

# COE848 Project Proposal

Christopher D'leema

500773571

My objective is to make an application to manage a database for warehouses. I have worked in a warehouse before and the scale of the work has always surprised me, with large quantities of items passing through the system daily, all with a different destination and company they are being exported to. For this reason I have chosen warehouses for the database I will be creating in this course. This database will have at minimum three separate entities, being the warehouses, the items stored in the warehouses, and the companies who place requests for the items. It is open to expansion, with possible support for more refined searches or storing more advanced information, such as distance between warehouses or companies and how that affects the quantity of items held and the type. This database will show that I can apply the information learned in my courses to real-world scenarios and produce useful applications. Hopefully this will allow me to appear more appealing to potential employees.

The first database containing the warehouses will include information such as their location, the size of their building, the owning company, which companies are associated with the warehouses, and the date of arrival and departure of the items, which can be used to calculate average wait time for new stock to be brought. It will contain a reference to all the items stored in it along with their quantity.

The second database containing the items will include information such as their name, the type of product (beauty, sports, books, furniture, etc.), as well as information about expiry dates (if applicable) and MSRP. This database will also include a reference to all the companies that stock that item, and potentially their selling price and quantity.

There will be another database on the companies including which warehouses they use to hold their items, which items they keep in stock, their quantity, and the price of one unit. This will also include information such as which

Possible queries I would like my database to answer would be:

- Which warehouses provide items to this company?
- Which company sells this item?
- What is the lowest price I can find this product at, and which company sells it?
- What are the items sold in this store matching this type?
- What quantity of items is being held in this warehouse?
- Sort all items in this warehouse by decreasing quantity.
- Which is the most popular item in a warehouse, given by its shortest difference between restocking?
- How many unique companies, warehouses, and items are in the database?
- Which company orders the most amount of this item/ item type?
- How long will it take for this item to be restocked (based on previous restock times)?