

Project Description

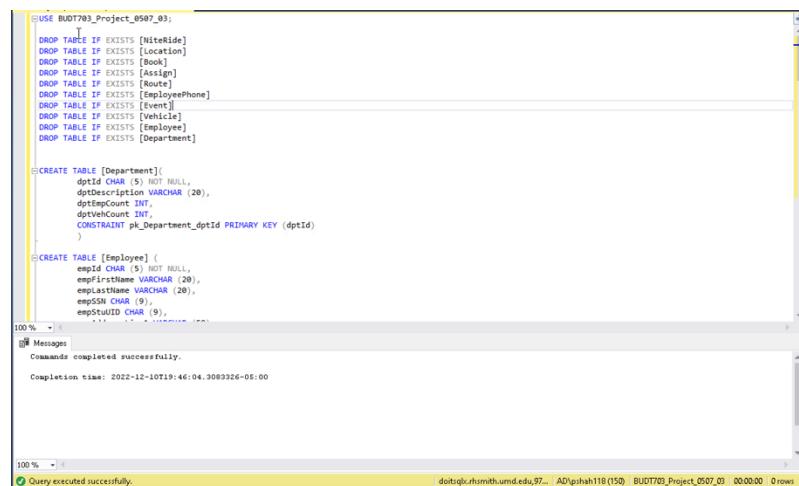
DOTS UMD Consulting Firm is committed to providing safe, cost effective and innovative services that anticipate the needs of our growing community of more than 50,000 students, faculty and staff in the city of College Park and beyond

Data Source

- Crowd Sourcing (Google forms)
- Transit
- Transloc
- UMD Website

SQL

Step 1: Checking if tables are created by running the CREATE SQL file.



```
USE BUDT703_Project_0507_03;
DROP TABLE IF EXISTS [NiteRide];
DROP TABLE IF EXISTS [Location];
DROP TABLE IF EXISTS [Area];
DROP TABLE IF EXISTS [Assign];
DROP TABLE IF EXISTS [Route];
DROP TABLE IF EXISTS [EmployeePhone];
DROP TABLE IF EXISTS [Event];
DROP TABLE IF EXISTS [Vehicle];
DROP TABLE IF EXISTS [Employee];
DROP TABLE IF EXISTS [Department];
```

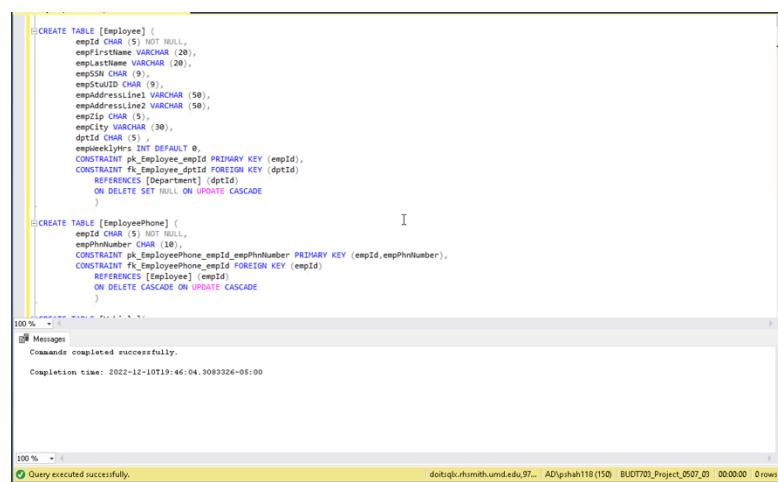
```
CREATE TABLE [Department]{
    dptId CHAR (5) NOT NULL,
    dptDescription VARCHAR (20),
    dptActive INT,
    dptActiveCount INT,
    CONSTRAINT pk_Department_dptId PRIMARY KEY (dptId)
}
```

```
CREATE TABLE [Employee] {
    empId CHAR (5) NOT NULL,
    empFirstName VARCHAR (20),
    empLastName VARCHAR (20),
    empMiddleName CHAR (9),
    empSSN CHAR (9),
    empStuID CHAR (9),
    empAddressLine1 VARCHAR (50),
    empAddressLine2 VARCHAR (50),
    empZip CHAR (5),
    empCity VARCHAR (30),
    dptId CHAR (5),
    empSalaryPerHr INT DEFAULT 0,
    CONSTRAINT pk_Employee_empId PRIMARY KEY (empId),
    CONSTRAINT fk_Employee_dptId FOREIGN KEY (dptId)
        REFERENCES [Department] (dptId)
        ON DELETE SET NULL ON UPDATE CASCADE
}
```

100 %  Messages
Commands completed successfully.
Completion time: 2022-12-10T19:46:04.3083326-05:00

100 %  Messages
Commands completed successfully.
Completion time: 2022-12-10T19:46:04.3083326-05:00

Query executed successfully. dotsql.rsmith.umd.edu,97... AD\psahal118(150) BUDT703_Project_0507_03 00:00:00 0 rows



```
CREATE TABLE [EmployeePhone] {
    empId CHAR (5) NOT NULL,
    empPhNumber CHAR (10),
    CONSTRAINT pk_EmployeePhone_empId_empPhNumber PRIMARY KEY (empId,empPhNumber),
    CONSTRAINT fk_EmployeePhone_empId FOREIGN KEY (empId)
        REFERENCES [Employee] (empId)
        ON DELETE CASCADE ON UPDATE CASCADE
}
```

100 %  Messages
Commands completed successfully.
Completion time: 2022-12-10T19:46:04.3083326-05:00

100 %  Messages
Commands completed successfully.
Completion time: 2022-12-10T19:46:04.3083326-05:00

Query executed successfully. dotsql.rsmith.umd.edu,97... AD\psahal118(150) BUDT703_Project_0507_03 00:00:00 0 rows

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```
REFERENCES [Employee] (empId)
ON DELETE CASCADE ON UPDATE CASCADE
)

CREATE TABLE [Vehicle](
vhId CHAR (5) NOT NULL,
vhModel CHAR (30),
vhCapacity INT,
vhRunningStatus VARCHAR (25),
deptId CHAR (5),
CONSTRAINT pk_Vehicle_vhId PRIMARY KEY (vhId),
CONSTRAINT fk_Vehicle_deptId FOREIGN KEY (deptId)
REFERENCES [Department] (deptId)
ON DELETE SET NULL ON UPDATE CASCADE
)

CREATE TABLE [Event](
eveId CHAR (5) NOT NULL,
eveType CHAR (20),
eveOrigin VARCHAR (20),
eveDestination VARCHAR (20),
eveDurationM INT,
eveCapacity INT,
CONSTRAINT pk_Event_eveId PRIMARY KEY (eveId)
)

CREATE TABLE [Route](
rotNo CHAR (3) NOT NULL,
CONSTRAINT pk_Route_rotNo PRIMARY KEY (rotNo)
)

100 % ▶ (1) Messages
Commands completed successfully.

Completion time: 2022-12-10T19:46:04.3083326-05:00

100 % ▶ (1) Query executed successfully.
doitsql.rsmith.umd.edu:97... AD\pshah118(150) BUDT70_Project_0507_03 00:00:00 0 rows
```

```
)

CREATE TABLE [Route](
rotNo CHAR (3) NOT NULL,
routeName VARCHAR (50),
rotEndLoc VARCHAR (50),
rotStopCount INT,
rotFrequency INT,
CONSTRAINT pk_Route_rotNo PRIMARY KEY (rotNo)
)

CREATE TABLE [Location](
locId CHAR (5) NOT NULL,
locName VARCHAR (30),
locLatitude DECIMAL(8,6),
locLongitude DECIMAL(8,6),
CONSTRAINT pk_Location_locId PRIMARY KEY (locId)
)

CREATE TABLE [Assign](
empId CHAR (5),
vhId CHAR (5),
rotNo CHAR (3),
LicenseNo CHAR (13),
CONSTRAINT pk_Assign_empId_vhId PRIMARY KEY (empId, vhId),
CONSTRAINT fk_Assign_empId FOREIGN KEY (empId)
REFERENCES [Employee] (empId)
ON DELETE NO ACTION ON UPDATE CASCADE;
CONSTRAINT fk_Assign_vhId FOREIGN KEY (vhId)
REFERENCES [Vehicle] (vhId)
ON DELETE NO ACTION ON UPDATE CASCADE;
CONSTRAINT fk_Assign_rotNo FOREIGN KEY (rotNo)
REFERENCES [Route] (rotNo)
ON DELETE NO ACTION ON UPDATE CASCADE;
)

100 % ▶ (1) Messages
Commands completed successfully.

Completion time: 2022-12-10T19:46:04.3083326-05:00

100 % ▶ (1) Query executed successfully.
doitsql.rsmith.umd.edu:97... AD\pshah118(150) BUDT70_Project_0507_03 00:00:00 0 rows
```

```
CREATE TABLE [Assign](
empId CHAR (5),
vhId CHAR (5),
rotNo CHAR (3),
LicenseNo CHAR (13),
CONSTRAINT pk_Assign_empId_vhId PRIMARY KEY (empId, vhId),
CONSTRAINT fk_Assign_empId FOREIGN KEY (empId)
REFERENCES [Employee] (empId)
ON DELETE NO ACTION ON UPDATE CASCADE;
CONSTRAINT fk_Assign_vhId FOREIGN KEY (vhId)
REFERENCES [Vehicle] (vhId)
ON DELETE NO ACTION ON UPDATE NO ACTION;
CONSTRAINT fk_Assign_rotNo FOREIGN KEY (rotNo)
REFERENCES [Route] (rotNo)
ON DELETE NO ACTION ON UPDATE CASCADE;
)

CREATE TABLE [Book](
empId CHAR (5),
vhId CHAR (5),
eveId CHAR (5),
CONSTRAINT pk_Book_empId_vhId_eveId PRIMARY KEY (vhId, empId, eveId),
CONSTRAINT fk_Book_empId FOREIGN KEY (empId)
REFERENCES [Employee] (empId)
ON DELETE NO ACTION ON UPDATE CASCADE;
CONSTRAINT fk_Book_vhId FOREIGN KEY (vhId)
REFERENCES [Vehicle] (vhId)
ON DELETE NO ACTION ON UPDATE CASCADE;
)

100 % ▶ (1) Messages
Commands completed successfully.

Completion time: 2022-12-10T19:46:04.3083326-05:00

100 % ▶ (1) Query executed successfully.
doitsql.rsmith.umd.edu:97... AD\pshah118(150) BUDT70_Project_0507_03 00:00:00 0 rows
```

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```
ON DELETE NO ACTION ON UPDATE CASCADE
)
CREATE TABLE [Book](
    vhid CHAR (5),
    emplId CHAR (5),
    evlid CHAR (5),
    CONSTRAINT pk_Book_vhid PRIMARY KEY (vhid, emplId, evlid),
    CONSTRAINT fk_Book_emplId FOREIGN KEY (emplId)
        REFERENCES [Employee] (emplId)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_Book_vhid FOREIGN KEY (vhid)
        REFERENCES [Vehicle] (vhid)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_Book_evlid FOREIGN KEY (evlid)
        REFERENCES [Event] (evlid)
        ON DELETE CASCADE ON UPDATE CASCADE
)
CREATE TABLE [NiteRide](
    vhid CHAR (5),
    emplId CHAR (5),
    piclocId CHAR (5),
    dropLocId CHAR (5),
    rideDate DATETIME,
    countRides INT,
    CONSTRAINT pk_NiteRide_emplId_piclocId_dropLocId_rideDate PRIMARY KEY (emplId, piclocId, dropLocId, rideDate),
    CONSTRAINT fk_NiteRide_emplId FOREIGN KEY (emplId)
        REFERENCES [Employee] (emplId)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_NiteRide_vhid FOREIGN KEY (vhid)
        REFERENCES [Vehicle] (vhid)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_NiteRide_evlid FOREIGN KEY (evlid)
        REFERENCES [Event] (evlid)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_NiteRide_piclocId FOREIGN KEY (piclocId)
        REFERENCES [Location] (locId)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_NiteRide_dropLocId FOREIGN KEY (dropLocId)
        REFERENCES [Location] (locId)
        ON DELETE NO ACTION ON UPDATE NO ACTION
)
100 % - Messages Commands completed successfully.
Completion time: 2022-12-10T19:46:04.3083326-05:00
```

```
REFERENCES [Event] (evlid)
        ON DELETE CASCADE ON UPDATE CASCADE
)
CREATE TABLE [NiteRide](
    vhid CHAR (5),
    emplId CHAR (5),
    piclocId CHAR (5),
    dropLocId CHAR (5),
    rideDate DATETIME,
    countRides INT,
    CONSTRAINT pk_NiteRide_emplId_piclocId_dropLocId_rideDate PRIMARY KEY (emplId, piclocId, dropLocId, rideDate),
    CONSTRAINT fk_NiteRide_emplId FOREIGN KEY (emplId)
        REFERENCES [Employee] (emplId)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_NiteRide_vhid FOREIGN KEY (vhid)
        REFERENCES [Vehicle] (vhid)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_NiteRide_evlid FOREIGN KEY (evlid)
        REFERENCES [Event] (evlid)
        ON DELETE NO ACTION ON UPDATE NO ACTION,
    CONSTRAINT fk_NiteRide_piclocId FOREIGN KEY (piclocId)
        REFERENCES [Location] (locId)
        ON DELETE NO ACTION ON UPDATE CASCADE,
    CONSTRAINT fk_NiteRide_dropLocId FOREIGN KEY (dropLocId)
        REFERENCES [Location] (locId)
        ON DELETE NO ACTION ON UPDATE NO ACTION
)
100 % - Messages Commands completed successfully.
Completion time: 2022-12-10T19:46:04.3083326-05:00
```

STEP 2: Check if tables are altered by running the ALTER SQL file.

```
SQLQuery1.sql: do...AD\pishah118(150)* = X
ALTER TABLE [Assign]
ADD [assgDay] CHAR(3) DEFAULT 'TBA' NOT NULL, [shiftStart] DATETIME, [shiftEnd] DATETIME DEFAULT NULL;
ALTER TABLE [Assign] DROP CONSTRAINT pk_Assign_emplId_vhid;
ALTER TABLE [Assign] ADD CONSTRAINT pk_Assign_emplId_vhid_assgDay PRIMARY KEY (emplId,vhId,assgDay);

100 % - Messages Commands completed successfully.
Completion time: 2022-12-10T20:01:55.4788802-05:00
```

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STEP 3: Insert Values into the table by running the INSERT SQL file.

Department table

	dptId	dptDescription	dptEmpCount	dptVehCount
1	DT001	UM Shuttle	5	0
2	DT002	Nite Ride	4	0
3	DT003	Administration	3	0
4	DT004	Special Events	4	0
5	DT005	Maintenance	6	0

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... | AD\pshah118 (150) | BUDT703_Project_0507_03 | 00:00:00 | 5 rows

Employee Table

	empId	empFirstName	empLastName	empSSN	empStuUID	empAddressLine1	empAddressLine2	empZip	empCity	dptId	empWeeklyHrs
1	A0001	Akshat	Mehta	111121121	119229194	8125 48th Avenue	518	20740	College Park	DT001	0
2	A0002	Bhavik	Shah	111232211	114764085	8125 48th Ave	Apt 313	20740	College Park	DT001	0
3	A0003	Hriday	Mehta	111421322	119263976	8125 48th Ave	College Park, Maryland	20740	College Park	DT001	0
4	A0004	Ikshita	Ganta	111322223	118752273	4330 Hartwick Rd	College park towers	20740	College park	DT001	0
5	A0005	Charishma	Jaladi	111233322	119070116	#107	2200 Phelps road	20783	Adelphi	DT001	0
6	A0006	Naga Vennela	Tummala	111323322	119098448	4700 Berwyn Rd	College Park, Maryland	20740	College Park	DT001	0
7	A0007	Tanay	Shah	111213121	119837392	8804, 37th Ave	College Park, Maryland	20740	College Park	DT001	0
8	A0009	Varun	Vora	111313212	119232221	8145 48th Ave	College Park, Maryland	20740	College Park	DT001	0

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... | AD\pshah118 (150) | BUDT703_Project_0507_03 | 00:00:00 | 44 rows

Vehicle Table

	vhId	vhModel	vhCapacity	vhRunningStatus	dptId
1	60901	Volvo Bus	50	Running	DT001
2	60902	Volvo Bus	50	Running	DT001
3	60903	Volvo Bus	50	Running	DT001
4	60904	Volvo Bus	50	Running	DT001
5	60905	Volvo Bus	50	Not Running	DT001
6	60906	Volvo Bus	50	Not Running	DT001
7	60907	Volvo Bus	50	Not Running	DT001
8	60908	Volvo Bus	50	Not Running	DT001

