

## Project Status Report: Connor and Connor's Cable Company (CCCC)

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We have reviewed the feedback provided on our initial project proposal and have continued to build out our idea for our cable company's database structure. This update is structured into three sections: UML and EER diagrams explaining the structure of the database; example use cases/user flows; and technical specifications.

## UML and EER Diagrams

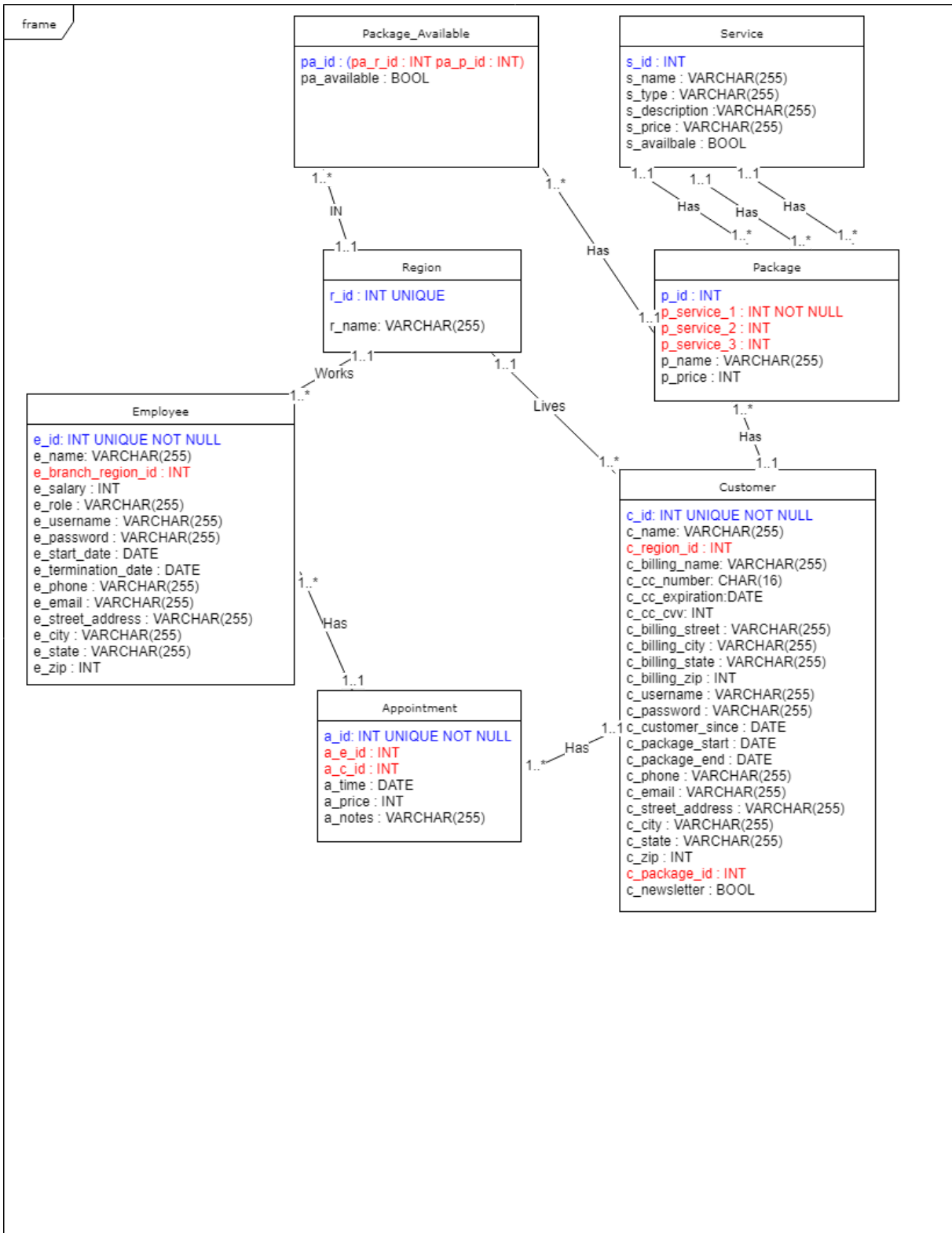


Figure 1: UML Diagram

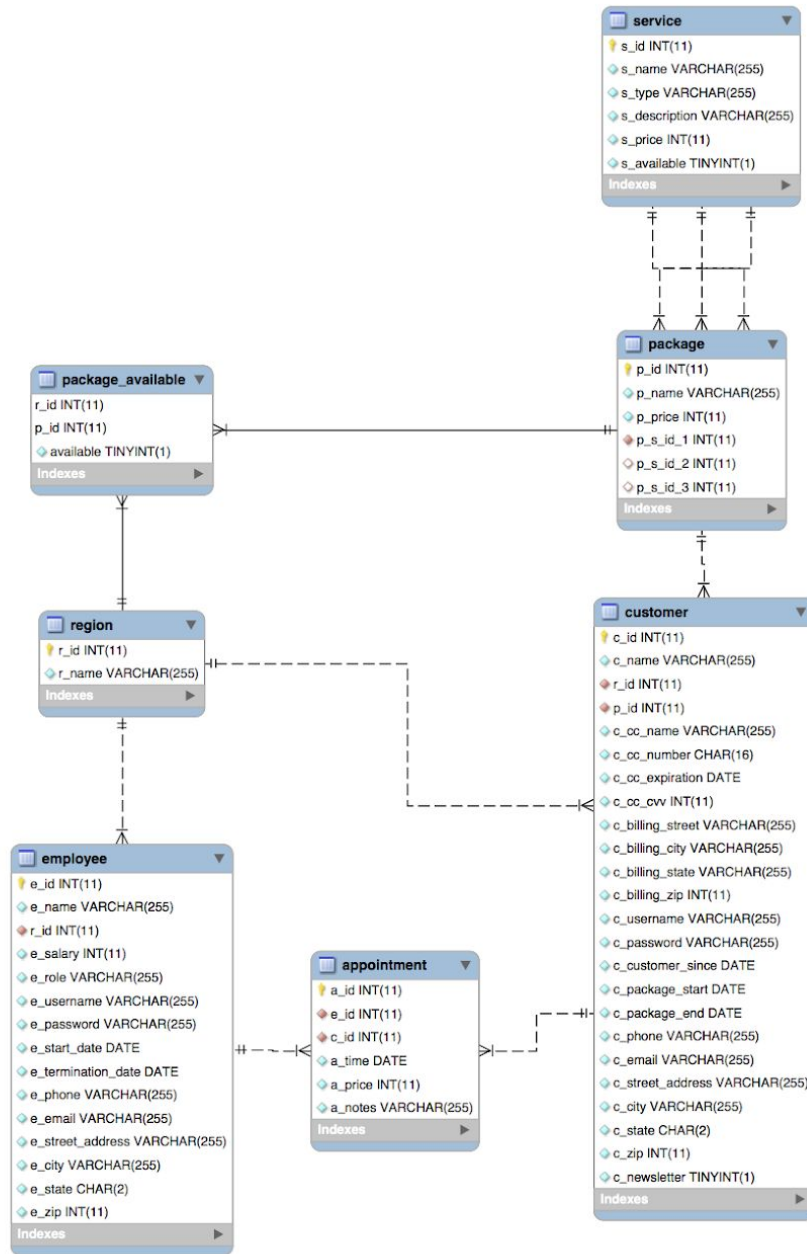


Figure 2: ERR Diagram

The UML and ERR diagrams above show the complete structure of our database system. We have decided to divide the service offerings and support out by region, with customers only interacting with employee based in their region. This is shown by the overarching 'Region' parent table that has the 'Employee' and 'Customer' tables as children. The employee table contains personal information for each worker, as well as their role within the company. An employee's role will determine what information they have access to edit and view; for example, managers have full view and edit privileges of the database concerning their region, while salespeople cannot view or edit salaries, and support people are the only ones allowed to edit and create new appointments. The 'Customer' table contains personal information of each customer, as well as their package enrollment information and billing information.

The 'package\_id' field within the Customer table references the 'Package' table, which has information about the current offerings within each region. After a customer is enrolled in a package, an expiration date is placed within their Customer account and expiration of the package indicates they will be rolled onto the retail price of their service offerings - if the package is no longer available. This availability information is contained within the 'Package Availability' table. Packages are comprised of different service offerings, each of which has a type (internet, cable, or phone) as well as a retail price. The service description has data associated with the service - such as number of channels (for TV), speed (internet), or local vs. long distance calling (phone).

The final table is concerned with service appointments, which support personnel have the ability to create, while service techs and customers have the ability to view. An appointment must have an associated tech, customer, and time, as well as other auxiliary data.

## Example User Interactions

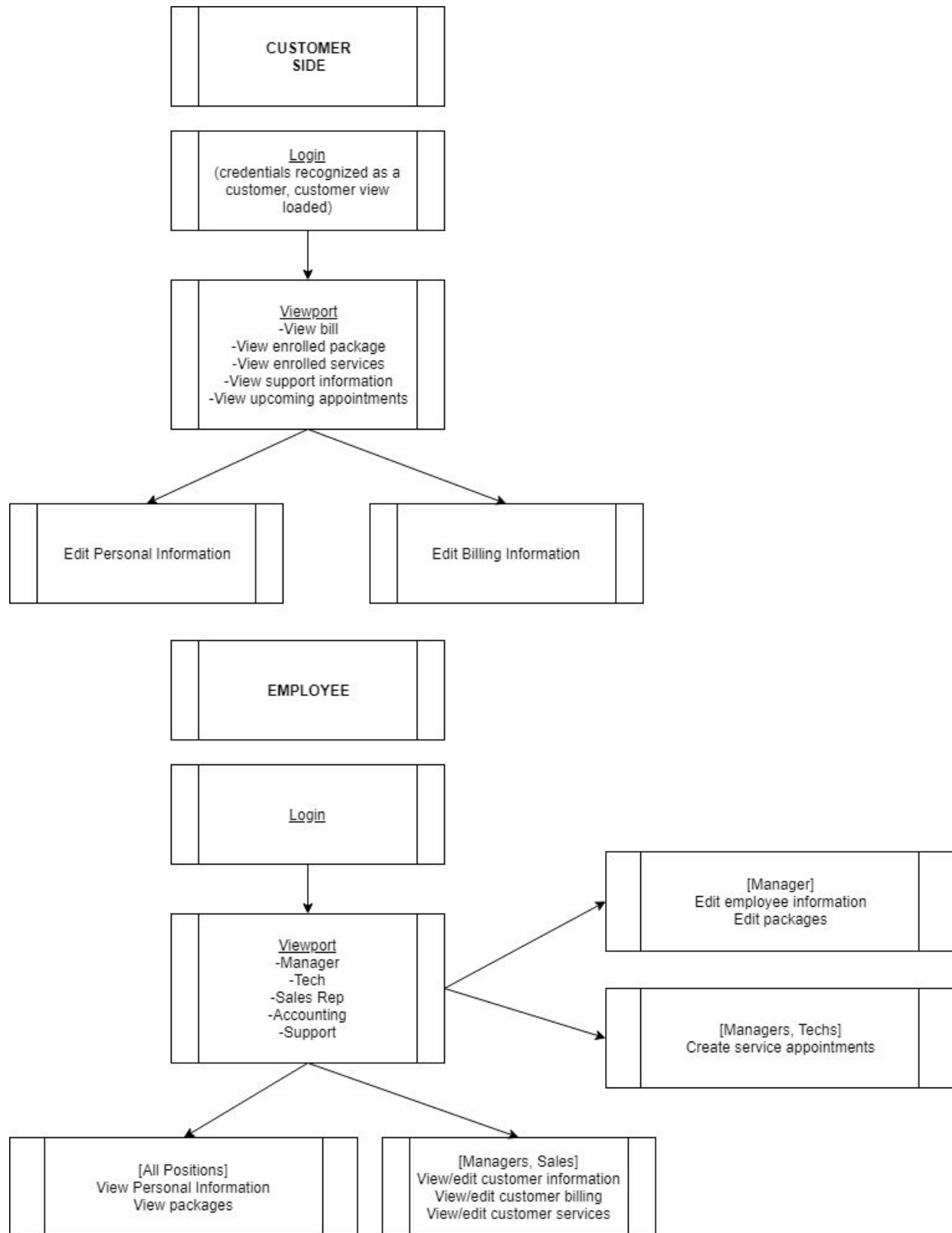


Figure 3: User Interaction Flow Chart

## **Technical Specifications**

For this project we plan to use a SQL database built in MySQL. For the user interface we plan to use QT to develop our own gui which will connect with the database. SQL support is directly integrated into QT's model and view architecture. Both the program built using QT as well as the database must be run on the same machine - we do not plan to include networked functionality. We will develop the database architecture within the MySQL workbench, but the data will be imported using the import wizard from .csv files generated in Microsoft Excel. QT4 is compatible with Windows, Mac, and Linux machines, so we do not anticipate many if any machine restrictions. We will be using Python as the host language to access Qt and MySQL in the construction of our GUI.