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On-line restaurant order and delivery system
Fall 2020

In this system, we are about to develop an on-line restaurant order and delivery system so that the restaurant can provide menus of food, customers browse and order the food from the menu, delivery people of the restaurant deliver the food.

In this system, there are three groups of users:
1. Restaurant:
    a) at least two chefs who independently decide the menus;
- **We preload the system with a few chefs with at least 2 labeled as designated chefs who can add to the menu.**

    b) at least two delivery people who compete for food delivery
- **We preload the system with at least 2 delivery people.**

    c) the manager/superuser who process customer registrations, handles customer
    compliments and complaints, hire/fire/raise or cut pay for chef(s) and deliver people
- **When customers apply, they are not allowed to log in until the manager sets their status to active. The manager does this in the /admin page by selecting pending users and making them active.**
- **When a complaint or compliment is submitted, it is sent to the manager for approval. In the /admin page, the manager may select complaints or compliments and choose whether or not to accept them.**
- **In the /admin page, the manager may see all of the applications for a chef or delivery person and hire or reject them accordingly. Similar to how a customer application is processed, a chef or delivery application is set to inactive, awaiting for the manager to change the value to active.**
- **On this same page, the manager may fire a chef or delivery person by selecting them and deleting their account.**
- **To give a chef or delivery person a pay raise or pay cut, the**

manager may edit their salary field to whatever they would like to change the staff's pay.

2. Customers:

a) Registered customers who can browse/search, order and vote (lowest 1 star to highest 5 stars) food delivered (on food and delivery quality/manners individually); can start/participate a discussion topic on cooks/dishes/deliver people.

- **On the menu page, registered customers may go through all available dishes and add to their cart the item they would like. The customer may then go to the checkout page to order their food. Customers may also click on an item to view its detail page and from there rate the item from 1-5 stars.**

- **Registered customers may also participate in the discussion board on the /discussion_board page. Here the customer may view the posts posted and click on one to see it in more detail. On a post's detail page, the comments for that post are shown below it. Likewise, a customer may post a new discussion topic or post a comment on a post to participate in the discussion.**

- **You can also search for a set of items through a search bar on the top left of the page. This sends a simple GET query to a view function that searches the names and descriptions of all of the dishes available.**

b) VIP customers who spent more than $500 or placed 50 orders as registered customers, whichever comes first, in addition to the actions of registered customers, they will receive 10% discount of their ordinary orders, have access to specially developed dishes, and their complaints/compliments are counted twice as important as ordinary ones.

- **Every time a registered customer submits an order, we check to see if they exceed $500 worth of orders or if they have 50+ orders, and if so, they are turned into a VIP customer by setting an is_VIP flag. When this flag is set, the customer then pays a reduced price of 10% on all subsequent orders. Also, on the menu page, these VIP customers will now have access to add a special dish to their cart as previously they were not allowed to.**

- **If a complaint or compliment is accepted by the manager, then we check if the person giving the complaint or compliment is a VIP, and if they are, then that complaint/compliment is counted twice against the person being complained/complimented.**

3. Surfers: who can browse the menus and ratings only, can apply to be the registered customers with fixed amount of deposit money and checked by the manager.

- **Anyone can browse the menu and view the ratings for each item on the/menu page. Surfers may apply to be customers who have to first be approved by the manager in order to access their account. Once approved, these users may submit a deposit to their account on the /deposit page.**

System features:

1. Provide a GUI, not necessarily web-based, with pictures to show the components and descriptions of each dish and price; each registered customer/VIP has a password to login, when they log in, based on the history of their prior choices, different registered customer/VIP will have different top 3 listing dishes. For new customers or surfers, the top 3 most popular (ordered most) dishes and top 3 highest rated dishes are listed on the page.

- **Our GUI is shown in a web browser and each dish in the menu has an associated image, description, and price. You are allowed to click on a dish to get a more detailed description.**
- **All registered/VIP customers may go to /login to login to their accounts with their own usernames and passwords.**
- **Based on their history of prior dish choices, we can show them their own personalized featured items list. Each dish has an associated category/tag associated with it i.e. appetizers, steaks etc. First we go through a customer's orders to get their top 3 most commonly ordered categories. From here, we select the highest rated dish in each one of the customer's favored categories and display those 3 as the featured selection for this customer. Different customers would thus have their own featured dishes.**
- **If the user is a surfer or a customer with less than 3 orders, we simply retrieve the top 3 most ordered and highly rated items from the Dish database. However, if there are a lack of ratings or orders, duplicates may occur.**

2. The chef whose dishes received consistently low ratings or 3 complaints, or no order at all for 3 days, will be demoted (less salary), a chef demoted twice is fired. Conversely, a chef whose dishes received high ratings or 3 compliments, will be promoted (higher salary). One compliment can be used

to cancel one complaint. The delivery people are handled the same way.

