## Lab 4 Report

1. Display the schedule of all trips for a given StartLocationName and Destination Name, and Date. In addition to these attributes, the schedule includes: Scheduled StartTime, ScheduledArrivalTime, DriverID, and BusID.

## Query found in TripOfferingDao.java line 88 in method showOfferings()

Table Trip:

Table Trip Offering:

	TripNumber	StartLocationName	DestinationName
•	1	la verne	pomona
	2	pomona	la verne
	3	brea	pomona
	4	pomona	brea
	5	daremont	pomona
	6	pomona	claremont
	7	west covina	montclair
	8	montclair	west covina
	NULL	NULL	NULL

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-03-23	8:30AM	2	1:00PM	Bob	54
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
bw.	NULL	NULL	NULL	NULL	NULL	

## Program Interaction:

```
Welcome to Pomona Transit System
Select an option (1-8)
1. Find Trip Schedules
2. Edit Trip Offerings
3. Display trip stops
4. Display Driver schedule
5. Add a driver
6. Add a bus
7. Delete a bus
8. Add Actual Trip Stop Info
9. Exit Program
Choose your option:
Please enter your trip query:
Enter a starting location:
la verne
Enter a destination:
pomona
Enter a date: (YYYY-MM-DD)
2022-04-16
Trip number: 1 | Date: 2022-04-16 | ScheduledStartTime : 6:30AM | ScheduledArrivalTime : 10:30:AM | Driver Name: Bob | Bus ID: 1
Trip number: 1 | Date: 2022-04-16 | ScheduledStartTime : 9:30AM | ScheduledArrivalTime : 12:30PM | Driver Name: John | Bus ID: 2
Would you like to return to the main menu? (Y/N)
```

2. Edit the schedule i.e. edit the table of Trip Offering as follows:

# Query in tripOfferingDao.java in method delete()

-Delete a trip offering specified by Trip#, Date, and ScheduledStartTime;

# TripOffering Before:

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
•	2021-03-23	8:30AM	2	1:00PM	Bob	54
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
	NULL	NULL	NULL	NULL	NULL	NULL

## Program Interaction:

```
Choose your option:

2
Editing Trip Offer:
Choose an option:

1. Delete trip offering

2. Add trip offering

3. Change driver

4. Change bus

1
Deleting trip offering
Enter a trip number:

2
Enter a date: (YYYY-MM-DD)

2021-03-23
Enter a start time:
8:30AM
Would you like to return to the main menu? (Y/N)
```

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
þ#	NULL		NULL	NULL	HULL	NULL

-Add a set of trip offerings assuming the values of all attributes are given (the software asks if you have more trips to enter);

# Query in TripOfferingDao.java in method add()

# TripOffering Before:

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
þ-w	NULL	NULL	NULL	NULL	NULL	

## **Program Interaction**

```
Choose your option:
Editing Trip Offer:
Choose an option:
1. Delete trip offering
2. Add trip offering
3. Change driver
4. Change bus
Adding trip offering
Enter a trip number:
Enter a date: (YYYY-MM-DD)
2022-04-12
Enter the schedueled start time:
9:30AM
Enter the schedueled arrival time:
Enter the driver name:
Bob
Enter the bus ID:
Trip offering added successfully
Would you like to add another trip offering?
```

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-12	9:30AM	1	10:30AM	Bob	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
Þ#	NULL	NULL	NULL	NULL	NULL	NULL

- Change the driver for a given Trip offering (i.e given TripNumber, Date, ScheduledStartTime);

# Query in TripOfferingDao.java

# TripOffering Before:

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-12	9:30AM	1	10:30AM	Bob	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
<b>&gt;</b> *	NULL	NULL	NULL	NULL	NULL	NULL

## Program Interaction:

```
Choose an option:

1. Delete trip offering

2. Add trip offering

3. Change driver

4. Change bus

3
Editing driver.
Enter a trip number:

1
Enter a date: (YYYY-MM-DD)

2022-04-12
Enter a start time:

9:30AM
Enter a the new driver name:
Chris
Successfully updated driver.
Would you like to return to the main menu? (Y/N)
```

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-12	9:30AM	1	10:30AM	Chris	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
<b>&gt;</b> *	NULL	NULL	NULL		NULL	NULL

- Change the bus for a given Trip offering.

