:31:39	SELECT Description, Year, Rental.TotalAmount, DATEDIFF(ReturnDate, StartDate) AS Duration_In_...	10 row(s) returned

For question 9a, we assumed that the unit price was the total amount divided by the duration of the rental (in days). This would result in the price per unit which is day.

Question 9-b: For the same customer return the current balance. [2 points]

SELECT SUM(TotalAmount) AS 'Current Balance'

FROM RENTAL AS R, CUSTOMER AS C

WHERE C.Name = 'J. Brown' AND C.CustID = R.CustID AND PaymentDate IS NULL;

```
153      /* Question 9-b: For the same customer return the current balance. [2 points] */
154 •    SELECT SUM(TotalAmount) AS 'Current Balance'
155      FROM RENTAL AS R, CUSTOMER AS C
156      WHERE C.Name = 'J. Brown' AND C.CustID = R.CustID AND PaymentDate IS NULL;
157
```

<	
Result Grid	Filter Rows: <input type="text"/> Export: Wrap Cell Content:
	Current Balance
▶	14400

Result 14 x

Output



Action Output

	#	Time	Action	Message
✓	1	18:24:48	SELECT SUM(TotalAmount) AS 'Current Balance' FROM REN...	1 row(s) returned
✓	2	18:29:34	SELECT SUM(TotalAmount) AS 'Current Balance' FROM REN...	1 row(s) returned

Question 10: Retrieve all weekly rentals for the vehicleID '19VDE1F3XEE414842' that are not paid yet. List the Customer Name, the start and return date, and the amount.[3 points]

SELECT CUSTOMER.Name, StartDate, ReturnDate, TotalAmount

FROM CUSTOMER, RENTAL

WHERE Rental.VehicleID='19VDE1F3XEE414842' AND Customer.CustID=Rental.CustID
AND PaymentDate IS NULL;

```
32 -- Question 10: Retrieve all weekly rentals for the vehicleID '19VDE1F3XEE414842' that are not paid yet.
33 -- List the Customer Name, the start and return date, and the amount.[3 points]
34 • SELECT CUSTOMER.Name, StartDate, ReturnDate, TotalAmount
35 FROM CUSTOMER, RENTAL
36 WHERE Rental.VehicleID='19VDE1F3XEE414842' AND Customer.CustID=Rental.CustID AND PaymentDate IS NULL;
37
```

Result Grid				
Filter Rows: <input type="text"/>				
Export:				
Wrap Cell Content:				
	Name	StartDate	ReturnDate	TotalAmount
▶	G. Clarkson	2019-11-01	2019-11-15	1200
	J. Brown	2020-01-01	2020-01-29	2400

Result 1 x			
Output			
Action Output			
#	Time	Action	Message
✓ 1	16:06:28	SELECT CUSTOMER.Name, StartDate, ReturnDate, TotalAmount FROM CUSTOMER, RENTAL WH...	2 row(s) returned

Question 11: Return all customers that they never rent a vehicle. [3 points]

```
SELECT DISTINCT Name
FROM CUSTOMER AS C, RENTAL AS R
WHERE Name NOT IN (
    SELECT Name
    FROM RENTAL AS R, CUSTOMER AS C
    WHERE R.CustID = C.CustID);
```

```
159      /* Question 11: Return all customers that they never rent a vehicle. [3 points] */
160      •  SELECT DISTINCT Name
161      FROM CUSTOMER AS C, RENTAL AS R
162      WHERE Name NOT IN (
163          SELECT Name
164          FROM RENTAL AS R, CUSTOMER AS C
165          WHERE R.CustID = C.CustID);
```

<

Result Grid

Name
A. Crowther
A. McGhee
A. Nguyen
A. Odonnell
A. Parks
C. Pearce
G. Carver
H. Mahoney
H. Stokes
I. Whyte
J. Greenaway
J. Reeves
K. Kaiser A...
K. Kay
L. Bernal
L. Lott
L. Lutz
L. Mullen
L. Perkins
M. Beach
M. Lee
R. Armstrong
R. Booker
S. Patel
Sh. Byers
Sh. Dunlap

Result 21

Output

Action Output

#	Time	Action	Message
✓ 1	18:52:45	SELECT DISTINCT Name FROM CUSTOMER AS C, RENTA...	26 row(s) returned

Question 12: Return all rentals that the customer paid on the StartDate. List Customer Name, Vehicle Description, StartDate, ReturnDate, and TotalAmount. Order by Customer Name.[3 points]

SELECT CUSTOMER.Name, Description, StartDate, ReturnDate, TotalAmount

FROM CUSTOMER, VEHICLE, RENTAL

WHERE StartDate=PaymentDate AND CUSTOMER.CustID=RENTAL.CustID AND
VEHICLE.VehicleID=RENTAL.VehicleID

ORDER BY CUSTOMER.Name;

```
39 -- Question 12: Return all rentals that the customer paid on the StartDate.
40 -- List Customer Name, Vehicle Description, StartDate, ReturnDate, and TotalAmount.
41 -- Order by Customer Name.[3 points]
42 • SELECT CUSTOMER.Name, Description, StartDate, ReturnDate, TotalAmount
43 FROM CUSTOMER, VEHICLE, RENTAL
44 WHERE StartDate=PaymentDate AND CUSTOMER.CustID=RENTAL.CustID AND VEHICLE.VehicleID=RENTAL.VehicleID
45 ORDER BY CUSTOMER.Name;
```

Result Grid

	Name	Description	StartDate	ReturnDate	TotalAmount
▶	A. Hernandez	Mazda CX5	2019-09-09	2019-09-13	460
	A. Hess	Nissan NV	2019-08-02	2019-08-30	2740
	D. Kirkpatrick	Acura ILX	2019-05-06	2019-05-10	400
	D. Kirkpatrick	Audi A5	2019-05-06	2019-05-10	400
	H. Gallegos	Acura ILX	2019-06-10	2019-07-01	1800
	J. Brown	Acura ILX	2019-07-01	2019-07-08	600
	J. Brown	Audi A5	2019-07-01	2019-07-08	600

Result 4 ×

Output

Action Output

#	Time	Action	Message
✓ 1	16:11:35	SELECT CUSTOMER.Name, Description, StartDate, ReturnDate, TotalAmount FROM CUSTOMER, ...	7 row(s) returned