

CPSC 304

Milestone #1

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Group Number: 72

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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 Description

The domain of the application will be public transportation by city buses and skytrains in Metro Vancouver. This includes only daytime buses (no night buses) and skytrains in the cities of Vancouver, Richmond, Burnaby, North Vancouver, West Vancouver, New Westminster, Coquitlam, Surrey, Delta, and Port Moody.

The aspects of the domain that will be modeled by the database are:

1. BusModels (the different kinds of buses)
2. Buses (the individual buses)
3. SkyTrainModels (the different kinds of skytrains)
4. SkyTrains (the individual skytrains)
5. Routes (the course that a vehicle will move from origin to destination, in the case of skytrains there are also two different types of route)
6. BusStops (the bus stops at different locations along a route)
7. SkyTrainStations (the skytrain stops at different locations along a route)
8. Zones (each stop is located in a designated zone)
9. CompassTaps (a valid Compass Card tap)

Database Specifications

The database will provide the following functionalities:

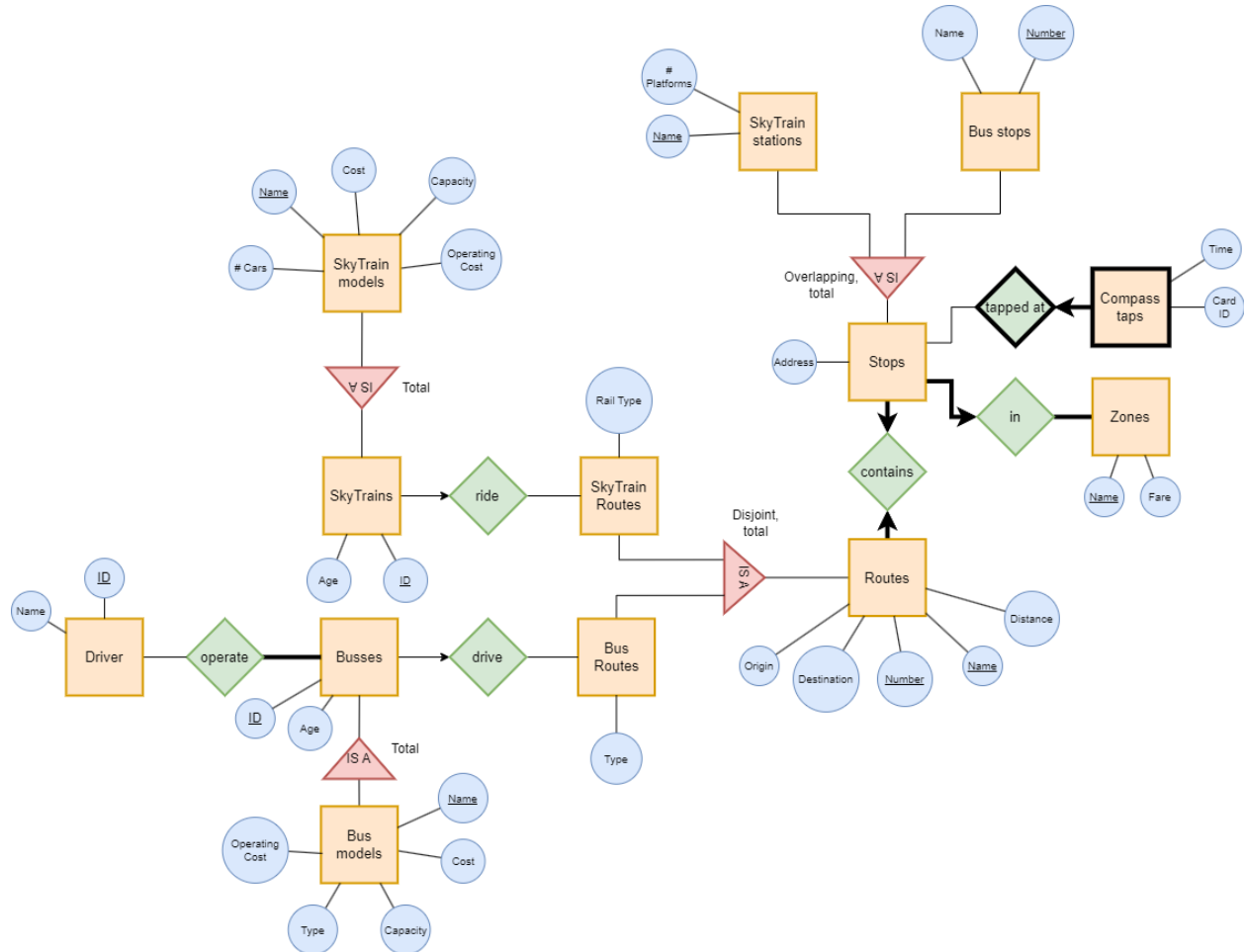
- Allow users to see if a particular stop is historically “busy” based on ridership data
- Allow users to see if a route is congested enough to require additional vehicles
- Allow users to see timing data of a particular stop (how late or early the buses or skytrains are historically)
- Allow users to see how often trips have been historically canceled

Application Platform

The platform that will be used in the application’s tech stack are:

- Oracle DB as the database,
- SQL as the database access language,
- PHP for the backend/SQL connection, and
- HTML/CSS for any frontend features

ER Diagram



[Link for viewing of finer details \(e.g. underlined attributes\)](#)

Additional Comments

We would like to address the difference between our project and the airlines example from the blacklist.

1. An airline model must distinguish individual passengers and seats, while our application will be more focused on the general capacity of the various vehicles.
2. We are modeling the differences between bus lines and skytrain lines, for which there is no analogue in the airline model.
3. We are modeling the Compass Card taps at bus stops, for which there is no analogue in the airline model