# Query in TripOfferingDao.java

# TripOffering before

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-12	9:30AM	1	10:30AM	Chris	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
<b>b</b> -w	NULL	NULL	NULL		NULL	NULL

## **Program Interaction**

```
Choose an option:

1. Delete trip offering

2. Add trip offering

3. Change driver

4. Change bus

4

Editing bus ID.

Enter a trip number:

1

Enter a date: (YYYY-MM-DD)

2022-04-12

Enter a start time:

9:30AM

Enter a the new bus ID:

54

Would you like to return to the main menu? (Y/N)
```

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-12	9:30AM	1	10:30AM	Chris	54
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
<b>**</b>	NULL		NULL	NULL	NULL	NULL

3. Display the stops of a given trip (i.e. the attributes of the table TripStopInfo).

Query found in TripOfferingDao.java line 119 method displayStops()

## TripStopInfo:

	TripNumber	StopNumber	SequenceNumber	DrivingTime
	1	1	245	30m
	1	2	256	24m
	1	3	424	16m
	2	3	225	20m
•	2	4	232	10m
	NULL	NULL	NULL	NULL

## Program interaction:

```
Welcome to Pomona Transit System
Select an option (1-8)
1. Find Trip Schedules
2. Edit Trip Offerings
3. Display trip stops
4. Display Driver schedule
5. Add a driver
6. Add a bus
7. Delete a bus
8. Add Actual Trip Stop Info
9. Exit Program
Choose your option:
3
Displaying trip stops
Enter the trip ID:
TripNumber 1, StopNumber 1, SequenceNumber 245, DrivingTime 30m
TripNumber 1, StopNumber 2, SequenceNumber 256, DrivingTime 24m
TripNumber 1, StopNumber 3, SequenceNumber 424, DrivingTime 16m
Would you like to return to the main menu? (Y/N)
```

4. Display the weekly schedule of a given driver and date.

Query found in driverDao.java in method showSchedule()

# **Trip Offering**

	Date	ScheduledStart	TripNumber	ScheduledArrival	DriverName	BusID
	2021-03-23	8:30AM	2	1:00PM	Bob	54
	2021-04-23	8:30PM	3	2:00PM	Chris	2
	2022-04-16	6:30AM	1	10:30:AM	Bob	1
	2022-04-16	9:30AM	1	12:30PM	John	2
	2022-05-22	7:30AM	1	12:30:PM	John	54
	2022-05-25	8:00AM	2	5:00PM	Chris	54
	2022-12-09	9:30AM	5	10:00AM	John	1
	2022-12-10	10:30AM	6	12:00PM	John	1
þ#	NULL	HULL	NULL	HULL	NULL	

## Program Interaction:

```
Welcome to Pomona Transit System
Select an option (1-8)

    Find Trip Schedules

2. Edit Trip Offerings
Display trip stops
4. Display Driver schedule
5. Add a driver
6. Add a bus
7. Delete a bus
8. Add Actual Trip Stop Info
9. Exit Program
Choose your option:
Displaying driver weekly schedule
Enter driver name:
John
Enter date
2022-12-08
TripNumber 5 | Date 2022-12-09 | ScheduledStart 9:30AM | ScheduledArrival 10:00AM | DriverName John TripNumber 6 | Date 2022-12-10 | ScheduledStart 10:30AM | ScheduledArrival 12:00PM | DriverName John
Would you like to return to the main menu? (Y/N)
```

#### 5. Add a driver

## Queries found in DriverDAO.java

#### Before Table:

	driverName	telephone			
•	Bob	626-262-7374			
	Chris	592-493-4939			
	John	909-525-2525			
	NULL	NULL			

#### After table:



## Program run:

```
PS C:\Users\echen\Documents\CS4350\Lab4> c:; cd 'c:\Us
al\Temp\cp_ck6g7fali8eyfmfz9vj7rw38o.argfile' 'JDBC'
Welcome to Pomona Transit System
Select an option (1-8)
1. Find Trip Schedules
2. Edit Trip Offerings
3. Display trip stops
4. Display Driver schedule
5. Add a driver
6. Add a bus
7. Delete a bus
8. Add Actual Trip Stop Info
9. Exit Program
Choose your option:
5
Adding a driver
Please enter the driver name:
Steve
Enter the telephone number:
808-252-2525
Driver successfully added.
Would you like to return to the main menu? (Y/N)
```

