**1. Introduction**

This project is an online procedure to assist retail employees’ complete orders, improve inventory organization, and monitor corporate progress and develop proposals. The goal of this project is establish automation in merchandising, that is, medium-sized to large retailers. Typical issues retail employees deal with contains:

* Present stock/out of merchandise
* Handling

The project is based on an Online Store marketplace. This is an essential tool of operation among retail stores are sale and inventory management. Products gain enormous expansions in a process to allow any user to place orders virtually, we understand, with internet access.

The goal for this project is to introduce computerization in privately-owned restaurants, that is, small to medium-sized establishments. Typical problems restaurant personnel are facing include:

* Coordination of their work activities
* Anticipating and handling periods of low/high customer traffic
* Recognizing trends early enough to take advantage of bestsellers or abandon the flops

The goal of this project is to alleviate the above problems and to lower restaurant operating cost and increases business efficiency/productivity and profits.

Many restaurants are still operated using pen and paper methods, with little or no automation (see Figure 1). Customers enter the facility to be greeted by a host, who often times has a “dry erase” diagram of the tables, maintained on a blackboard. The host can see the status of the tables based on whether or not they or someone else physically updates the diagram. Once seated a waiter tends to the costumers by jotting down the orders onto a piece of carbon paper and delivers it to the kitchen for proper food preparation. The waiter then has to periodically check back to find out when the meal is ready. When the food is done, the piece of carbon paper is saved for proper record keeping by the management. This “old fashion” system works but yields a large amount of tab receipts, wastes a lot of time and is simply out-of-date. In old fashion systems, waiters have to carry pads around to take orders, always have a working pen and be sure to keep each bill organized and “synchronized” with the proper table.



Another issue is record maintenance. In the old system, when everything is done by paper, the management is responsible to keep all information saved and organized, which is no easy task. Everyday tabs are collected, data needs to be organized and employees need to get paid. This requires a great deal of time and attention from the managers.

This project computerizes restaurant operation so that all information pertaining to patron’s orders and staff activity will be conveniently shared and stored over the restaurant’s intranet. Hosts will be able to view table status with a click of a button. The wait staff will be able to enter the patron’s orders quickly and efficiently and then have it electronically delivered to the kitchen. The kitchen staff will be able to view the incoming orders and notify the proper wait staff when the food is ready. Bus boys will be able to view real-time floor status allowing them to know which tables are clean, dirty, or occupied. Most importantly, all of the restaurant information is organized and saved in the system database for the management viewing and archival. There is no more abundance of papers and long hours of punching numbers. All data is automatically collected and processed allowing management to focus on analyzing the data rather than calculating it.

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 include:

* Organizing a database for a medium sized restaurant
* Coordinating work activities of the various actors – Host, Waiter, Cook, Busboy and Manager
* Increase efficiency by minimizing time between an order is placed and the billing
* Increase profits by reducing operating costs and increasing revenues by increasing efficiency
* Archiving information of the workers and hours worked

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.

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. Once the food is prepared, the corresponding waiter is notified via a message to his PDA. 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, most favorite menu items 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:

* Add and modify employee profiles
* Track employee activities
* 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.