University of British Columbia, Vancouver
Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 1
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Group #: 35

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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 email 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.

The domain that we are going to model is a city transit system. In particular, our project will focus on the data stored about transit lines/routes, transit employees to vehicles, and passenger data.

First off, transit accounts and tickets will be one of the main aspects of this project. Each transit account will have an associated account number, passenger name, email address, phone number, and physical address. Once an account is created, transit accounts can be linked to physical transit cards which can be loaded with money or monthly transit pass. Note that specialized student passess can also be linked to a transit card.

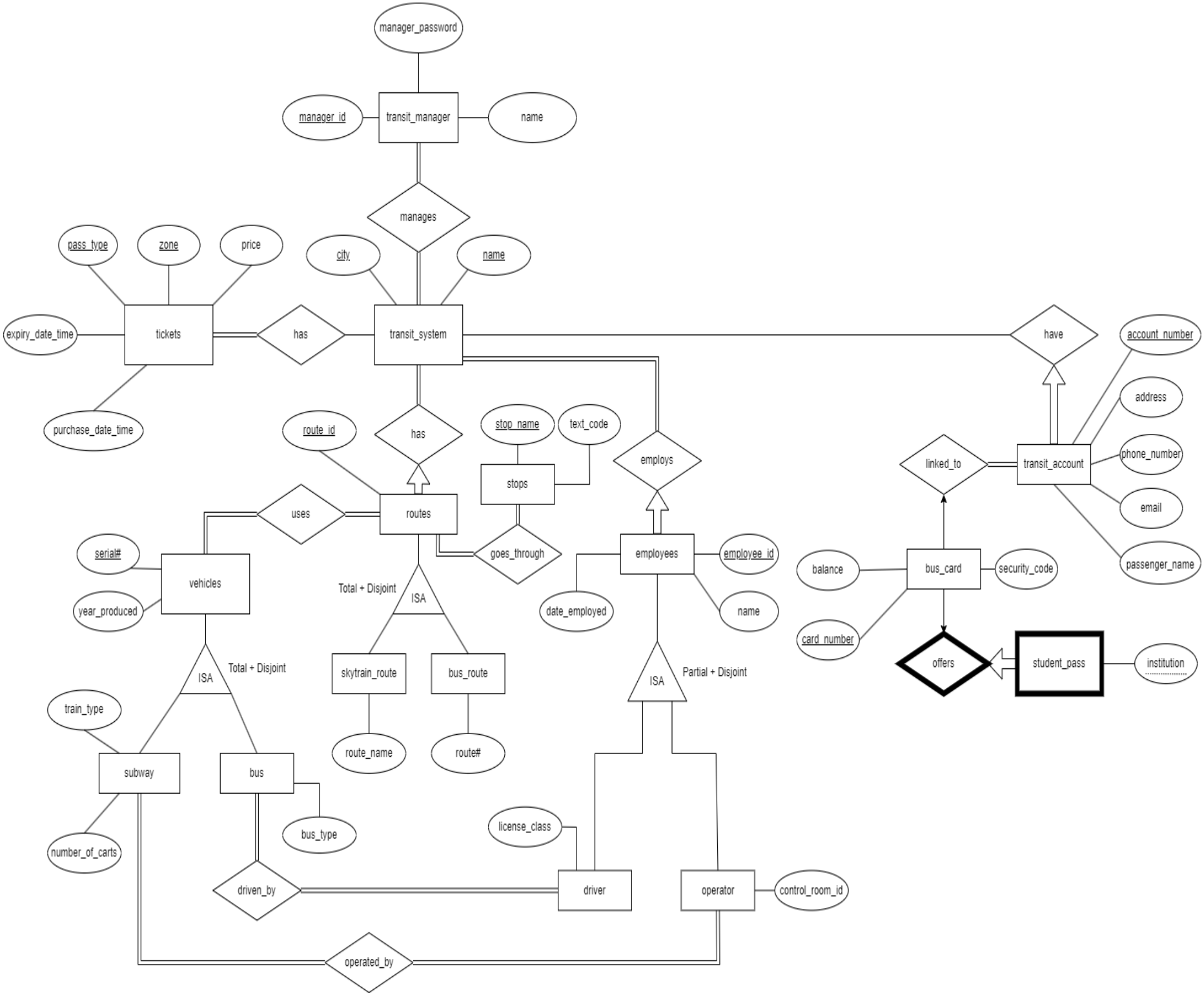
Furthermore, this project will also have a significant focus on transit routes within the system. Our project distinguishes between two types of routes: bus routes and train routes. All routes have a unique id number, are associated with one or more stops, and use a vehicle which is operated or driven by an employee of the transit system.

The main user of this database application will be managers of the transit system. After inputting their manager ID and password these users will be able to use the database to schedule buses, schedule employees to drive particular routes, create and remove bus stops, create and remove routes, and manage passenger accounts. Our application will benefit city transit systems as a means of providing data that will help optimize infrastructure and transportation planning within urban centres. Our project will also help provide meaningful insights such as which stops are the most popular based on ticket zone sales, whether more buses are required, or if additional stops are needed on a route.

This project will be created using Oracle and PHP . We do not currently plan on using any special software or hardware. Attached is the E/R diagram for this project.

Our assumptions:

- Vehicles are driven between zones during different shifts.
- Drivers and operators do not have a designated vehicle and may frequently switch vehicles between shifts.
- An account must be linked to a card, but a card does not need an account.
- Some stops can be part of multiple routes (E.g. in Vancouver transit system the Commercial-Broadway and Columbia have both Millenium Line and Expo Line, terminal stations often house several bus lines, etc).
- Employees can only work for one transit system.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