

# CPSC 304 Project Cover Page

Milestone #: 1

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Group Number: 36

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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

# CPSC 304 Milestone 1: Project Proposal

## 1. What is the domain of the application? Describe it.

We are making an application for a trucking transport company. The domain of our project is logistics and transportation management. More specifically we cover employee and fleet management like details about each employee and truck in the business. It also delves into managing different branches of a company further connecting all the employees and motor vehicles. Apart from physical aspects, it also covers domains like order processing & customer transactions. This includes keeping track of all clients and all shipments coming in and out. Finally, it also takes care of all the routes taken, linking orders to it and all details of the route. This domain is crucial for businesses that rely on a structured supply chain and transportation network to manage large-scale deliveries. By integrating fleet tracking, employee scheduling, route optimization, and customer order management, the system helps streamline operations, reduce costs, and improve overall efficiency.

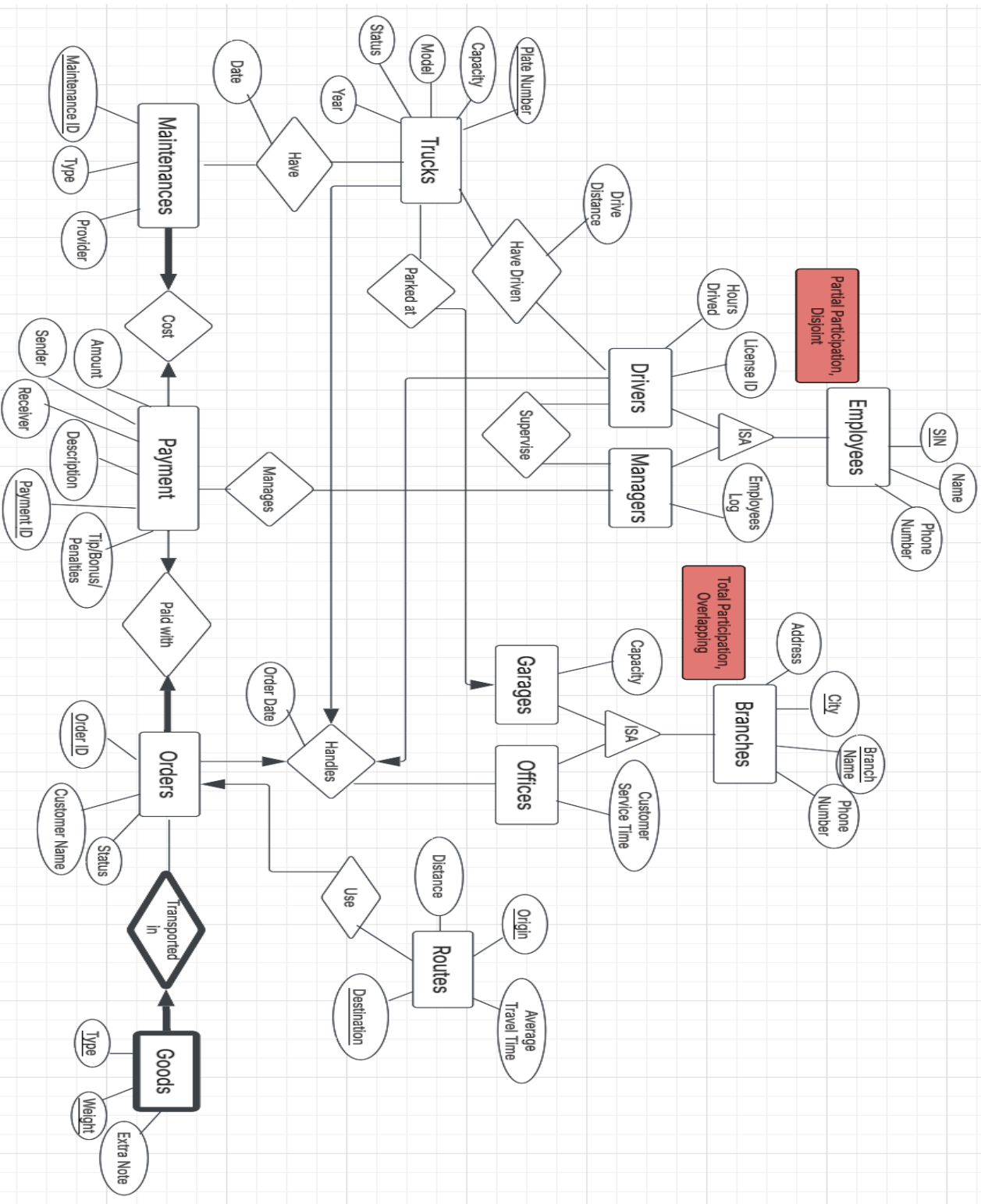
## 2. What aspects of the domain are modeled by the database?

Fleet management is modeled in the database by capturing information about the trucking fleet. Trucks are tracked with attributes such as plate number, model, year, etc. As well as their relationships with maintenance, orders, and drivers. Order processing and customer transactions are covered through our modelling of Orders and Payments, where orders have attributes like its ID, status, and customer name. Payments has fields such as sender, receiver, amount, among others. The employees are modelled with a few shared attributes, but separate role specific attributes depending on if the employee is a manager or driver. Finally we model our location management through branches, which are either garages where trucks are parked, or offices, where more tasks are managed such as orders, driver, and truck information.

## 3. Database specifications:

The database will allow management of logistics operations for a trucking company. Users will be able to track and manage trucks, including their maintenance history, current status, and assigned routes. It also can allow someone to monitor employee details such as drivers or managers, and they will have their work details recorded, such as driving logs and supervision responsibilities. Our system will also process customer orders. It will handle information about goods, delivery status, and payment transactions. It will also support route optimization by storing details about travel distances and estimated times. The database will lastly allow branch management, including their locations, contact details, and capacities. Here you can further see which trucks are parked at which garages. Each branch can be an office or a garage ensuring well coordination between different parts of the business

ER Diagram



***Additional Comments:***

The website used to create the ER diagram did not allow us to use a dashed line to put for the weak entity key but we have acknowledged that with the TA

***AI Statement:***

*CHAT GPT was used to come up with the "Maintenance" entity by asking "what are different things managed by a trucking company".*

*Other than that, there was no artificial intelligence used in this milestone by our group*