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... | AD\pshah118 (150) | BUDT703_Project_0507_03 | 00:00:00 | 43 rows

Route Table

	rotNo	rotStartLoc	rotEndLoc	rotStopCount	rotFrequency
1	104	Regeant Drive Garage	UMD Metro Station	6	12
2	105	Regeant Drive Garage	Graduate Gardens	26	9
3	108	Regeant Drive Garage	Mt. Pisgah Road at Chateau Apartments	31	20
4	109	UMD Metro Station	USDA	8	20
5	111	STAMP Student Union	Silver Spring Metro Station	45	120
6	113	Regeant Drive Garage	Prince Georg's Community College	35	60
7	114	STAMP Student Union	University View	8	10
8	115	Regeant Drive Garage	Regeant Drive Garage	13	13

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... | AD\pshah118 (150) | BUDT703_Project_0507_03 | 00:00:00 | 23 rows

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Event Table

A screenshot of a SQL Server Management Studio window titled "Event Table". The results pane displays a table with columns: eveId, eveDate, eveOrigin, eveDestination, eveDurationHr, and eveCapacity. The data shows 8 rows of event details.

	eveId	eveDate	eveOrigin	eveDestination	eveDurationHr	eveCapacity
1	E0001	2022-09-10	Adele Stamp	Washington D.C	24	140
2	E0002	2022-09-24	Van Muching	Annapolis	24	140
3	E0003	2022-10-08	Van Muching	Washington D.C	24	140
4	E0004	2022-10-28	Adele Stamp	Ohio	72	140
5	E0005	2022-11-05	Van Muching	Manhattan	24	140
6	E0006	2022-11-19	Adele Stamp	Virginia	24	70
7	E0007	2022-12-17	Adele Stamp	New York	24	140
8	E0008	2022-01-22	Adele Stamp	Virginia	48	140

Assign Table

A screenshot of a SQL Server Management Studio window titled "Assign Table". The results pane displays a table with columns: empId, vhid, rotNo, LicenseNo, assgDay, shiftStart, and shiftEnd. The data shows 8 rows of assignment details.

	empId	vhid	rotNo	LicenseNo	assgDay	shiftStart	shiftEnd
1	A0001	60904	109	S123133112655	THU	2022-12-01 07:00:00.000	2022-12-01 14:00:00.000
2	A0001	60904	109	S123133112655	TUE	2022-11-29 07:00:00.000	2022-11-29 14:00:00.000
3	A0002	60902	105	S112098887675	TUE	2022-11-29 07:00:00.000	2022-11-29 14:00:00.000
4	A0002	60902	105	S112098887675	WED	2022-11-30 07:00:00.000	NULL
5	A0004	60909	116	S123232233232	FRI	2022-12-02 07:00:00.000	2022-12-02 14:00:00.000
6	A0004	60909	116	S123232233232	SUN	2022-12-04 07:00:00.000	2022-12-04 14:00:00.000
7	A0005	60901	104	S342796954990	MON	2022-11-28 07:00:00.000	2022-11-28 14:00:00.000
8	A0005	60901	104	S342776954990	THU	2022-12-01 07:00:00.000	2022-12-01 13:00:00.000

Employee PhoneNo Table

A screenshot of a SQL Server Management Studio window titled "Employee PhoneNo Table". The results pane displays a table with columns: empId and empPhnNumber. The data shows 8 rows of employee phone number details.

	empId	empPhnNumber
1	A0001	2409277846
2	A0001	8469056330
3	A0002	7819219780
4	A0002	9426649382
5	A0003	2408543735
6	A0003	9820830089
7	A0004	3462763350
8	A0004	9390051501

Location Table Table

A screenshot of a SQL Server Management Studio window titled "Location Table Table". The results pane displays a table with columns: locId, locName, locLatitude, and locLongitude. The data shows 8 rows of location details.

	locId	locName	locLatitude	locLongitude
1	N0001	Courtyards #100	39.003567	-76.942174
2	N0002	Courtyards #200	39.001679	-76.942507
3	N0003	Courtyards #300	39.001264	-76.942039
4	N0004	Courtyards #400	39.002128	-76.942688
5	N0005	Courtyards #500	39.003154	-76.942565
6	N0006	Courtyards #600	39.003010	-76.941462
7	N0007	Courtyards #700	39.003569	-76.942139
8	N0008	Metzorah Road	39.001155	-76.944634

Book Table

A screenshot of a SQL Server Management Studio window titled "Book Table". The results pane displays a table with columns: empId, vhid, and eveId. The data shows 8 rows of book details.

	empId	vhid	eveId
1	A0051	60923	E0001
2	A0051	60923	E0002
3	A0051	60923	E0004
4	A0051	60923	E0005
5	A0051	60923	E0006
6	A0051	60923	E0007
7	A0051	60923	E0008
8	A0051	60923	E0009

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NiteRide Table

The screenshot shows the 'Results' tab of a SQL query window. The table has columns: vrId, empId, pickLocId, dropLocId, rideDate, and countRiders. The data is as follows:

	vrId	empId	pickLocId	dropLocId	rideDate	countRiders
1	60924	A0015	N0015	N0008	2022-11-18 00:00:00.000	5
2	60924	A0015	N0017	N0008	2022-11-14 00:00:00.000	1
3	60924	A0015	N0020	N0016	2022-11-14 00:00:00.000	1
4	60924	A0015	N0032	N0035	2022-11-20 00:00:00.000	1
5	60924	A0015	N0033	N0002	2022-11-18 00:00:00.000	3
6	60925	A0018	N0013	N0024	2022-11-15 00:00:00.000	1
7	60925	A0018	N0014	N0030	2022-11-15 00:00:00.000	2
8	60925	A0018	N0016	N0008	2022-11-19 00:00:00.000	12

Query executed successfully.

STEP 4: Update the values in the table by running the UPDATE SQL file.

The screenshot shows two windows. The top window contains an UPDATE script for the Employee table:

```
UPDATE [Employee]
SET empWeeklyHrs = (
    SELECT SUM(DATEDIFF(MINUTE,a.shiftStart,a.shiftEnd))/60
    FROM Vehicle v
    WHERE v.dptId = Employee.dptId
);
```

The bottom window shows the execution results:

```
(5 rows affected)
Warning: Null value is eliminated by an aggregate or other SET operation.
(44 rows affected)

Completion time: 2022-12-10T20:15:18.5258019-05:00
```

Query executed successfully.

Make sure the Department table is updated with the column 'dptVehCount'

The screenshot shows the 'Results' tab of a SQL query window. The table has columns: dptId, dptDescription, dptEmpCount, and dptVehCount. The data is as follows:

	dptId	dptDescription	dptEmpCount	dptVehCount
1	DT001	UM Shuttle	5	36
2	DT002	Nite Ride	4	5
3	DT003	Administration	3	0
4	DT004	Special Events	4	2
5	DT005	Maintenance	6	0

Query executed successfully.

Make sure the Employee table is updated with the column 'empWeeklyHrs'.

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	empId	empFirstName	empLastName	empSSN	empStUID	empAddressLine1	empAddressLine2	empZip	empCity	dptId	empWeeklyHrs
1	A0001	Akshat	Mehta	111121121	119223194	8125 48th Avenue	518	20740	College Park	DT001	14
2	A0002	Bhavik	Shah	111232211	114764085	8125 48th Ave	Apt 313	20740	College Park	DT001	7
3	A0003	Hriday	Mehta	111421322	119263976	8125 48th Ave	College Park, Maryland	20740	College Park	DT001	NULL
4	A0004	Ikshita	Ganta	111322223	118752273	4330 Hartwick Rd	College park towers	20740	College park	DT001	14
5	A0005	Charishma	Jaladi	111233322	119070116	#107	2200 Phelps road	20783	Adelphi	DT001	13
6	A0006	Naga Vennela	Tummala	111323322	119098448	4700 Berwyn Rd	College Park, Maryland	20740	College Park	DT001	7
7	A0007	Tanay	Shah	111213121	119837392	8804, 37th Ave	College Park, Maryland	20740	College Park	DT001	20
8	A0009	Varun	Vora	111313212	119232221	8145 48th Ave	College Park, Maryland	20740	College Park	DT001	14

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... | AD\snahac1 (91) | BUDT703_Project_0507_03 | 00:00:00 | 44 rows

STEP 5: Input Select query and run the command and correspondingly create a dashboard in Tableau

QUERY 1:

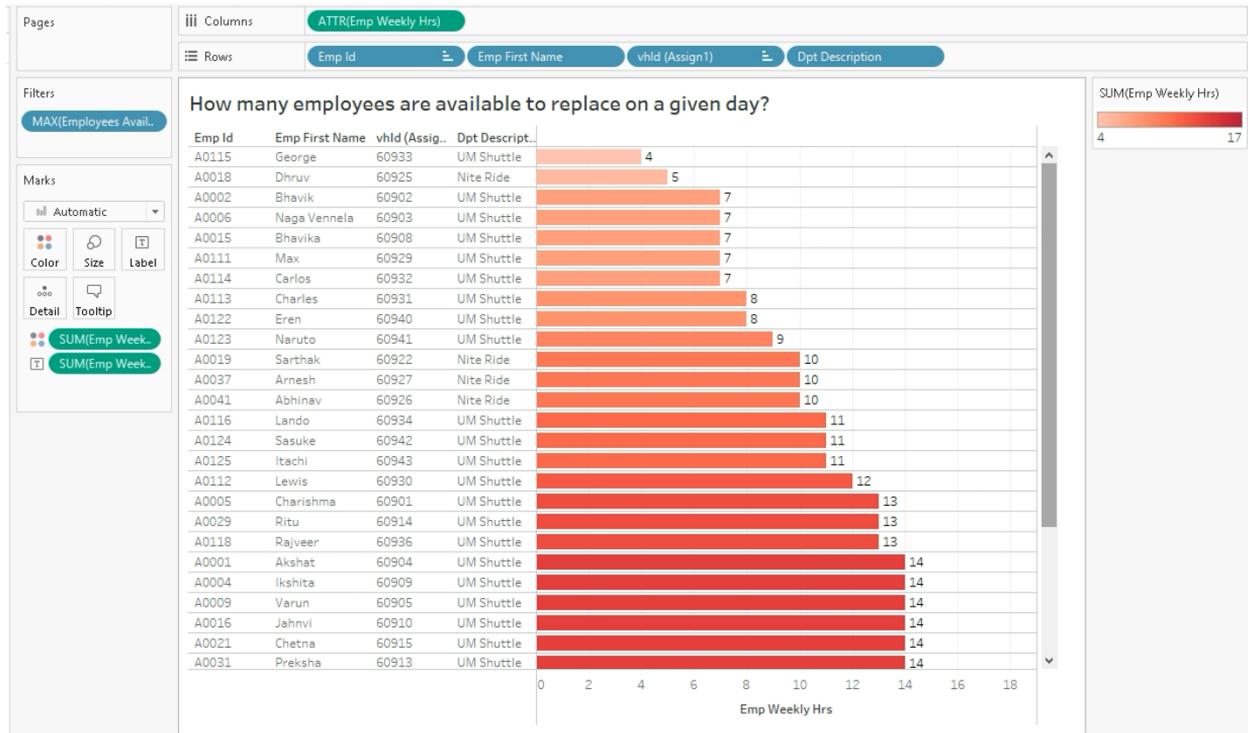
```
--How many employees are available to replace on a given day?
SELECT DISTINCT e.empId, e.empFirstName, a.vhId, d.dptDescription,
e.empWeeklyHrs
FROM Employee e, Assign a, Department d
WHERE (SELECT UPPER(DATENAME(WEEKDAY,GETDATE()))) NOT LIKE
(CONCAT(a.assgDay, '%')) AND
(a.shiftEnd IS NOT NULL) AND
(e.empWeeklyHrs < 20) AND
(a.empId=e.empId) AND
(e.dptId=d.dptId)
ORDER BY e.empWeeklyHrs;
```

