

CS4350 Database Systems

Lab#4

Use the following tables to design and implement the Pomona Transit System using any database product and JDBC.

Trip (TripNumber, StartLocationName, DestinationName)

TripOffering (TripNumber, Date, ScheduledStartTime, SecheduledArrivalTime, DriverName, BusID)

Bus (BusID, Model, Year)

Driver(DriverName, DriverTelephoneNumber)

Stop (StopNumber, StopAddress)

ActualTripStopInfo (TripNumber, Date, ScheduledStartTime, StopNumber, SecheduledArrivalTime, ActualStartTime, ActualArrivalTime, NumberOfPassengerIn, NumberOf PassengerOut)

TripStopInfo (TripNumber, StopNumber, SequenceNumber, DrivingTime)

The system should deal with at least the following transactions:

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.

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

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

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

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

- Change the bus for a given Trip offering.

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

4. Display the weekly schedule of a given driver and date.
5. Add a drive.
6. Add a bus.
7. Delete a bus.
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**.

Test your program using several test data for the above transactions.

Please submit a hard copy of your program and a printout of all test data and its output in a large envelope.