Software Design 2.0

Data Management Strategy

Data management is a very important aspect of our application. This app is not just one storefront or handling one type of user, we are handling different types of users that all have their unique properties and sensitive information. It is important that we handle this information with care in order to not lose customers or our business partners. There also needs to be certain connections between these users and only certain information should be shared. For these reasons, our application will consist of 6 different databases to ensure security and organization: customers, drivers, businesses, nutrition, orders, and charities.

Customer Database

Database responsible for keeping track of customer accounts. It is crucial that this database be well secured as this contains very sensitive information. Some of the possible pieces of data stored are: username, email, and phone number. A unique user ID will be created and stored in the data for internal identification purposes. Only information needed to contact and identify a user will be needed to store. Credit card information, address, and such data will not be needed to be saved for privacy purposes.

* can use the business database to look up locations
* No access to driver database, only needs to know their current driver
* No access to other customers
* Can access the nutritional database for nutrition information
* No access to order database
* Access to charity database to see available ones

Driver Database

A Driver database is necessary so we can keep track of all employed drivers. Not only will this be used for tax purposes but for safety purposes to avoid imposters. We will keep track of an employee identification number, name, car license plate, email, bank information, and pay information.

* Access to business database to know where to go
* Access to order database to know what to pick up
* Only access to customer name and address to deliver
* No access to other drivers
* No need to access nutritional database
* No need to access charities

Business Database

In order to keep our app functional, we need participating restaurants and stores who are willing to sell their left over product. The database is necessary to know which businesses are in our system. Information stored includes, business name, type of business, city, and address.

* Access to customer database to see name of order
* Access to driver database to verify and give order to
* Access to order database in order to keep track in case of anything
* Access to nutrition database to fill in information if applicable
* No access to other businesses
* No access to charities

Nutrition Database

One of our main goals is to promote sustainability and a healthy lifestyle so, we will be providing a database of nutritional information that participating restaurants can assist in completing. In this database we will be storing documents provided by the companies that led to the nutritional information of their respective establishment.

* Is available to be viewed by customers
* Businesses contribute to this database
* No need for drivers to view
* No need to access itself
* No need to view orders
* No need to view charities

Orders Database

This database will be a bit more dynamic. We will not keep a record of every order ever made on the app but we will keep recent orders up to a certain amount of time. This will be important in case of any issues regarding cancellation, wrong order, or unsatisfactory experience. Information stored include a order number, what restaurant it came from, and order contents document.

* Customers can view orders
* Businesses add orders to the database
* Drivers view orders if necessary
* Orders link to nutritional information
* No access to itself
* No need to view charities

Charities Database

Though more different than our standard operations, working with reputable charities will be a great way to encourage community engagement. They are not included in the business database as methods of operation are a bit different. Name, money goal, money received, and number of donors, are some stored aspects.

* Customers see the different charities and can choose to donate
* Can partner with restaurants to achieve goals faster
* No access to the driver database
* No access to orders
* No access to the nutrition database
* Can team up with other charities