Farm to Table (Restaurant Automation System)

Team B:

Bjarni Jónsson
Cheikh Abdoulaye Faye
Sokhna Khady Mbacke
Ivan Velo Castaneda

Introduction and motivation

The project is about restaurant automation, motivated by the challenge of running a restaurant and overseeing employees. The idea was connected to by all team members, with one having experience working in a restaurant.

Customer Problem Statement and Requirements

Customer Problem Statement

- Restaurant owners and managers, along with their staff, chefs, and waitstaff, require a solution that simplifies restaurant operations, optimizes efficiency, and ensures smooth workflow management.
- Customers indirectly face the problem of delayed service and inaccurate orders, which can negatively impact their dining experience. Therefore, there is a need for a system that addresses these challenges to create a more enjoyable and efficient dining experience for all parties involved.

Product requirements

- The system's ultimate aim is to increase the restaurant's overall efficiency, improve the quality of service, reduce operational costs, and provide a better experience for both staff and customers.
    - Efficiently manage and process customer orders
    - Facilitate reservations and manage seating arrangements
    - Simplify the payment process
    - Reduce errors and enhance accuracy

Use Cases and Interface Specifications

Functional:

- Interactive menu and real-time wait estimates
- Table layout management and order notifications
- Automated employee time tracking and menu updates
- Employee clock in/out and order status tracking
- Workforce management
- Emphasis on security and privacy

Non-Functional:

- Interactive table layout for customers
- Strong focus on data security and compliance
- Seamless integration, scalability, and customization
- Training and feedback mechanisms
- High availability during peak hours
- Multi-language support
- Rewards program and takeout ordering capability

Interface-Specifications:

- Interactive menu display
- Table layout visualization
- Interactive order display
- Customer account page

Implementation and Development Tools

Front-End

HTML, CSS, JavaScript

Back-End

MySQL

Middleware

Node.js (JavaScript)

Project Wide Tools

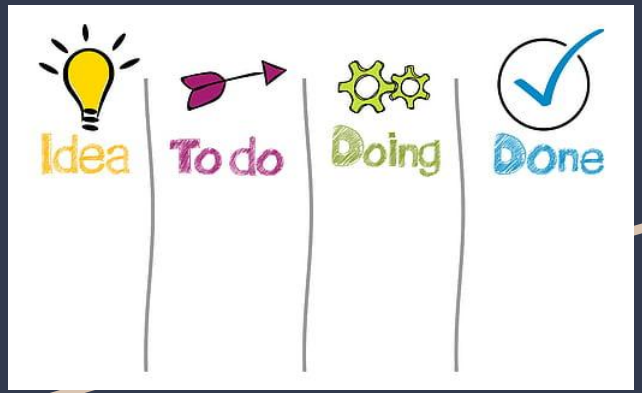
GitHub, VS Code

Live Program Demonstration

Bjarni Jonsson Contribution

- Designed the project's database and wrote the SQL code for our MySQL server that is hosted on a free cloud service.
- Built the middleware of our app with Node.js to handle all the data requests and responses, making sure information moves smoothly between the user side and the database.
- Worked on connecting the database (back-end) to the user side (front-end), making sure they work well together for a better user experience.
- Guided the team on using GitHub, teaching them the basics of working in a group, which helped us work more effectively on our project.

Project challenges and future work



Project Challenges

- We had issues with commiting and syncing our code to the most updated version at times
- Coming up with a design for some of the interfaces

Future Work

- Have a fully functional system
  - Hook up back end to the front end
  - Clean up css(merge it into one file and making the product more presentable)
  - Order related functions
  - Employee reports
  - Testing and deployment

Conclusion

Project is on track!

Initial problems have been addressed

Future testing and implementation stages planned