#### 6. Add a bus.

# Queries found in BusDAO.java

#### Before:

# BusID plate year make 1 8DQG072 2002 lexus 2 CFC8589 2000 toyota 54 CL9B529 2020 honda

#### After:

	BusID	plate	year	make	
	1	8DQG072	2002	lexus	
	2	CFC8589	2000	toyota	
	54	CL9B529	2020	honda	
•	8	7KBB291	2018	Ford	
	NULL	NULL	NULL	NULL	

## Program interaction:

```
Welcome to Pomona Transit System
Select an option (1-8)
1. Find Trip Schedules
2. Edit Trip Offerings
3. Display trip stops
4. Display Driver schedule
5. Add a driver
6. Add a bus
7. Delete a bus
8. Add Actual Trip Stop Info
9. Exit Program
Choose your option:
Adding a bus
Enter bus ID:
8
Enter plate
7KBB291
Enter year
2018
Enter make
Ford
Bus successfully added.
Would you like to return to the main menu? (Y/N)
```

#### 7. Delete a bus.

# Queries found in BusDAO.java

## Before:

	BusID	plate	year	make	
	1	8DQG072	2002	lexus	
	2	CFC8589	2000	toyota	
	54	CL9B529	2020	honda	
•	8	7KBB291	2018	Ford	
	NULL	NULL	NULL	NULL	

#### After:

	BusID	plate	year	make				
	1	8DQG072	2002	lexus				
	2	CFC8589	2000	toyota				
•	54	CL9B529	2020	honda				
	NULL	NULL	NULL	NULL				

# Program interaction:

```
Welcome to Pomona Transit System
Select an option (1-8)
1. Find Trip Schedules
2. Edit Trip Offerings
3. Display trip stops
4. Display Driver schedule
5. Add a driver
6. Add a bus
7. Delete a bus
8. Add Actual Trip Stop Info
9. Exit Program
Choose your option:
Deleting bus
Enter Bus ID:
8
Deletion successful
Would you like to return to the main menu? (Y/N)
```

8. Record (insert) the actual data of a given trip offering specified by its key. The actual data include the attributes of the table ActualTripStopInfo.

#### Queries found in ActualTripStopInfoDao.java

\*Note add method will add the minimal amount needed (primary keys only)

Update is called after if the user enters the additional information which fills in the non primary attributes

ActualTripStopInfo Before

	TripNumber	Date	ScheduledStartTime	StopNumber	ScheduledArrivalTime	ActualStartTime	ActualArrivalTime	NumberOfPassengerIn	NumberOfPassengerOut
	1	2022-05-22	6:30AM	1	9:30PM	8:30AM	10:30PM	56	23
	1	2022-05-22	8:30AM	1	8:30PM	9:50AM	10:50PM	23	5
þ-w	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	

## Program Interaction:

```
8. Add Actual Trip Stop Info
9. Exit Program
Choose your option:
Adding actual trip stop info
Enter trip number:
Enter date: (YYYY-MM-DD)
2021-04-23
Enter start time:
8:30PM
Enter stop number:
Enter Scheduled Arrival Time:
2:00PM
Enter Actual Start Time:
Enter Actual Arrival Time:
10:00PM
Enter Number of passengers in:
Enter Number of passengers out:
Would you like to return to the main menu? (Y/N)
```

#### ActualTripStopInfo After

	TripNumber	Date	ScheduledStartTime	StopNumber	ScheduledArrivalTime	ActualStartTime	ActualArrivalTime	NumberOfPassengerIn	NumberOfPassengerOut
	1	2021-04-23	8:30PM	2	2:00PM	9:00PM	10:00PM	23	12
	1	2022-05-22	6:30AM	1	9:30PM	8:30AM	10:30PM	56	23
•	1	2022-05-22	8:30AM	1	8:30PM	9:50AM	10:50PM	23	5
	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL