Lab 4 Tests
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For this assignment, I used microsoft VSCode as my environment and MySQL for the database.

Overall Menu:

```
------ Lab 4: Pomona Transit System ------
1. View Trip Schedules
2. Edit Trip Offerings
3. Other Functions
4. Exit

Select an option:
PS E:\School\CS4350\Lab4> []
```

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.

```
------ Lab 4: Pomona Transit System ------
1. View Trip Schedules
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Select an option: 1

Enter Start Location: City A
Enter Destination: City B
Enter Date (yyyy-mm-dd): 2025-05-01

Start: 08:00:00 | Arrival: 10:00:00 | Driver: John Doe | Bus ID: 1
```

```
1    select * from trip, tripoffering
2
```

	TripNumber	StartLocationName	DestinationName	TripNumber	Date	ScheduledStartTime
▶	102	City C	City D	101	2025-05-01	08:00:00
	101	City A	City B	101	2025-05-01	08:00:00
	102	City C	City D	102	2025-05-02	09:00:00
	101	City A	City B	102	2025-05-02	09:00:00

2. Edit the schedule i.e. edit the table of Trip Offering as follows:
-Delete a trip offering specified by Trip#, Date, and ScheduledStartTime;

```
------ Lab 4: Pomona Transit System ------
1. View Trip Schedules
2. Edit Trip Offerings
3. Other Functions
4. Exit

Select an option: 2

------ Edit Schedule ------
1. Delete a trip offering
2. Add a set of trip offerings
3. Change driver for a trip offering
4. Change bus for a trip offering
5. Exit
Select an option: 1
Enter Trip Number: 101
Enter Date (yyyy-mm-dd): 2025-05-01
Enter Scheduled Start Time (HH:MM:SS): 08:00:00
Trip offering deleted.
```

```
1      select * from trip, tripoffering
2
```

TripNumber	StartLocationName	DestinationName	TripNumber	Date	ScheduledStartTime
101	City A	City B	102	2025-05-02	09:00:00
102	City C	City D	102	2025-05-02	09:00:00

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

```
------ Edit Schedule ------
1. Delete a trip offering
2. Add a set of trip offerings
3. Change driver for a trip offering
4. Change bus for a trip offering
5. Exit
Select an option: 2
Enter Trip Number: 101
Enter Date (yyyy-mm-dd): 2025-05-03
Enter Scheduled Start Time (HH:MM:SS): 08:00:00
Enter Scheduled Arrival Time (HH:MM:SS): 09:00:00
Enter Driver Name: John Doe
Enter Bus ID: 1
Trip offering added.
Do you want to add another trip offering? (Y/N): []
```

TripNumber	Date	ScheduledStartTime	ScheduledArrivalTime	DriverName	BusID
101	2025-05-03	08:00:00	09:00:00	John Doe	1
102	2025-05-02	09:00:00	11:30:00	Jane Smith	2
NULL	NULL	NULL	NULL	NULL	NULL

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

```
------ Edit Schedule ------
1. Delete a trip offering
2. Add a set of trip offerings
3. Change driver for a trip offering
4. Change bus for a trip offering
5. Exit
Select an option: 3
Enter Trip Number: 101
Enter Date (yyyy-mm-dd): 2025-05-03
Enter Scheduled Start Time (HH:MM:SS): 08:00:00
Enter New Driver Name: Jane Smith
Driver updated.
```

Result Grid	Filter Rows:		Edit:	Export/Import:	
TripNumber	Date	ScheduledStartTime	ScheduledArrivalTime	DriverName	BusID
101	2025-05-03	08:00:00	09:00:00	Jane Smith	1
102	2025-05-02	09:00:00	11:30:00	Jane Smith	2
NULL	NULL	NULL	NULL	NULL	NULL

- Change the bus for a given Trip offering.

```
------ Edit Schedule ------
1. Delete a trip offering
2. Add a set of trip offerings
3. Change driver for a trip offering
4. Change bus for a trip offering
5. Exit
Select an option: 4
Enter Trip Number: 101
Enter Date (yyyy-mm-dd): 2025-05-03
Enter Scheduled Start Time (HH:MM:SS): 08:00:00
Enter New Bus ID: 2
Bus updated.
```

TripNumber	Date	ScheduledStartTime	ScheduledArrivalTime	DriverName	BusID
101	2025-05-03	08:00:00	09:00:00	Jane Smith	2
102	2025-05-02	09:00:00	11:30:00	Jane Smith	2
NULL	NULL	NULL	NULL	NULL	NULL

From this point onwards, I consolidated all of the other functions into a single "other functions" class with its won unique menu.

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

```
------ Lab 4: Pomona Transit System ------
1. View Trip Schedules
2. Edit Trip Offerings
3. Other Functions
4. Exit

Select an option: 3

--- Transit Admin Menu ---
1. Display stops of a trip
2. Display weekly schedule of driver
3. Add driver
4. Add bus
5. Delete bus
6. Record actual trip stop info
7. Exit
Choose an option: 1
Enter Trip Number: 101
Stop #1 | Sequence: 1 | Driving Time: 15 mins
Stop #2 | Sequence: 2 | Driving Time: 15 mins
```

	TripNumber	StopNumber	SequenceNumber	DrivingTime
▶	101	1	1	15
	101	2	2	15
	102	3	1	20
	102	4	2	20
*	NULL	NULL	NULL	NULL

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

```
--- Transit Admin Menu ---
1. Display stops of a trip
2. Display weekly schedule of driver
3. Add driver
4. Add bus
5. Delete bus
6. Record actual trip stop info
7. Exit
Choose an option: 2
Enter Driver Name: Jane Smith
Enter Date (yyyy-mm-dd, will show week containing this date): 2025-05-04
Trip #102 | Date: 2025-05-02 | Start: 09:00:00 | Arrival: 11:30:00 | Bus: 2
Trip #101 | Date: 2025-05-03 | Start: 08:00:00 | Arrival: 09:00:00 | Bus: 2
```

TripNumber	Date	ScheduledStartTime	ScheduledArrivalTime	DriverName	BusID
101	2025-05-03	08:00:00	09:00:00	Jane Smith	2
102	2025-05-02	09:00:00	11:30:00	Jane Smith	2
NULL	NULL	NULL	NULL	NULL	NULL

5. Add a drive.

```
--- Transit Admin Menu ---
1. Display stops of a trip
2. Display weekly schedule of driver
3. Add driver
4. Add bus
5. Delete bus
6. Record actual trip stop info
7. Exit
Choose an option: 3
Enter Driver Name: Will Doe
Enter Telephone Number: 123-456-7890
Driver added.
```

DriverName	DriverTelephoneNumber
Jane Smith	555-5678
John Doe	555-1234
Will Doe	123-456-7890
NULL	NULL

6. Add a bus.

```
--- Transit Admin Menu ---
1. Display stops of a trip
2. Display weekly schedule of driver
3. Add driver
4. Add bus
5. Delete bus
6. Record actual trip stop info
7. Exit
Choose an option: 4
Enter Bus ID: 3
Enter Model: Magic Schoolbus
Enter Year: 1997
Bus added.
```

	BusID	Model	Year
▶	1	Volvo 9700	2019
	2	Scania Touring	2020
	3	Magic Schoolbus	1997
*	NULL	NULL	NULL

7. Delete a bus.

```
--- Transit Admin Menu ---
1. Display stops of a trip
2. Display weekly schedule of driver
3. Add driver
4. Add bus
5. Delete bus
6. Record actual trip stop info
7. Exit
Choose an option: 5
Enter Bus ID to delete: 3
Bus deleted.
```

	BusID	Model	Year
▶	1	Volvo 9700	2019
	2	Scania Touring	2020
*	NULL	NULL	NULL

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.

```
--- Transit Admin Menu ---
1. Display stops of a trip
2. Display weekly schedule of driver
3. Add driver
4. Add bus
5. Delete bus
6. Record actual trip stop info
7. Exit
Choose an option: 6
Enter Trip Number: 102
Enter Date (yyyy-mm-dd): 2025-05-02
Enter Scheduled Start Time (HH:MM:SS): 09:00:00
Enter Stop Number: 1
Enter Scheduled Arrival Time (HH:MM:SS): 11:30:00
Enter Actual Start Time (HH:MM:SS): 11:15:00
Enter Actual Arrival Time (HH:MM:SS): 11:20:00
Enter # of Passengers In: 14
Enter # of Passengers Out: 13
Actual trip stop info saved.
```

TripNumber	Date	ScheduledStartTime	StopNumber	ScheduledArrivalTime	ActualStartTime	ActualArrivalTime	NumberOfPassengerIn	NumberOfPassengerOut
102	2025-05-02	09:00:00	1	11:30:00	11:15:00	11:20:00	14	13
102	2025-05-02	09:00:00	3	09:20:00	09:05:00	09:25:00	7	2
102	2025-05-02	09:00:00	4	09:40:00	09:30:00	09:45:00	4	3
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL