

Software Engineering

Restaurant Automation

by

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Aim:

The aim of this project is to develop a software system that would eliminate the need of traditional pen and paper approach for privately- owned restaurants. The project is focused on making the restaurant fully automated such that it is easier to co-ordinate various work activities that go on inside a typical restaurant. The main features of the project includes:

- Organizing a database for the restaurant.
- Coordinating work activities of the various actors- Host, Waiter, Chef and Manager.
- Increase efficiency by minimizing time between placement of order, billing and chef to get the order.
- Increase profits by reducing operating costs and increasing revenues by increasing efficiency.
- Archiving information of the workers and hours worked.

Problems with the primitive system:

There are problems in the traditional approach:

- In a busy restaurant, it is important to keep track of the empty tables. There is always room for human error to find a vacant space for it's customer.
- After taking the order by the waiter, some time is needed to provide the information at the terminal which reduces efficiency. In peak hours especially, it reduces profit.
- The cooks could not notify the waiters quickly which does the same work as above.
- Keeping track of billing and other statistical information is an issue.

Software Solution:

We propose a software solution to the above problems which would allow the restaurant management to be easier and offer more coordination for the everyday work. A touch screen will be used by the staff to log in and complete the desired task.

The supported employee roles are: Host, Waiter, Cook, Busboy and Manager. The various employees have user accounts and login using their passwords they need to remember except the cook. Logging in and out will be exploited as triggering events to update and organize the data.

When a person enters the restaurant the host will greet the customer and log in to see the tables that are free. The host can also show the floor status to the customer for their preference (e.g. if the customer prefers a free table near the window etc.). After being seated the assigned waiter for that particular table takes over from the host and takes the order from the customer on a PDA. The order is seen by the cooks in the kitchen who can right away start preparing the order. After the customer is done eating they are billed and

the order is archived in the database for calculation of the restaurant revenues for that day/month/year. This also allows preparing easy statistics regarding high patron service hours etc. The Busboy who checks the table status can then take care of the dirty table and after he is done cleaning can mark them as ready to use in the system. The manager has administrative power over employee profiles. They can do the following:

1. The ability to create and modify profiles
2. Track employee activities
3. Authorize restricted waiter activities.

We will take into account the number of clicks that are necessary to accomplish the individual tasks and try to minimize the number of clicks for efficient deployment of our system.