University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: ___1___

Date: ___2021-10-08____

Group Number: ___45___

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

Project Proposal

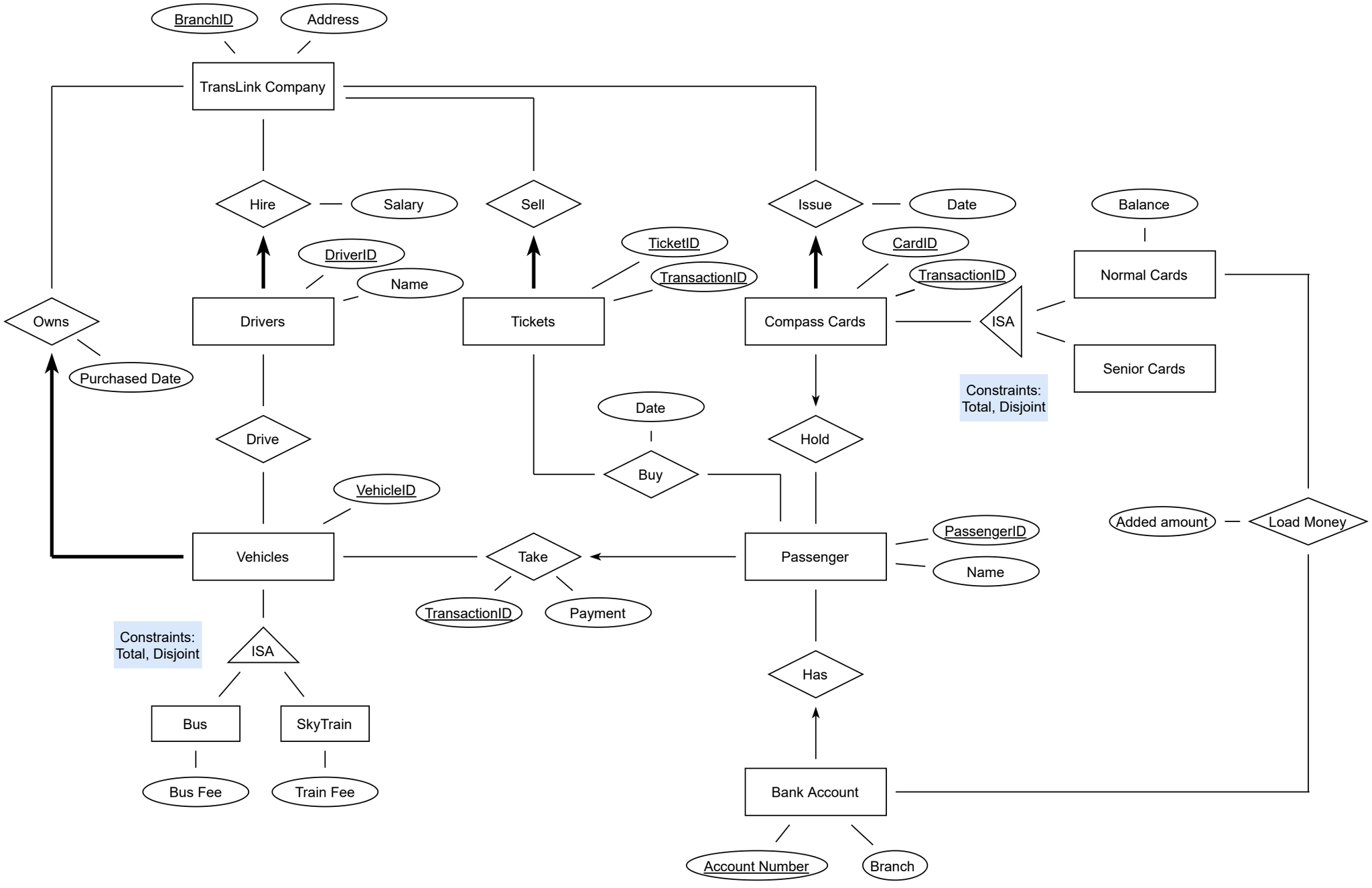
The domain that we're going to model is the TransLink company. Hence, we will focus on the data that is stored about the daily operations of TransLink.

TransLink is Metro Vancouver's transportation corporation, serving residents and visitors with public transit. We will focus on modeling the management of the TransLink daily operations. This includes entities like the public vehicles owned by TransLink, the drivers hired by TransLink who drive those vehicles, the passengers who take the public vehicles (either a bus or a Skytrain, which have different fees), the compass card issued by TransLink and hold by passengers, the tickets that were sold by TransLink and bought by passengers, and the bank accounts which passengers use to load money into their Compass Cards. And there will be two types of Compass Cards: Normal Cards, which need to have money load into it, and Senior Cards, which do not need to load money.

The relational database will store all the information needed by the application, which will mainly provide service to two types of users: the passenger and the administrative staff of TransLink company. And by using the application, passengers will be able to use the service of TransLink, and the administrative staff will be able to provide service to the public and operate the company. The passenger will be able to create their profile, register (hold) a Compass Card to their profile, and buy tickets from the TransLink company. They will also be able to use their bank account to add money to their Normal Compass Card. The administrative users of TransLink company will be able to register ownership of vehicles to the TransLink company and to hire drivers for the company. They will also be able to sell tickets to the passengers and issue Compass Cards.

This project will be done using the MySQL database system provided on the UBC CS department server. We will use technology stacks including PHP + HTML & CSS to build the web application. No other special hardware or software is anticipated to be used in the project.

We have drawn an ER diagram to demonstrate our conceptual database design:


BranchID
Address
TransLink Company
Hire
Salary
Sell
Issue
Date
Balance
DriverID
Name
TicketID
TransactionID
CardID
TransactionID
Normal Cards
Owns
Drivers
Tickets
Compass Cards
ISA
Purchased Date
Senior Cards
Constraints:
Total, Disjoint
Date
Drive
Hold
Buy
VehicleID
Added amount
Load Money
PassengerID
Vehicles
Take
Passenger
Name
TransactionID
Payment
Constraints:
Total, Disjoint
ISA
Has
Bus
SkyTrain
Bus Fee
Train Fee
Bank Account
Account Number
Branch