Wireless Ordering & Billing System for Restaurants

Problem Statement

Many times in hotel we have to wait for a waiter to give our order for food. This creates problem when there is rush in hotel especially in festival seasons and generally on weekends. Also, there are self-service hotels where customers have to get up each time to place and receive their orders. Customers also expect to have an idea about service time and total bill beforehand. Main intention of our project is to avoid such problems and to give a cost effective solution to such problems.

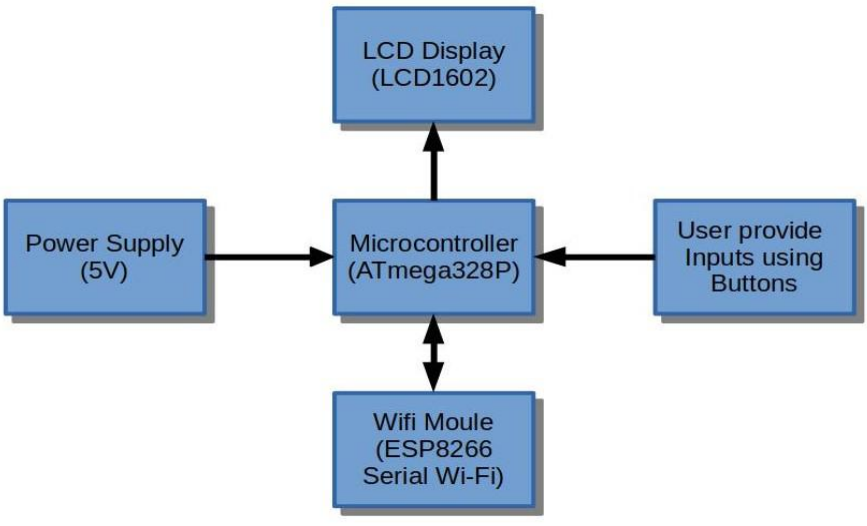
Proposed Solution

The project is based on client-server model where the customer sitting at a table is the client and the chef or employees of the restaurant will act as server. The user will be presented with the menu through an LCD display. He/she can scroll the available items using buttons to select a particular menu item after looking at its price. Once he/she selects dishes order can be placed using another button. The placed order will be transmitted through Wi-Fi to a micro-controller based server in the kitchen. The kitchen can then inform the customer about the time to serve the order. In between the customer can add/modify order also if it has not already been processed. The total bill amount can finally be shown directly to the user at the table.

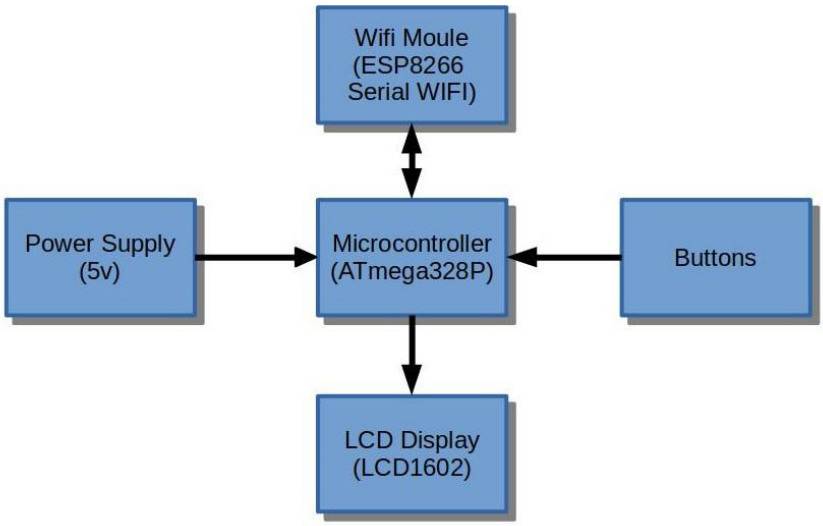
Technical Aspects

- Interfacing Buttons to select different menu options.
- Interfacing LCD to display every selection made and corresponding response received from server.
- Interfacing ATmega328P micro-controller with Wi-Fi module at both the ends.
- Storing the request of client at the server side and updating it at each instant.
- Maintaining proper database to rightly bill the customer at the end.
- Displaying a timer at the customer side to let him/her know of the time remaining for order to arrive.
- Generating unique IDs to keep track of every table served.

Block Diagram/Architecture



Customer Side



Chef/Kitchen Side

Proposed Bill

ITEM	QUANTITY	PRICE (Rs)
ATmega328P	2	274
LCD1602	2	260
ESP8266	2	400
Accessories	~	~200
	Total	**~1134 Rs**