

On-line restaurant order and delivery system

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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 with optimal route.

In this system, there are three groups of users:

1. Restaurant:
 - a) at least two chefs who decide the menus, they may share the same menu for customers to choose from;
 - b) at least two delivery people who decide the best route for food delivery
 - c) the manager who process customer registrations, handles customer compliments and complaints, hire/fire/promote/demote chef(s)
2. Customers:
 - a) Registered customers who can browse/search, order and grade (lowest 1 star to highest 5 stars) food delivered (on food and delivery quality individually).
 - 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 orders and their complaints/compliments are counted twice as important as ordinary ones.
3. Surfers: who can browse the menus and ratings only, can apply to be the registered customers with fixed amount of deposit money and certified by the manager.

System features:

1. Provide a GUI, *not necessarily web-based*, with pictures to show the components and descriptions of each food and price; each registered customer/VIP has a password to login, when they log in, based on the history of their prior choice, different registered customer/VIP will have different top listing dishes. For new customers or surfers, the top 5 most popular (ordered most) dishes are listed on the page.
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.
3. Customers whose complaints are decided without merit by the manager will receive one warning. Delivery people can issue warnings to the customers who they delivered food directly. 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.

4. If the price of the order is more expensive than the deposited money in the account, the order is frozen until the customer put more money in the account.
5. 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.
6. For simplicity the map involved is only several, (≥ 5), blocks in width and height, with the restaurant located in the center, the customer puts in the location the food is expected, the system decides the optimal route for the delivery boy to go. To make your system interesting, your system randomly assigns the busyness, 1 being no traffic, 5 being totally blocked, of each street on the fly, the best route is thus determined accordingly.
7. Any food you are familiar with are fine, such as Pizza, burger, Indian, Chinese, Mexico or Japanese food. 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.
8. Each team comes up with a creativity feature of the system to make it more exciting, e.g., better GUI for the map and route selection, which is worth 10% of overall score of the final project.
9. 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.

Acknowledgement: This project requirement is inspired by Jean Chang et. al.'s original idea, Arun Adiththan summarized the ideas and made several more valuable suggestions that are put into this list.