

Project Name: Car Rental Database 2019  
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Date: November 20th, 2019

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.

Signed by: Mason McDaniel, Alexander Eseyin

### Query 1:

ALTER TABLE RENTAL  
ADD Returned CHAR(1);

306	16:09:25	SHOW COLUMNS FROM 'carrental2019','rental'	OK	0.000 sec
307	16:09:35	PREPARE stmt FROM 'INSERT INTO 'carrental2019','rental' ('StartDate','VehicleID','ReturnDate','Qty','Rent...'	OK	0.000 sec
308	16:09:36	DEALLOCATE PREPARE stmt	OK	0.000 sec

UPDATE rental  
SET Returned = '1'  
WHERE PaymentDate is NOT NULL;

315	16:26:45	UPDATE rental SET Returned = 1 WHERE PaymentDate is NOT NULL	11 row(s) affected Rows matched: 11 Changed: 11 Warnings: 0	0.031 sec
-----	----------	--	---	-----------

UPDATE rental  
SET Returned = '0'  
WHERE PaymentDate is NULL;

#	Time	Action	Message	Duration / Fetch
311	16:24:43	UPDATE rental SET Returned = 1 WHERE PaymentDate is NULL	12 row(s) affected Rows matched: 12 Changed: 12 Warnings: 0	0.140 sec

select \*  
from rental

	CustID	VehicleID	StartDate	OrderDate	RentalType	Qty	ReturnDate	TotalAmount	PaymentDate	Returned
▶	203	JM3KE4DY4F0441471	2019-09-09	2019-05-22	1	4	2019-09-13	460	2019-09-09	1
	210	19VDE1F3XEE414842	2019-11-01	2019-10-28	7	2	2019-11-15	1200	NULL	0
	210	JTHFF2C26F1358X45	2019-05-01	2019-04-15	7	1	2019-05-08	600	2019-05-08	1
	210	JTHFF2C26F1358X45	2019-11-01	2019-10-28	7	2	2019-11-15	1200	NULL	0
	210	WAUTFAFH0E0010613	2019-11-01	2019-10-28	7	2	2019-11-15	1200	NULL	0
	210	WBA3A9G51ENN73366	2019-11-01	2019-10-28	7	2	2019-11-15	1200	NULL	0
	210	WBA3B9C59EP458859	2019-11-01	2019-10-28	7	2	2019-11-15	1200	NULL	0
	210	WDCGG0EB0EG188709	2019-11-01	2019-10-28	7	2	2019-11-15	1200	NULL	0

315	16:26:45	UPDATE rental SET Returned = 1 WHERE PaymentDate is NOT NULL	11 row(s) affected Rows matched: 11 Changed: 11 Warnings: 0	0.031 sec
316	16:26:50	select * from rental LIMIT 0, 500	23 row(s) returned	0.000 sec / 0.000 sec

### Query 2:

```

CREATE VIEW vRentalInfo AS
SELECT r.OrderDate, r.StartDate, r.ReturnDate, DATEDIFF(r.ReturnDate,
r.StartDate) as 'TotalDays',
r.VehicleID as 'VIN', v.Description as 'Vehicle',
CASE WHEN v.Type = 1 THEN "Compact"
      WHEN v.Type = 2 THEN "Medium"
      WHEN v.Type = 3 THEN "Large"
      WHEN v.Type = 4 THEN "SUV"
      WHEN v.Type = 5 THEN "Truck"
      WHEN v.Type = 6 THEN "VAN"
END AS Type,
CASE WHEN v.Category = 0 THEN "Basic"
      ELSE "Luxury"
END AS Category, r.CustID as 'CustomerID', c.Name as 'CustomerName',
TotalAmount as 'OrderAmount',
CASE WHEN r.Returned = 0 THEN TotalAmount
      ELSE 0
END AS RentalBalance
FROM RENTAL r , VEHICLE v , CUSTOMER c
WHERE r.VehicleID = v.VehicleID and r.CustID = c.CustID
ORDER BY StartDate ASC

```

356 17:09:33 CREATE VIEW vRentalInfo AS SELECT r.OrderDate, r.StartDate, r.ReturnDate, DATEDIFF(r.ReturnDate, r.St... 0 row(s) affected 0.078 sec

```

select *
from vRentalInfo

```

	OrderDate	StartDate	ReturnDate	TotalDays	VIN	Vehicle	Type	Category	CustomerID	CustomerName	OrderAmount	RentalBalance
▶	2019-04-15	2019-05-01	2019-05-08	7	JTHFF2C26F135BX45	Lexus IS 250C	Compact	Luxury	210	G. Clarkson	600	0
	2019-04-12	2019-05-06	2019-06-10	35	19VDE1F3XEE414842	Acura ILX	Compact	Luxury	229	D. Kirkpatrick	400	0
	2019-04-12	2019-05-06	2019-06-10	35	WAUTFAFH0E0010613	Audi A5	Compact	Luxury	229	D. Kirkpatrick	400	0
	2019-04-15	2019-06-10	2019-07-01	21	19VDE1F3XEE414842	Acura ILX	Compact	Luxury	212	H. Gallegos	1800	0
	2019-06-12	2019-07-01	2019-07-08	7	19VDE1F3XEE414842	Acura ILX	Compact	Luxury	221	J. Brown	600	0
	2019-06-12	2019-07-01	2019-07-08	7	WAUTFAFH0E0010613	Audi A5	Compact	Luxury	221	J. Brown	600	0
	2019-06-12	2019-07-09	2019-07-11	2	19VDE1F3XEE414842	Acura ILX	Compact	Luxury	221	J. Brown	200	0

359 17:15:10 select \* from vRentalInfo LIMIT 0, 500 23 row(s) returned 0.047 sec / 0.000 sec

## Task 2:

1. INSERT INTO customer (Name, Phone) VALUES ('\$name', '\$phone')

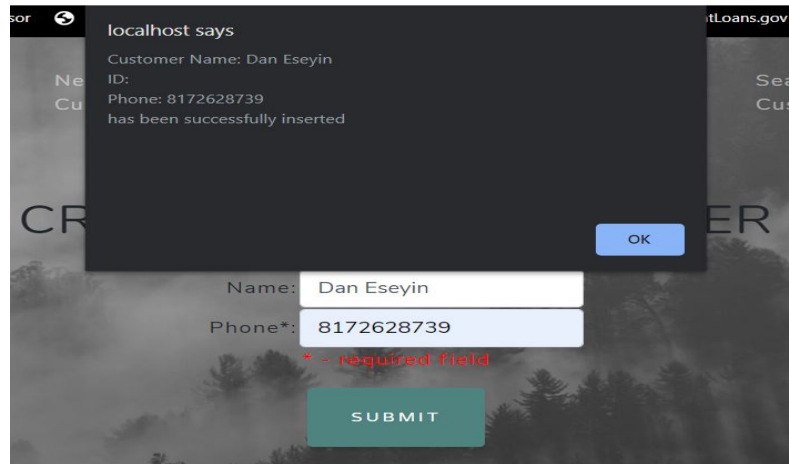


Figure 1a. Shows that the customer was successfully added.

221	J. Brown	(644) 756-0110
222	H. Stokes	(931) 969-7317
223	J. Reeves	(940) 981-5113
224	A. Mcghee	(838) 610-5802
225	L. Mullen	(798) 331-7777
226	R. Armstrong	(325) 783-4081
227	J. Greenaway	(212) 262-8829
228	K. Kaiser Aco...	(228) 576-1557
229	D. Kirkpatrick	(773) 696-8009
230	A. Odonnell	(439) 536-8929
231	K. Kay	(368) 336-5403
234	Dan Eseyin	8172628739
	NULL	NULL

18 13:45:12 select \* from customer LIMIT 0, 1000 32 row(s) returned 0.000 sec / 0.000 sec

Figure 1b. Shows the customer was added to workbench.

2. \$sql = "INSERT INTO vehicle (VehicleID, Description, Year, Type, Category) VALUES ('\$VehicleID', '\$Description', '\$Year', '\$Type', '\$Category')"

localhost says

VehicleID: 5YJSA1E22JF281470  
 Description: Tesla Model S  
 Year: 2018  
 Type: 1  
 Category: 2  
 has been successfully inserted

OK

Description\*: Tesla Model S  
 Year\*: 2018  
 Type\*: 1  
 Category\*: 2

\* - required field

Type(s)

SUBMIT

Figure 2a. Shows A car being Added Successfully

VehicleID	Description	Year	Type	Category
4S4BSBF39F3261064	Subaru Outback	2015	4	0
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
5TDBKRFH4ES26D590	Toyota Highlander	2014	4	0
5XYKT4A75FG610224	Kia Sorento	2015	4	0
5XYKU4A7XFG622415	Kia Sorento	2015	4	0
5XYKUDA77EG449709	Kia Sorento	2014	4	0
5YJSA1E22JF281470	Tesla Model S	2018	1	2
JF1GPAA61F8314971	Subaru Impreza	2015	1	0
JH4KC1F50EC800004	Acura RLX	2014	3	1
JH4KC1F56EC000095	Acura RLX	2014	3	1

Figure 2b. Shows A car being Added Successfully to the Database.

3. <?php

```
$sql = "
SELECT Description
FROM Vehicle
WHERE VehicleID NOT IN (
```

```

        SELECT DISTINCT VehicleID
        FROM Rental
        WHERE (StartDate >= '$reserve' and returndate <= '$return') or
        (startDate<'$return' and returndate>= '$reserve') ) and Type = '$type'
and Category = '$category'
        UNION
        SELECT Description
        FROM Vehicle
        WHERE Type = '$type' and Category = '$category' and VehicleID
NOT IN (
        SELECT DISTINCT VehicleID
        FROM Rental)
";

```

```

$Phone = $_POST["Phone"];
$sql1 = "
        SELECT CustID
        FROM Customer
        WHERE Phone = '$Phone'
        LIMIT 1"

```

```

$sql2 = "SELECT VehicleID
        FROM Vehicle
        WHERE Description = '$Description' and Type = '$Type' and Category =
'$Category'";

```

```

$sql = "INSERT INTO rental (CustID, VehicleID, StartDate, OrderDate,
RentalType, Qty, ReturnDate, TotalAmount, PaymentDate, Returned) VALUES
if($interval->d>=7){
        $RentalType = '7';
        $sql2 = "SELECT Weekly
        FROM rate
        WHERE Type = '$Type' and Category = '$Category'";
        $result = mysqli_query($link, $sql2);
        $value = mysqli_fetch_object($result);
        $TotalAmount = $value->Weekly * $interval->d * $Qty;
    }
    else
    {

```

```

$RentalType = '1';
$sql2 = "SELECT Daily
FROM rate
WHERE Type = '$Type' and Category = '$Category'";
$result = mysqli_query($link, $sql2);
$value = mysqli_fetch_object($result);
$TotalAmount = $value->Daily * $interval->d * $Qty;
}

```

```

('$CustID', '$VehicleID', '$StartDate', '$OrderDate', '$RentalType', '$Qty',
'$ReturnDate', '$TotalAmount', $PaymentDate, '0');

```

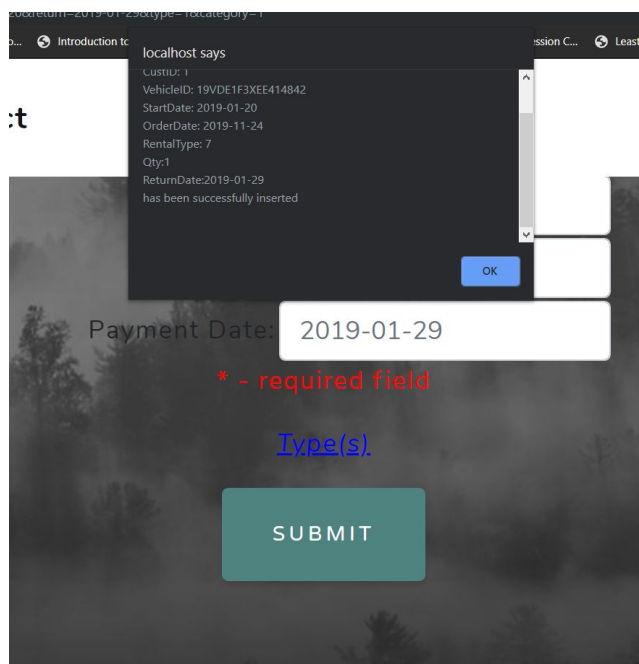


Figure 3a. Shows a rental being processed

232	19VDE1F3XEE414842	2019-01-20	2019-11-24	7	1	2019-01-29	5400	HULL
HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL	HULL

Figure 3b. Shows the Vehicle being added to the database

- ```

sql = "SELECT DISTINCT v.VehicleID, v.Description
FROM Vehicle v, Rental r
WHERE v.VehicleID = r.VehicleID and Returned = '0'"

```

```

$sql2 = "SELECT v.VehicleID
FROM Vehicle v, rental r
WHERE v.VehicleID = r.VehicleID and v.Description = '$Description' and
r.ReturnDate = '$return';

