University of British Columbia, Vancouver

Department of Computer Science

CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 7

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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.

Milestone 1: Project Proposal and ER Diagram

Project Description
What is the domain of the application? What aspects of the domain are modeled by the database?

For the project, our group will be creating a parking lot management that oversees parking spaces, and allocates to vehicles. Unlike generic retail management which focuses on ordering, our application is an inventory tracker that features a parking log, a record of both vacant and occupied parking spaces, and updates instantaneously to ensure managers are able to gain insight of the usage of the parking spots. With the given information, and based on a given vehicle's specifications, our application will be able to assign a designated parking spot for such vehicle, and contain information regarding both the vehicle and the vehicle owner. This includes the vehicle's parking activities, and the vehicle owner's identifications.

Database Specification
What functionality will the database provide?

Given the complexity of administering an immense parking lot, our database will provide valuable information pertaining to a parking lot that will help regulate and manage it. Rather than monitoring vacant parking spaces visually, our database will ease the tension by storing parking lot statistics. Such information includes a parking lot's capacity, as well as its vacant and occupied parking spaces. To expand, it will also contain a parking spaces' details such as its type (reserved/normal), time limit, and subtypes (electric/accessibility). With such information, any parking lot management will be able to easily oversee its parking spaces (and if any individual violates their parking session, issue a parking ticket, or tow their vehicle if necessary).

Application Platform
What platform will your project use? What is your expected application technology stack?

Following the recommendations of CPSC 304's course instructors, our group will be using Oracle for the DBMS. However, as opposed to using Java and PHP, we decided to use React with TypeScript for the frontend, and Node.js for the backend - implementing a REST API to make changes to the database.

ER Diagram