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Capstone Project Initial Proposal

Catering Order Management System

The Catering Order Management System will be a software application that can organize a catering company’s orders and help the business run more smoothly . There will be three classes of users: customers, employees, and administrators. Customers will have the ability to place an order, get a quote for an order, view their past orders, edit or cancel their existing orders, view previous orders, submit reviews for previous orders with pictures, read reviews from other customers, submit a form to contact the caterer, and suggest items to add to the menu with pictures. When a customer attempts to make an order, they will see a calendar with available dates and times for which the order can be placed. When a customer gets a quote for an order, the customer will get a price based on the items ordered without checking a specific time and date. Customers will only be able to cancel or edit an existing order if they do so more than 24 hours before the scheduled pick-up time. Customers will be able to upload photos to include in reviews and submit suggestions for items to add to the menu. They will only be able to leave reviews for items which they have ordered in the past. Employees will have the ability to view the upcoming schedule of orders, cancel existing orders, edit inventory quantities, mark an order as picked up or abandoned, and respond to customer support inquiries. Employees will be responsible for responding to the questions submitted through the contact page by customers. Administrators will be able to add and delete accounts for customers and employees, change menu items, and block off specific dates and time when orders cannot be placed.

A goal for the Catering Order Management System will be to add a customer support chatbot to address any questions or concerns in real time. Another goal will be to implement a system to notify employees when they need to reorder specific ingredients based on the upcoming orders. If a certain ingredient is running low, the report produced by the system will notify the employee which ingredients need to be ordered and suggest the quantity to order. This feature would ensure that the catering company does not run out of important ingredients.

WRSPM Analysis

World Assumptions:

* Users have access to a computer that is capable of running the program.
* Users will pay for their order when they pick it up.
* When creating an account, users will be honest about the role that they fill and will create their account accordingly.
* Customers placing an order will understand that they cannot place an order for pick-up at a specific time and date if it is not listed.
* Some customers will prefer to get a quote for an order before they go through the trouble of scheduling the order.
* Customers will only cancel or edit existing orders when necessary.
* Customers will be truthful in their reviews.
* When customers submit suggestions for items to be added to the menu, they will act in good faith and only submit food to be added.
* If a customer’s suggestion for items to be added is chosen, admins will be honest in adding the specific item to the menu on the website.
* Employees will update their inventory consistently and availability for certain meals according to their inventory supply.
* Employees will answer customer support questions until the customer is satisfied.
* Employees will update order status on the website so customers know when orders are completed and picked up.
* Employees will check the calendar frequently to see how many orders they have to fulfil on certain days.
* Admins will only delete accounts when necessary.
* Admins will only disable customer support chatbot services if there are complaints or issues.
* Admins will only prohibit orders from being placed for a certain time or date if the business needs to close or for other extenuating circumstances.

User Requirements:

* There are 3 separate types of accounts with 3 levels of privileges: customer. employee, and admin
* There will be a maximum number of pick-up slots for each time and date. When a customer makes an order, they will select their pick-up time and date from a calendar that does not let them select a pick-up data and time that is already full.
* Customers will be able to get a quote for an order based on the quantity of items that they select. Quoted orders will not have the user select a date or time for pick-up.
* Customers will be able to cancel or change their order more than 24 hours before their scheduled pick-up time and date.
* Customers will be able to leave reviews for items that they have previously ordered. They can include photos of the food in their review.
* Customers will be able to submit suggestions for items that they would like added to the menu and include photos with their suggestion.
* Employees will be able to view upcoming orders, cancel or edit orders, view and edit the inventory of ingredients, mark orders as picked up, and respond to customer support requests submitted through the contact page.
* Admins will be able to add or delete accounts for customers and employees, change menu items, and block off specific dates and time when orders cannot be placed.

Specifications:

* When the user creates their account, the first step will be to choose if they are a customer, employee, or user. Then, the user will sign up with their personal information, and a unique account will be created that they can log into on future visits to the website.
* There will be a database that tracks open pick-up times and dates and pick-up times and dates that have already been booked. Before the customer sees the available times and dates to place an order, we will filter out dates
* When a customer gets a quote for an order, the system will multiply the price of each item selected by the number of each item selected to output the total price of the order.
* When a customer attempts to cancel or edit their order, the system will check to ensure that the time of the request is more than 24 hours before the customer’s scheduled pick-up date and time. If it is more than 24 hours before the scheduled pick-up, a deleted order will be deleted from the order database and an edited order will amend the existing database entry.
* When a customer attempts to leave a review, the system will check the database with their previous orders to ensure that the customer has previously ordered the item being reviewed. There will be a separate database to hold the reviews and photos that customers submit.
* Customer suggestions with photos for items to be added to the menu will be stored in a database that only admins can access.
* Admins will have access to the database to delete a user or employees account manually if a user’s account is inactive or an employee is no longer employed/
* Admins will be able to change items on the menu by accessing the menu database.
* The database can be accessed by the admin to fill specific dates or times so that no orders can be placed if the business needs to close or there are any issues
* Admins will be able to disable or enable the customer support chatbot if there is a bug or scheduled maintenance.
* There will be a separate database containing the types of ingredients and what meals they are being used for. Employees will be able to view and edit the inventory database. They will also be able to generate a report to determine which ingredients should be ordered based on the quantities needed for upcoming orders.
* When a customer submits their concern through the contact page, employees will be able to view all the submissions and respond to them.
* Employees will be able to view details of any order on the schedule.
* Employees will mark when an order has been picked up and paid for. There will be a boolean variable associated with each order that is set to false, until the customer comes in to pick it up and pay for it.

Program and Hardware:

* The application will be built using Java and JavaFX FXML
* The application’s databases will be stored on and accessed through Firebase
* This application will be integrated to work with an artificial intelligence chatbot

GitHub repo: <https://github.com/kevinmurray2330/csc325capstone>

Weekly Meeting Times: Monday at 3:00PM and Friday at 12:15PM on Microsoft Teams