Farm to Table (Restaurant Automation System)

Team B:

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Github Link:
https://github.com/ivanvelocastaneda/CSCI441_A-Team-B-Project.git

Introduction and motivation

The project is a restaurant automation system, 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

The customer problem statement revolves around the need for a solution to streamline restaurant operations, enhance efficiency, and manage workflow effectively.

Restaurant owners and their teams seek a system that minimizes delays and order inaccuracies, which often disrupt the dining experience. The desired product aims to boost restaurant efficiency, elevate service quality, cut operational expenses, and enhance the experience for both customers and staff.

Use Cases and Interface Specifications

Functional:

- Interactive menu
- Table layout management and order notifications
- Automated employee time tracking and menu updates
- Employee clock in/out and order status tracking
- Workforce management

Non-Functional:

- 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 online ordering capability

Interface-Specifications:

- Interactive menu display
- Table layout visualization
- Interactive order display

Implementation and Development Tools

Front-End
HTML, CSS, JavaScript

Back-End
MySQL

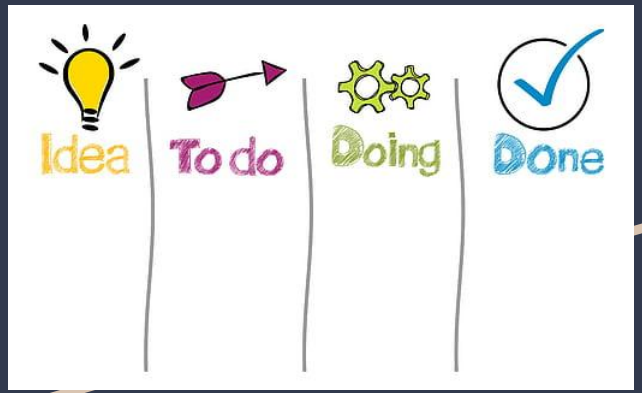
Middleware
Node.js (JavaScript)

Project Wide Tools
GitHub, VS Code

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
- We could not implement a lot of the things we originally had planned due to time constraints

Future Work

- Implement the rewards system and allow customers to place online orders and make online reservations
- Implement a system to allow customers to create accounts and login into them
- Employee reports
- Implement the payment system

Conclusion

The project currently has several incomplete tasks, particularly concerning customer-related functionalities like integrating payment systems for both cash and credit cards and enabling customer account creation and point accumulation for online purchases. Most pending tasks involve customer-facing features, offering significant room for improvement in the near future. Additionally, managerial tools for tracking metrics such as net sales and beverage percentages are yet to be implemented. These unfinished components serve as substantial areas for future development and enhancement in the project.

Live Program Demonstration