	empId	empFirstName	vhId	dptDescription	empWeeklyHrs
1	A0115	George	60933	UM Shuttle	4
2	A0018	Dhruv	60925	Nite Ride	5
3	A0002	Bhavik	60902	UM Shuttle	7
4	A0006	Naga Vennela	60903	UM Shuttle	7
5	A0015	Bhavika	60908	UM Shuttle	7
6	A0111	Max	60929	UM Shuttle	7
7	A0113	Charles	60931	UM Shuttle	8
8	A0123	Naruto	60941	UM Shuttle	9

Query executed successfully. doitsqlx.rhsmith.umd.edu,97... | AD\pshah118 (150) | BUDT703_Project_0507_03 | 00:00:00 | 33 rows

VISUALIZATION:

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QUERY 2:

```
--What is the count of NiteRide booking requests in each location?
SELECT l.locName , COUNT(n.picLocId) AS 'PickUp Count'
FROM [Location] l LEFT JOIN NiteRide n
    ON l.locId = n.picLocId
GROUP BY n.picLocId, l.locName
ORDER BY COUNT(n.picLocId) DESC
```

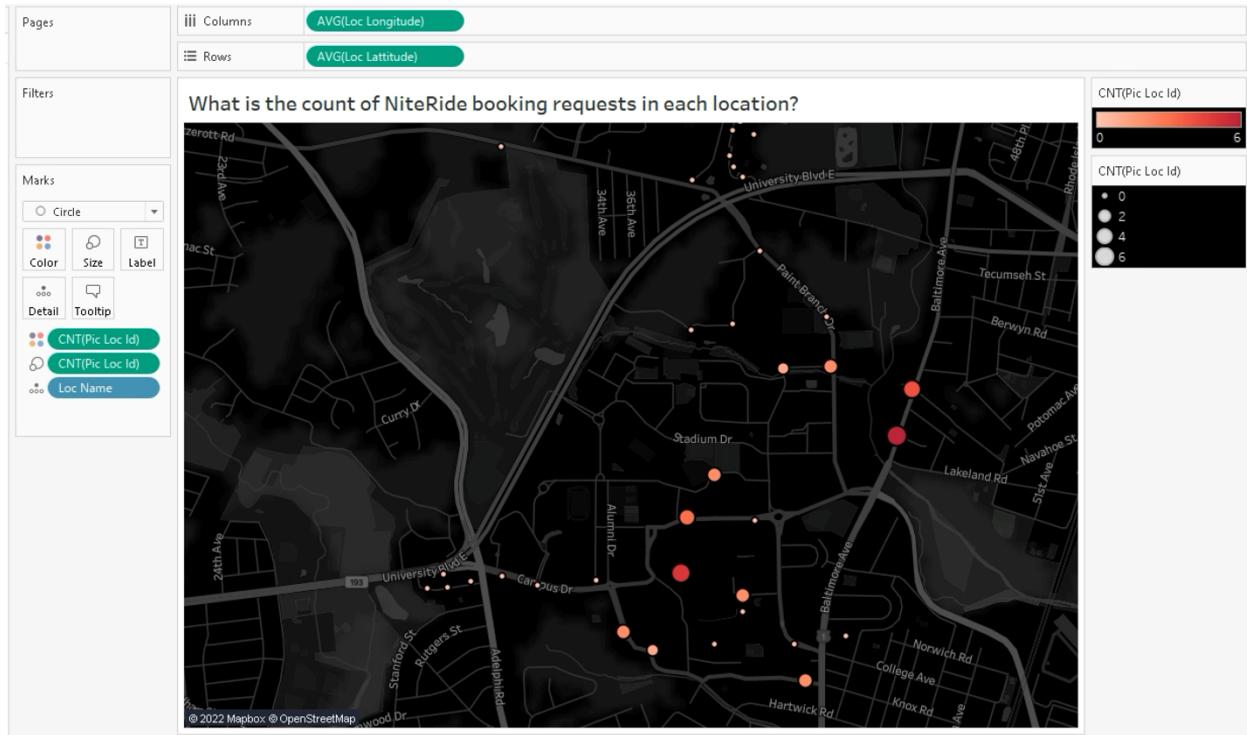
The screenshot shows the SQL Server Management Studio results grid. It has two tabs: "Results" and "Messages". The "Results" tab displays the query results in a table format. The columns are "locName" and "PickUp Count". The data shows 8 locations with their respective pickup counts.

	locName	PickUp Count
1	Looney's Pub	6
2	McKeldin Library	5
3	Uni View	4
4	Adele Stamp	3
5	Adele Stamp Entrance	2
6	Van Munching Hall	2
7	Shoemaker bldg	2
8	7-Eleven	2