```

```

$result = mysqli_query($link, $sql2);

$sql1 = "
    SELECT CustID
    FROM Customer
    WHERE Phone = '$phone'
    LIMIT 1
    ";

$sql2 = "SELECT c.Name as 'Name', c.Phone as 'Phone', r.ReturnDate as
'ReturnDate', SUM(r.TotalAmount) as 'PaymentDue'
    FROM customer c, rental r , Vehicle v
    WHERE c.CustID = '$Customer' and c.CustID = r.CustID and r.VehicleID
= v.VehicleID and v.VehicleID = '$VehicleID'";

if($PaymentDue == 0)
{
    $sql = "UPDATE rental
    SET Returned = '1'
    WHERE CustID='$Customer' and ReturnDate='$return' and
VehicleID='$VehicleID'";
    if(!mysqli_query($link,$sql))
    {
        echo("Error description: " . mysqli_error($link));
        return false;
    }
    echo("Vehicle successfully returned! Thank you and have a wonderful day!");
}
else
{
    $sql = "UPDATE rental
    SET Returned = '1', TotalAmount = '0'
    WHERE CustID='$Customer' and ReturnDate='$return' and
VehicleID='$VehicleID'";
    mysqli_query($link,$sql);
    echo("Thank you for your payment, have a nice day!");
}

```



Phone\*: (309) 625-1838

Rented Vehicles: Lexus IS 250C

ReturnDate\*: 2019-11-15

\* - required field

SUBMIT

| Name        | Phone          | Return Date | Total Due |
|-------------|----------------|-------------|-----------|
| G. Clarkson | (309) 625-1838 | 2019-05-08  | \$1800    |

Figure 4a shows a return process when a Phone number is used

localhost/returns.php?phone=%28309%29+625-1838&VehicleID=Lexus+IS+250C&return=2019-11-15&customer=1

Student Center Sign in to your acco... Introduction to...

localhost says

Thank you for your payment, have a nice day!

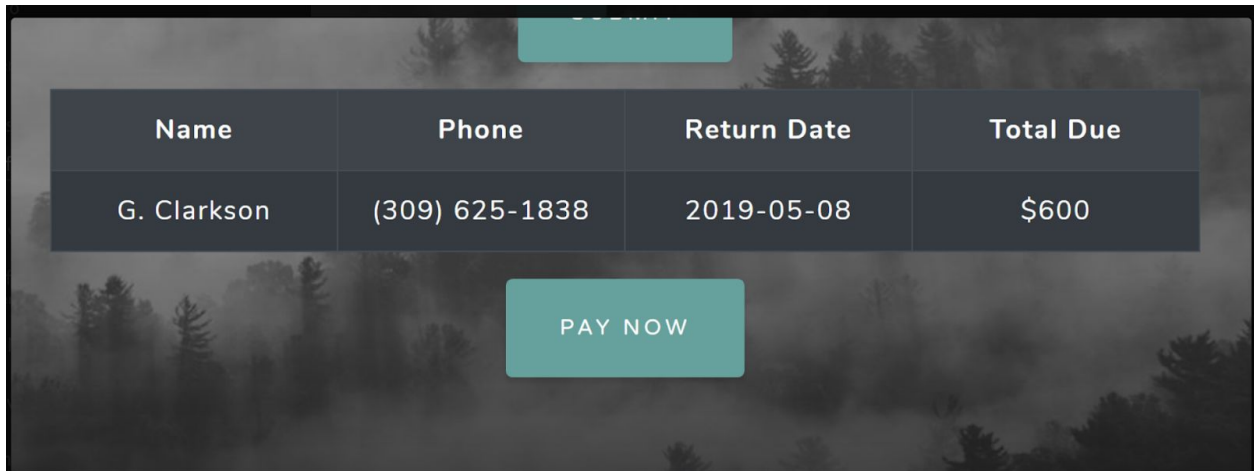
Menu

OK

| Name        | Phone          | Return Date | Total Due |
|-------------|----------------|-------------|-----------|
| G. Clarkson | (309) 625-1838 | 2019-05-08  | \$1800    |

PAY NOW

Figure 4b .Customer's total is displayed at it gives him the option to pay



The screenshot shows a web application interface with a dark background featuring a forest scene. At the top, there is a teal button labeled 'PAY NOW'. Below it is a table with four columns: 'Name', 'Phone', 'Return Date', and 'Total Due'. The table contains one row of data for 'G. Clarkson' with phone number '(309) 625-1838', return date '2019-05-08', and total due '\$600'. At the bottom, there is another teal button labeled 'PAY NOW'.

| Name        | Phone          | Return Date | Total Due |
|-------------|----------------|-------------|-----------|
| G. Clarkson | (309) 625-1838 | 2019-05-08  | \$600     |

Figure 4c Shows the remainder of the balance after payment.

5(i).

<?php

```
$searchSet = mysqli_query($link, "
    SELECT CustomerID, CustomerName, RentalBalance
    FROM vRentalInfo
    ORDER BY RentalBalance");
if(isset($_GET["search"])){
    $CustID = $_GET["CustID"];
    $Name = $_GET["name"];

    if(($CustID == NULL) && ($Name == NULL))
    {
        $searchSet = mysqli_query($link, "
            SELECT CustomerID, CustomerName, RentalBalance
            FROM vRentalInfo");
    }
    else if($CustID == NULL)
    {
        $searchSet = mysqli_query($link, "
            SELECT CustomerID, CustomerName, RentalBalance
            FROM vRentalInfo
            WHERE CustomerName Like '$Name'");
    }
    else if($Name == NULL)
    {
        $searchSet = mysqli_query($link, "
            SELECT CustomerID, CustomerName, RentalBalance
```

```

FROM vRentalInfo
WHERE CustomerID = '$CustID');
}
}
?>

```

**SEARCH BY CUSTOMER**

Name:

Customer ID:

| Customer ID | Name        | Balance   |
|-------------|-------------|-----------|
| 210         | G. Clarkson | \$0.00    |
| 210         | G. Clarkson | \$1200.00 |
| 210         | G. Clarkson | \$1200.00 |
| 210         | G. Clarkson | \$1200.00 |
| 210         | G. Clarkson | \$1200.00 |
| 210         | G. Clarkson | \$1200.00 |
| 210         | G. Clarkson | \$1200.00 |

**Figure 5a. Shows the Result when you search for Cust ID 210**

```

5(ii). $searchSet = mysqli_query($link, "
      SELECT VIN, Vehicle, round((OrderAmount / TotalDays),2) as
'DailyPrice'

```

```

      FROM vRentalInfo
      ORDER BY DailyPrice");

```

```

if(isset($_GET["search"])){
    $VIN = $_GET["VIN"];
    $Name = $_GET["Description"];

```

```

    if(($VIN == NULL) && ($Name == NULL))
    {

```

```

        $searchSet = mysqli_query($link, "
        SELECT VIN, Vehicle, CONCAT('$',
        round((OrderAmount/TotalDays),2)) as 'DailyPrice'

```

```

FROM vRentalInfo
UNION
select v.VehicleID, v.Description, 'N/A' AS 'DailyPrice' from vehicle v,
rate r where v.Type = r.Type and v.Category = r.Category
and v.VehicleID NOT IN (select VehicleID from rental);
}
else if($VIN == NULL)
{
$searchSet = mysqli_query($link, "
SELECT VIN, Vehicle, CONCAT('$',
round((OrderAmount/TotalDays),2)) as 'DailyPrice'
FROM vRentalInfo
WHERE Vehicle Like '%$Name%'
UNION
select v.VehicleID, v.Description, 'N/A' AS 'DailyPrice' from vehicle v,
rate r where v.Type = r.Type and v.Category = r.Category
and v.Description like '%$Name%' and VehicleID NOT IN (select
VehicleID from rental)");
}
else if($Name == NULL)
{
$searchSet = mysqli_query($link, "
SELECT VIN, Vehicle, CONCAT('$',
round((OrderAmount/TotalDays),2)) as 'DailyPrice'
FROM vRentalInfo
WHERE VIN = '$VIN'
UNION
select v.VehicleID, v.Description, 'N/A' AS 'DailyPrice' from vehicle v,
rate r where v.Type = r.Type and v.Category = r.Category
and v.VehicleID = '$VIN' and v.VehicleID NOT IN (select VehicleID
from rental)");
}
}

```

# SEARCH BY VEHICLE

VIN: JM3KE4DY4F0441471

Description: bmw

SEARCH

| VIN               | Vehicle      | Daily Price |
|-------------------|--------------|-------------|
| WBA3A9G51ENN73366 | BMW 3 Series | \$85.71     |
| WBA3B9C59EP458859 | BMW 3 Series | \$85.71     |
| WBAVL1C57EVR93286 | BMW X1       | N/A         |

Figure 5b. Search result for All BMWs (This was a partial Search)