# Introduction and Context

The purpose of the system is to assist customers with their dining experience and to help restaurant staff fulfill their job duties.

Currently, all processes within the restaurant are done manually. There is no automation for ordering, keeping track of managerial tasks, or knowing when the customer needs assistance. Servers must spend more time with each customer than necessary, to ensure they are having a positive experience. Additionally, employees have difficulty communicating effectively, as they have so many situations to deal with at once.

The proposed system will automate many of these processes, freeing up employees to focus on more tasks than before. This will reduce the amount of overhead costs, as it will allow you to operate at the same current efficiency or better, with less staff. Customers will be able to operate the system to perform tasks that paid waitstaff generally would have to do, as well as automatically do part of the stock count for the manager. The system will also allow employees to no longer be burdened with a lack of information with what others need.

# Users and Their Goals

The users of this system are customers and employees of the restaurant. They are only required to know how a basic touch interface system works. The goal is to produce a system that allows customers to order items from a menu, checkout, request refills, request help, and play games. The employees’ goals are to make preparing and delivering food more efficient.

# Functional Requirement

* 1. The system will differentiate between customer and staff users.
     1. The system will have a separate section for customers.
     2. The system will have a separate section for waitstaff.
     3. The system will have a separate section for kitchen staff.
     4. The system will have a separate section for managers.
  2. The system will allow managers to be able to assign devices to tables.
  3. The system will allow the manager to update staff information.
  4. The system will allow the manager to update menu items.
  5. The system will allow customers to specify if an order is to go.
  6. The system will allow customers to ask for specific drink refills.
     1. The system will send a notification to the waitstaff to provide the specified drink refill.
  7. The system will allow customers to ask for a complimentary cracker refill.
     1. The system will send a notification to the waitstaff to provide the cracker refill.
  8. The system will allow customers to ask for help from the waitstaff.
  9. The system will allow customers to play games after the order is placed.
  10. The system will allow customers to view items from the menu.
      1. The food menu will contain at least 3 appetizers.
      2. The food menu will contain at least 3 entrees.
      3. The food menu will contain at least 3 kids’ entrees.
      4. The food menu will contain at least 3 drinks.
      5. The food menu will contain at least 3 desserts.
      6. The food menu will contain individual prices.
      7. The food menu will contain pictures for all menu items.
      8. The food menu will contain a description for all menu items.
      9. The food menu will contain a way to only show lactose intolerant friendly items.
      10. In the food menu, the customers can add food items to the cart.
      11. In the food menu, the customers can go to the cart.
      12. In the food menu, the customers can go back to the customer home page.
  11. The system will disallow customers to add out of stock items to the cart.
  12. The system will allow customers to view their cart.
      1. The cart will show all the customer added items.
      2. The cart will show the price of each item.
      3. The cart will show the total cost of the bill.
      4. In the cart, the customer will be able to go to the menu.
      5. In the cart, the customer will be able to remove items.
      6. In the cart, the customer will be able to add comments to the order.
      7. In the cart, the customer will be able to submit the order.
      8. In the cart, the customer will be able to see the status of order submission.
      9. In the cart, the customer will be able to go back to the home page.
  13. The system will allow customers to view their order status.
      1. In the order status window, customers will be able to go back to the home page.
  14. The system will allow users to play 4 games.
      1. While playing the game, customers will be able to exit the game at any time.
      2. While in the games window, customers will be able to go back to the home page.
  15. The system will allow customers to checkout.
      1. Customers will have the ability to pay with cash.
      2. Customers will have the ability to pay with card.
      3. Customers will have the ability to apply a coupon.
      4. Customers will have the ability to specify a tip to pay.
      5. Customers will have the ability to split the cost of the bill.
      6. The system will prompt the customer to complete a survey about their dining experience.
      7. The system will display suggested tip amounts.
      8. The system will allow a manager to comp a bill.
         1. The system will allow managers to see the number of comps per table.
      9. After paying the bill, the customer will have a 0.2 chance to win a coupon for a free appetizer or dessert.
      10. After paying the bill, the customer can choose to print a receipt or have the receipt sent to an email.
      11. If the customer wins a coupon, a coupon code will be displayed.
  16. The system will allow customers to request help from the waitstaff.
      1. The system will send a notification to the waitstaff to provide help to the customer.
  17. The system will allow waitstaff to see information concerning customer orders.
      1. The system will show a notification if a customer requests a refill or help.
      2. The system will allow the waitstaff to view the status of customers’ orders.
      3. The system will allow the waitstaff to monitor payment status.
  18. The system will allow kitchen staff to interact with the customer placed orders.
      1. The kitchen staff will have the ability to view the sent orders.
      2. The kitchen staff will have the ability to update the status of the order.
  19. The system will allow managers to access store information.
      1. The system will show the number of sales of each item.
      2. The system will allow the manager to distribute tips among the waitstaff.
      3. The system will allow managers to edit the number of items in stock.
      4. The system will allow managers to edit employee information.
      5. The system will allow managers to change permissions for employees.
  20. The system will allow managers to edit the menu.
      1. The system will allow managers to change menu item prices.
      2. The system will allow managers to change menu item names.
      3. The system will allow managers to change menu item descriptions.
  21. The system will have categorical permissions.
      1. The system will allow customers to access only the customer section.
      2. The system will allow waitstaff to access only the waitstaff section.
      3. The system will allow kitchen staff to access only the kitchen staff section.
      4. The system will allow managers to access the manager and waitstaff section.
  22. The system will allow customers to purchase store merchandise.
      1. The system will allow customers to navigate the merchandise purchase menu.
      2. The system will add the merchandise the customer selects to the cart, along with their food.

# Non-functional Requirements

* 1. The system will run on Android Lollipop+, with API version 21+.
  2. The system will use a graphical user interface.
  3. The system will function while connected to the internet.

# Glossary

* 1. **Android:** A operating system that devices run on. An android device could be a tablet personal computer, smartphone, or any type of mobile device.
  2. **Cart:** A list of the items added from the menu.
  3. **Checkout:** A process that allows the user to pay for their order.
  4. **Comment:** Additional information about the user’s order that they want the restaurant staff to be aware of.
  5. **Comp:** A complimentary or free item or items.
  6. **Coupon:** A discount applied during checkout to give a benefit to the customer.
  7. **Customer:** A person using the user side of the application. They only have access to the menu, games, checkout, and requesting the waitstaff.
  8. **Lactose intolerant:** The inability to digest lactose, which is a component of cheese and other dairy products.
  9. **Menu:** A list of food and drink items that are available for purchase. The menu contains names, descriptions, prices, and pictures.
  10. **Game:** A digital and interactive form of play.
  11. **Graphical user interface:** A visual interface the incorporates visual indicators that allow the user to easily manipulate the application.
  12. **Items:** What is available from the menu: appetizers, entrees, desserts, and drinks.
  13. **Kitchen:** An area in the restaurant that is dedicated to the preparation of food. In this application, it is the destination of received orders, where they are viewed and completed.
  14. **Manager:** An employee who leads the kitchen and waitstaff. He also ensures the restaurant is running smoothly as a business.
  15. **Order:** The entire group of items that a table has purchased.
  16. **Page:** The location in the application where the customer, kitchen staff, wait staff, and manager can select options.
  17. **Prices:** The dollar value associated with an item.
  18. **Stock**: A list of the current inventory of food and drink items.
  19. **Tips:** Extra money left by the customers, for the wait staff, to show their gratitude.
  20. **To go:** Specification if a food item will be eaten in-store or off premises.
  21. **Receipt:** A proof of purchase, provided after payment has been made.
  22. **Stock:** The items available for sale that are kept on premises of the business, which are available for sale.
  23. **Wait staff:** The staff that delivers food and drinks to customers.