- **Over time, a dish is queried to see if it has not been ordered in a while. If so, the chef gets a demotion. Also, every time a dish rating has been updated, it checks if the ratings for that dish have been consistently high or low. Consistently high ratings mean that for the past 10 ratings, the dish has an average rating >= 4. For low, it is an average rating <= 2 for the past 10 ratings. If this is so, we promote and demote the chef accordingly.**
- **When a compliment is approved by the manager, we simply decrease the amount of complaints a chef or delivery person has. This field is allowed to be negative with negative warnings equating to compliments that did not cancel out a complaint.**

3. A customer can choose to 1) eat the food in the restraint, 2) pick up the dishes by self or 3) by delivery. For 1) s/he need to fix the available time and seating in the restraint; for case 1) and 2) s/he can only complain/compliment the chef.

- **When the customer goes to the checkout page, they may choose three options: dine in, takeout, or delivery. If the customer chooses to dine in, they must choose a day to come into the restaurant. If the customer chooses takeout, they must click an accept field to get a takeout order. If the customer chooses delivery, they must enter an address to deliver to. In all cases, a new Order object is inserted into the database with a chef randomly assigned to make the dish. A confirmation id is also created and shown to the user. For delivery, a random delivery driver is assigned for the order.**

4. Customers can file complaints/compliments to the chef of the foods/he purchased and deliver person who delivered the dish or other customers who didn't behave in the discussion forums. Delivery person can complain/compliment customers s/he delivered dishes, all are handled by the manager. The complained person has the right to dispute the complaint, the manager made the final call to dismiss the complaint or convert it to one formal warning and inform the impacted parties. Customers/delivery people whose complaints are decided without merit by the manager will receive one warning.

- **Registered customers may go to the /compliment and /complaint pages to issue a compliment or complaint against a chef or delivery person. The customer may only issue a compliment/complaint if they have had a chef prepare their food or had a delivery person deliver their food. We**

retrieve from the database their past orders and only show the customer their previous chefs and delivery people. Likewise, a delivery person may only issue complaints and compliments against customers they have delivered to.
- **Customers may report each other in the discussion board as well. Next to each post and comment is a report button that will take the customer to the /report page. A reasoning is required for the report and is sent to the database for the manager to approve.**
- **Customers, chefs, and delivery people may go to their profile page to dispute a complaint/report and provide a reason for the dispute.**
- **The manager in the /admin page may view a complaint. The manager can choose to either dismiss the complaint by deleting it, accept the complaint and give the complained party a warning, or claim the complaint is meritless and deny it, giving the sender of the complaint a warning.**
- **The manager may also choose to accept a compliment which decreases the total warnings someone has or to reject and delete the compliment.**

5. Registered customers having 3 warnings are de-registered. VIPs having 2 warnings are put back to registered customers (with warnings cleared). The warnings should be displayed in the personalized page when the customers log in.
- **Each time a customer receives a warning in the database, we check to see if that customer has reached 3 warnings. If they have reached 3, then we deactivate, but don't delete, their account, to be handled by the manager.**
- **Likewise, for VIPs, every time they get a warning, we check to see if they have reached 2 warnings. If they have, then we simply turn off their VIP status.**
- **When the customers log in, they are brought to their personalized profile page where they can see if they have any warnings, complaints, or reports against them.**

6. If the price of the order is more expensive than the deposited money in the account, the order is frozen until the customer puts more money in the account.
- **If the total cost of the customer's cart is greater than their balance, the option to go to the checkout page is removed. The customer is also prompted to make a deposit to fix the issue.**

7. Customers who are kicked out of the system or choose to quit the system will be handled by the manager: clear the deposit and close the account.
- **Customers may choose to quit on their personalized profile page. They must confirm that they want to quit, in which case a database entry for a quit request is made and the manager must decide how they would like to delete their account.**
- **Customers who are kicked out of the system are recorded as being kicked out and are deactivated until the manager either reactivates them or deletes their account. The manager is able to see how many warnings the customer has.**

8. The chef is the one who put in the description and keywords for people to search and browse. The average ratings for each food/dish by customers are available for all.
- **A chef who decides what to put on the menu is considered a designated chef. Designated chefs are given this role by the manager. A designated chef may, in the /admin page, add a dish to the menu by making a new entry in the database. The chef would then add the description, category, and image of the dish.**
- **Any person, including surfers and registered customers, may view the menu and the menu has an average ratings number for each dish so all can see.**

9. The manager keeps a taboo list of words, any customer who used those taboo words will receive one warning automatically and the words are replaced by ***, a message with more than 3 taboo words are blocked automatically.
- **Taboo words are represented as a database table and are just a list of words. In the /admin page, the manager may add or remove taboo words at will.**
- **When a post or comment is added to the discussion board, it goes through a filter that checks if any words within the post or comment contain a taboo word. The filter returns the total number of taboo words used and the cleaned version of the text with all taboo words being replaced by '***'. If there are more than 0 taboo words used, then we immediately give the customer a warning and a message indicating they have taboo words in their text. If the total number of taboo words exceeded 3, then we do not post their text and we give them a notification that they had too many taboo words.**

10. Each team comes up with a creativity feature of the system to make it more

exciting, which is worth 10% of overall score of the final project. Details that are not found in this requirement list are up to your team's call: you fill in the details to your own liking.

- **We used an MVC (Model-View-Controller) framework to design our project. The framework we used is the Python based Django. This involved using the database SQLite to store all of our information. We also included job applications for chefs and delivery people so they could get hired by the manager. The discussion board also has an added feature of comments on each post.**