NuMenu

A Nu Kind of Menu

Background

Imagine you are in a food court, there are lots of food stall there. Nowadays, you would have to walk around the food court (**possibly many rounds**), glancing at some of the menus shown there (**possibly missing lots of good menus**), then (**out of frustration of not finding *the one***), you decide on which food stall you would like to buy from, order your food there, then rely on their employee to find where you sit so that he/she could deliver your food to your table.

Now, there is nothing wrong with that system. It works just fine. But, we at ***Adtronics***, don't settle for a *fine* system, we want to create an *amazing* system. And that is why we come up with ***NuMenu.***

How does it works?

NuMenu is a device that would be available on any table in a food court.

<IMAGE NOT YET AVAILABLE>

Every NuMenu device would have a unique table number ID and a unique WiFi AP Address & password (which will be clear would it need that later).

Once a customer arrives, NuMenu would greet the customer by displaying some cute words on its display such as "Hi! I'm NuMenu! :D", or "Watashi wa NuMenu desu! :3".

After that, NuMenu would show its Wifi AP Address and password and ask the customer to connect their phone to it. Then, it would also ask the customer to open a specific address on their browser.

Once opened, a wide variety of menu would show up on your browser page. Then, after some clicks (choose which food to order (ex. a Small Mac), showing how much money you should pay (ex. IDR 49900) and with how much money you would pay it with (IDR 50000)), and a confirmation click, NuMenu will send your order to the internet, where every food stall in the food court would see their orders.

That's it. Then you would just have to wait for your food to arrive at your table, pay it with the amount of money you specified, receive the change, and at last, enjoy the meal.

showing how much money you should pay and how much.

Project Specification

1. Rancang perangkat NuMenu, yaitu terdiri dari
   a. Arduino dan ESP8266
   b. LCD 16x2
   c. Beberapa tombol
2. Buat kode Arduino dan ESP8266 agar dapat bekerja sebagai berikut
   a. Pelanggan akan menekan sebuah tombol. Setelah tombol tersebut ditekan, NuMenu akan menampilkan salam nya pada layar LCD.
   b. Pelanggan diminta untuk menekan kembali tombol tadi. Setelah tombol tersebut ditekan, NuMenu akan menampilkan Wifi AP Address dan Password dari device ESP8266 NuMenu. (Password harus di set ulang setiap kali pelanggan baru datang)
   c. Pelanggan konek ke AP Address yang ditampilkan melalui HP nya.
   d. NuMenu menampilkan IP Address yang harus dituliskan di URL browser HP pelanggan.
   e. Setelah pelanggan memasukkan IP Address tersebut ke URL Browser nya, akan muncul berbagai pilihan makanan beserta harga-harganya.
   f. Pelanggan memilih salah satu makanan dari menu yang ditampilkan. (Metode memasukkan data makanan pilihannya bebas, namun tentu harus melalui browser)
   g. Pelanggan memasukkan jumlah uang yang disiapkan untuk membayar makanan yang dipesannya. (Metode memasukkan data jumlah uangnya bebas, namun tentu harus melalui browser)
   h. Pelanggan mengkonfirmasi pilihannya dengan menekan sebuah tombol pada NuMenu.
   i. NuMenu menampilkan makanan yang dipilih pelanggan pada layar LCD nya, beserta harganya, uang yang disiapkan pelanggan, serta jumlah kembalian yang diharapkan.
   j. Kemudian, NuMenu akan menyampaikan terimakasih dan menyampaikan kepada pelanggan untuk harap sabar menunggu pesanannya karena sedang diproses.
   k. Pelanggan menekan kembali tombol ketika makanan telah sampai dan dibayarkan.
   l. NuMenu menyampaikan ucapan selamat makan
   m. Setelah pelanggan selesai makan, dan hendak beranjak, tombol ditekan kembali
   n. NuMenu menyampaikan ucapan selamat tinggal dan terimakasihnya.

Additional Information

Untuk pilihan proyek ini, kalian boleh menanyakan pertanyaan teknikal kepada klien.

Bahan Bacaan

http://randomnerdtutorials.com/esp8266-web-server-with-arduino-ide/

https://learn.sparkfun.com/tutorials/esp8266-thing-hookup-guide/example-sketch-ap-web-server