Edgar Carbajal
Sanoj Oad
Angel Beltran
Jenny Hernandez-Nava

ER Diagram Details

This document is where we outline the details of the ER diagram (i.e. details about the entities, relationships, and their attributes) for the local database that implements the Quote System for this project.

Entities

Sales Associate

The Sales Associate entity contains information about one of the users of the system: the sales associate that works on behalf of the plant repair services company. This entity interacts with Admin, and Quote entities. Chosen as an entity as it represents one of the users of the system for the project, in which we need information about.

Attributes:

- **ID** - The primary key for this entity
- **Username** - Stores username for logging into web interface only
- **Password** - Stores password for logging into web interface only
- **Accumulated Commission** - Stores the accumulated commission of the sales associate (increases the more quotes they make are finalized)
- **Address** - Stores the sales associate's address (payroll, taxes, etc)

Quotes

The Quotes entity contains information about the quotes that are generated by the Sales Associates, and Customers. (Customers are handled in an external database, so we did not need to model them in the ER diagram). Chosen as an entity as it is the

main data structure needed for the system to work (i.e. the creating and maintaining of Quotes) of this system.

Attributes:

- **ID** - The primary key for this entity
- **Secret Notes** - Stores secret notes left in by either Sales Associates, or HQ Staff when creating/editing the quotes respectively
- **Price** - Stores the quoted price for the service
- **Description** - A description of the type of services this quote refers to (i.e. rational for the price)
- **isSanctioned** - Boolean that denotes whether a quote has been sanctioned (finalized) or not.
- **Customer ID** - Foreign key? to customer table in legacy database. Use this to obtain the email for the customer which would have normally been the attribute here.

HQ Staff

The HQ Staff entity is the entity that contains information about one of the users of the system: the HQ Staff which works for the Plant Services company. They interact with Quote entities and Purchase Order entities. Chosen as an entity as it represents one of the users of the system for the project, in which we need information about.

Attributes:

- **ID** - The primary key for this entity
- **Username** - Stores username for logging into company(still web) interface only
- **Password** - Stores password for logging into company(still web) interface only

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Admin

CHECK LATER!!

The Admin entity is the entity that contains information about one of the users of the system: the HQ Staff which works for the Plant Services company. They interact with Sales Associate entities (and Quotes entities according to UseCase Diagram???). Chosen as an entity as it represents one of the users of the system for the project, in which we need information about.

Attributes:

- **ID** - The primary key for this entity
- **Username** - Stores username for logging into admin(still web) interface only
- **Password** - Stores password for logging into admin(still web) interface only

Purchase Order

The Purchase Order entity is the entity that contains information about the Purchase Orders generated by the External System. This entity interacts with the HQ Staff, Quotes entities. Chosen as an entity as it represents one of the users of the system for the project, in which we need information about.

Attributes:

- **ID** - The primary key for this entity
- **Processing Date** - Stores processing date given by External Processing System API
- **Sales Commission Rate** -Stores Sales Commission Rate given by External Processing System API

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Relationships

records (edit later!)

The records relationship is a relationship that links Sales Associate, (customer??) and Quote entities together. It represents the interaction of Sales Associates creating new Quotes for a customer.

Cardinalities:

- **Sales Associate -> Quote (1,m)** - Has
- **Quote -> Sales Associate (1,1)** - Has

edits

The edits relationship is a relationship that links Quote and HQ Staff entities together. It represents the interaction of HQ Staff being able to edit, and view quotes created by Sales Associate entities.

Cardinalities:

- **Quote -> HQ Staff (1,m)** - For each Quote, there are a minimum of 1, and a maximum of m HQ Staff that can edit/view the quote.
- **HQ Staff -> Quote (1,m)** - For each HQ Staff, there are a minimum of 1, and a maximum of m Quotes they can edit.

convert

The convert relationship is a relationship that links Quote, HQ Staff, and Purchase Order entities together. It represents the interaction of HQ Staff taking

sanctioned (i.e. finalized) Quotes to be converted into Purchase Orders by the external system.

Cardinalities:

- **Quote, HQ Staff -> Purchase Order (1,m)** - For every Quote and HQ Staff combination, there are a minimum of 1, and a maximum of m Purchase Orders that can be made through the external system.
- **Quote, Purchase Order -> HQ Staff (1,1)** - For every Quote and Purchase Order combination, there can only be 1 HQ Staff that can initiate the conversion from Quote to Purchase Order.
- **HQ Staff, Purchase Order -> Quote (1,1)** - For every HQ Staff and Purchase Order combination, there can only be 1 Quote that the HQ Staff chose to convert to the given Purchase Order.

manages(edit later!!)

The manages relationship is a relationship that links Sales Associates and Admin (HQ Staff??) entities together. It represents the interaction of Administrators managing (i.e. creating, viewing, and modifying) Sales Associate accounts in the system.

Cardinalities:

- **Sales Associate -> Admin(HQ Staff??) (1,m)** - For each Sales Associate, there are a minimum of 1, and a maximum of m Admins that can manage the same Sales Associate.
- **Admin(HQ Staff??) -> Sales Associate (1,1)** - For each Admin(HQ Staff?), there are a minimum of 1, and a maximum of m Sales Associates that the admin can manage.