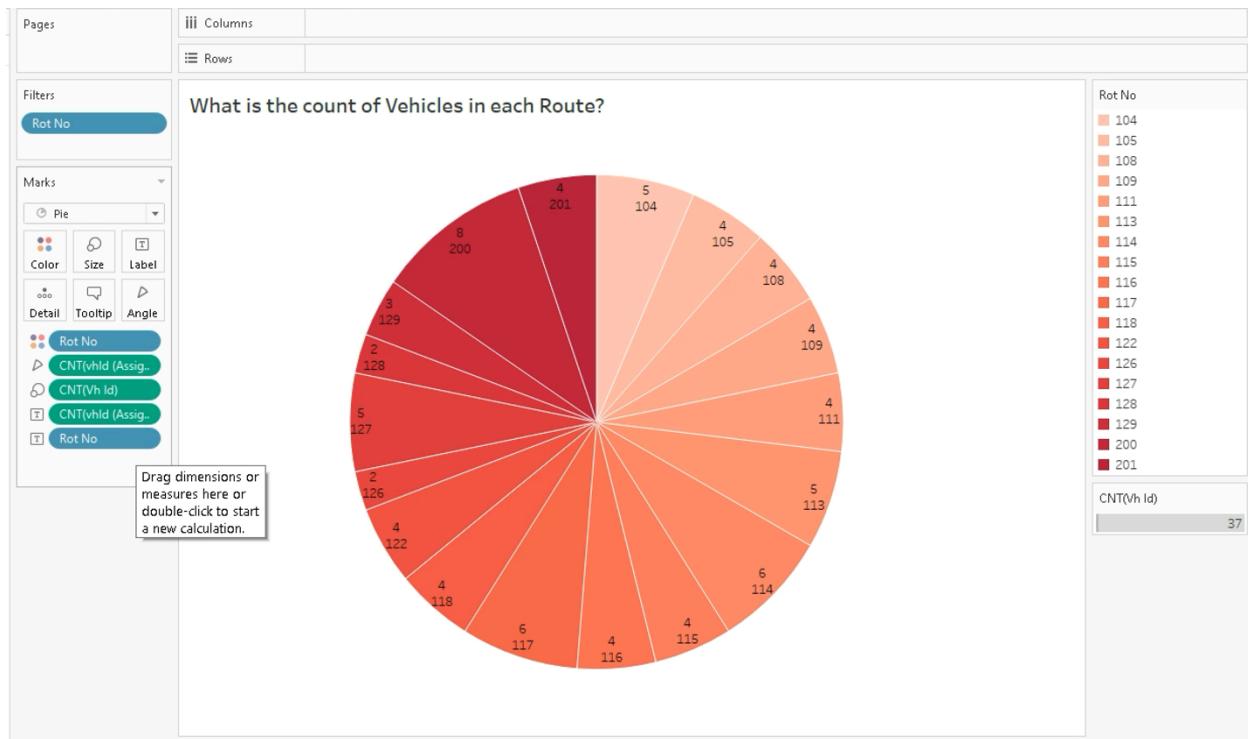
Query executed successfully. | doitsqlx.rhsmith.umd.edu,97... | AD\pszah118(150) | BUDT703_Project_0507_03 | 00:00:00 | 40 rows

VISUALIZATION:

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QUERY 4:

```
--How many Event bookings were taken this year, monthly?
SELECT COUNT(e.eveId) AS 'Number of Events', MONTH(e.eveDate) AS 'Month'
FROM [Event] e
WHERE eveDate >= '01-01-2022'
AND eveDate <= '12-31-2022'
GROUP BY MONTH(e.eveDate);
```

100 %

Results Messages

	Number of Events	Month
1	1	1
2	1	2
3	2	4
4	1	5
5	2	9
6	3	10
7	2	11
8	1	12

Query executed successfully. | doitsqlx.rhsmith.umd.edu,97... | AD\pshah118 (150) | BUDT703_Project_0507_03 | 00:00:00 | 8 rows

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VISUALIZATION:



QUERY 5:

```
--How many students are employed by each department?
SELECT e.dptId AS 'Department ID', d.dptDescription AS 'Department Name',
COUNT(e.empId) AS 'Student Count'
FROM Employee e, Department d
WHERE e.dptId=d.dptId AND e.empStuUID IS NOT NULL
GROUP BY e.dptId, d.dptDescription;
```

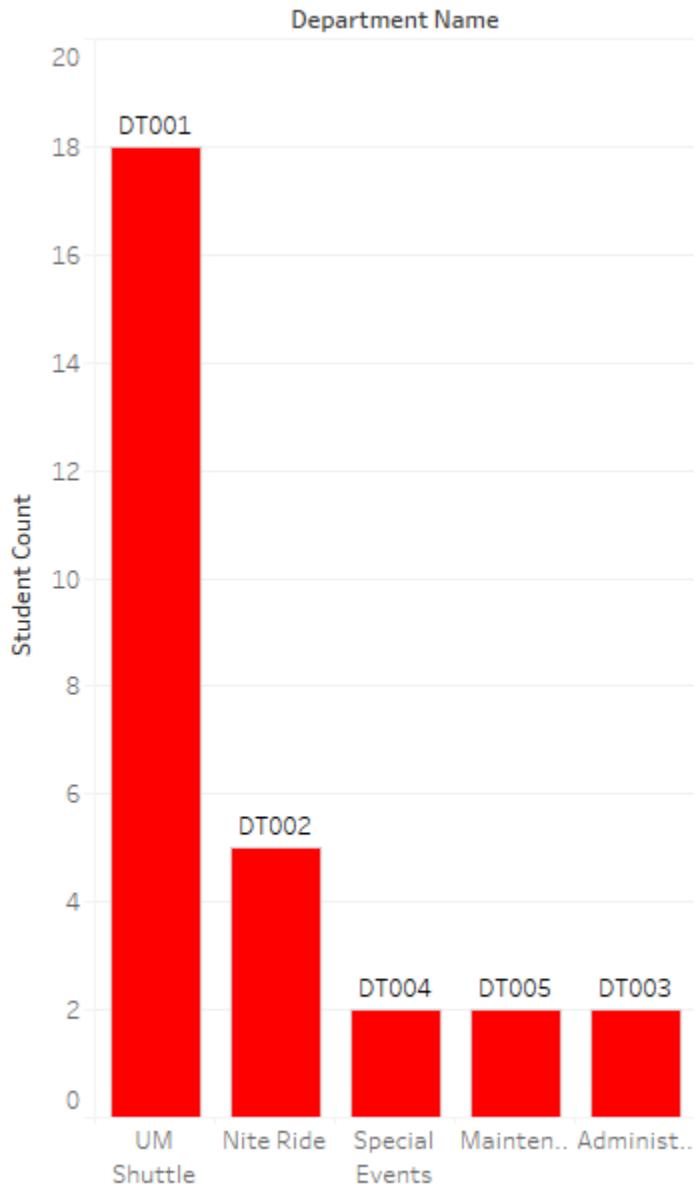
The screenshot shows a SQL query results window with a table titled "Results". The table has three columns: "Department ID", "Department Name", and "Student Count". The data is as follows:

Department ID	Department Name	Student Count
1 DT001	UM Shuttle	18
2 DT002	Nite Ride	5
3 DT003	Administration	2
4 DT004	Special Events	2
5 DT005	Maintenance	2

At the bottom of the window, a message states: "Query executed successfully." and provides connection details: doitsqlx.rhsmit... | AD\pshah118 (150) | BUDT703_Project_0507_03 | 00:00:00 | 5 rows

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VISUALIZATION:



Count of Emp Stu UID for each Department Name. The marks are labeled by Dpt Id.

QUERY 6:

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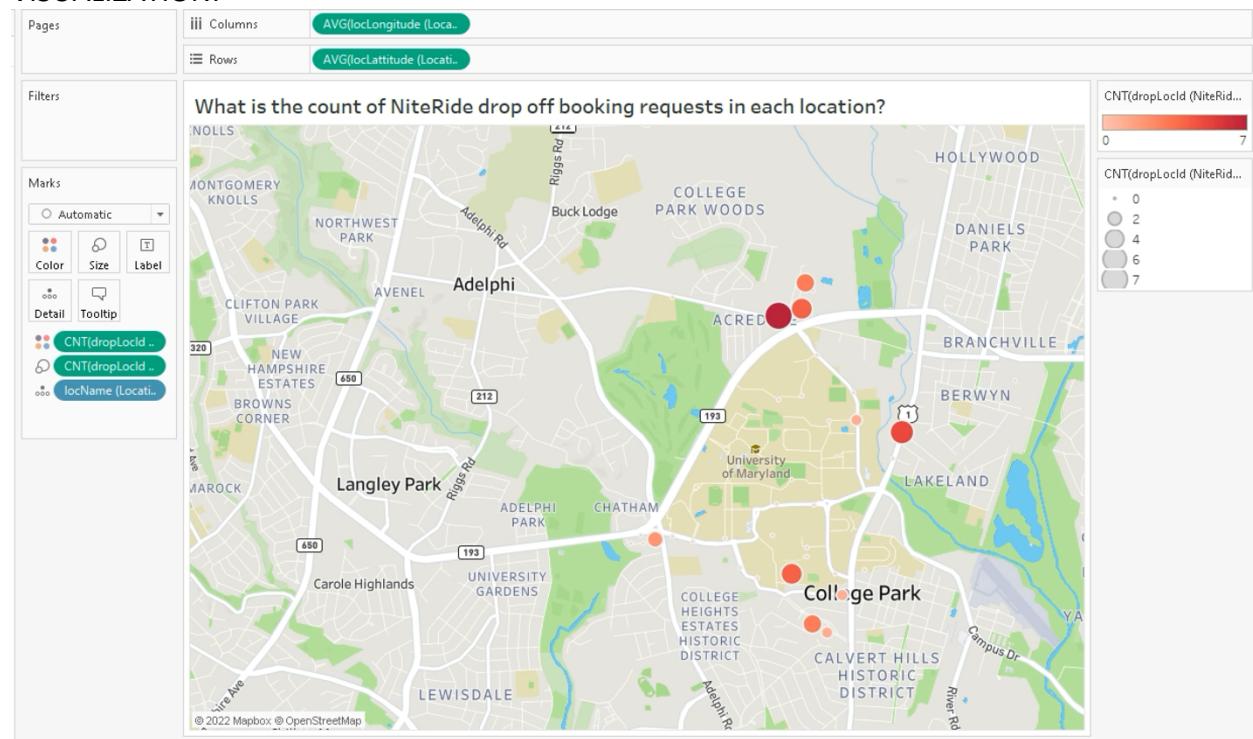
--What is the count of NiteRide drop off booking requests in each location?

```
SELECT l.locName , COUNT(n.dropLocId) AS 'Drop Location Count'  
FROM [Location] l LEFT JOIN NiteRide n  
    ON l.locId = n.dropLocId  
GROUP BY n.dropLocId, l.locName  
ORDER BY COUNT(n.dropLocId) DESC
```

locName	Drop Location Count
1 Metzoratt Road	7
2 Uni View	5
3 South Campus Commons	4
4 Courtyards #200	4
5 Courtyards #100	3
6 Graduate Gardens#1	3
7 Graduate Hills#1	2
8 7-Eleven	1

Query executed successfully.

VISUALIZATION:



NOTE:

1. Please download the [Dates.xlsx](#) for Tableau visualizations.
2. Please view the presentation (ppt) in Microsoft PowerPoint as a slide show.