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# Sprint 1 Materials

903-13



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## Retrospective Summary

During our last sprint, our goal was to migrate all of the features and functionality of the GUI project to the new web application. Throughout this first sprint, we identified several different areas of strengths and areas for improvement.

For the strengths of our group within this sprint, as a group, we were able to work consistently throughout the week. We were able to learn new technologies quicker than before which helped in the development process of the web application. Lastly, we adhered to the Agile methodology very well, a proven web development framework.

In terms of areas of improvement, as a group, we were able to follow our procedure and complete tasks however this can be improved with more communication so everyone knows when people complete a task. Another improvement we look to have in the next sprint is we need to have a more realistic plan because we were rushing to finish features by the end of the sprint. This also impacted testing our features since we were focused solely on implementation. Then, lastly, another inefficiency we identified was that our front code structure reusability and maintainability are poor currently as it can't be reused very well across different pages and is hard to maintain.



TEXAS A&M UNIVERSITY

Department of Computer  
Science & Engineering

CSCE 315: Programming Studio

Project 3 - Frontend Focus

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Going forward we will look to fix our areas of improvement and continue with our strengths but the biggest point of emphasis going into the next sprint will be to follow test-driven development so that we can build a more complete and reliable web application.



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## GitHub Release Link

Link to Github Release:

<https://github.com/csce-315-331-2024a/project-3-full-stack-agile-web-project-3-903-13/releases/tag/V1.0>

Link to deployed MVP (some items take a second to load in):

<https://project-3-full-stack-agile-web-project-3-903-13-six.vercel.app/>



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## Product Backlog

Github link to project board: <https://github.com/orgs/csce-315-331-2024a/projects/26/views/1>

Text version of the Product Backlog:

**As a developer, I would like to have the front-end code served on one server (5 tasks) [A]**

- **A1:** Research and select a suitable framework for rebuilding the GUI of the POS system.
  - **Dependencies:** None
  - **Time Estimate:** 1HR, 1 pt
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Framework selected based on research
- **A2:** Assess the compatibility, scalability, and usability of potential frameworks to determine the best fit for the project
  - **Dependencies:** A1
  - **Time Estimate:** 0.5 HR, 1 pt
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Frameworks assessed for compatibility, scalability, and usability.
- **A3:** Plan and execute the migration process to transition the existing GUI components to the new framework seamlessly.
  - **Dependencies:** A2
  - **Time Estimate:** 1.5 HR, 2 pt
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Migration plan executed seamlessly. Implementation reviewed, tested, and successfully transitioned.
- **A4:** Create a dedicated menu board view to display product offerings, prices, and promotions in a visually appealing and informative manner
  - **Dependencies:** A3
  - **Time Estimate:** 2.5 HR, 3 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Menu board view created with product offerings, prices, and promotions. Implementation reviewed, tested, and visually appealing.
- **A5:** Implement a customer view. This should be different from the cashier view, it should be more accessible and easier to navigate
  - **Dependencies:** A3
  - **Time Estimate:** 4 hr, 5 pt
  - **Priority:** High
  - **Status:** Completed



- **Definition of Done:** Customer view implemented for accessibility and ease of navigation. Implementation reviewed, tested, and distinct from the cashier view.

**As a developer, I would like to have the back-end code served on another server (18 tasks) [B]**

- **B1:** Analyze the impact of GUI redesign on the database schema and data structure
  - **Dependencies:** A
  - **Time Estimate:** .5 hr, 1 pt
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Analysis completed, and necessary adjustments identified. Changes reviewed and aligned with the revamped GUI.
- **B2:** Modify database schema as necessary to align with the revamped GUI
  - **Dependencies:** B1
  - **Time Estimate:** 1 hr, 2 pt
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Database schema modified successfully to align with GUI changes. Any new/modified relations are normalized appropriately. Changes reviewed and tested for compatibility.
- **B3:** Update database queries and data relationships to support new GUI features
  - **Dependencies:** B2
  - **Time Estimate:** 3 hr, 4 pt
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Database queries and relationships updated to support new GUI features. Changes reviewed and tested for accuracy.
- **B4:** Migrate the logic for the “What Sells Together” manager feature over to the back-end server and create a view for this data in the UI
  - **Dependencies:** B3
  - **Time Estimate:** 3 hr, 4 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Feature migrated successfully to the web server. Implementation reviewed, tested, and functioning as expected.
- **B5:** Migrate the logic for the “Restock Report” manager feature over to the back-end server and create a view for this data in the UI
  - **Dependencies:** B3
  - **Time Estimate:** 3 hr, 4 pt
  - **Priority:** High
  - **Status:** Completed



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- **Definition of Done:** Feature migrated successfully to the web server.  
**Implementation reviewed, tested, and functioning as expected.**
  - **B6:** Migrate the logic for the “Product Usage” manager feature over to the back-end server and create a view for this data in the UI
    - **Dependencies:** B3
    - **Time Estimate:** 3 hr, 4 pt
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Feature migrated successfully to the web server.  
**Implementation reviewed, tested, and functioning as expected.**
  - **B7:** Migrate the logic for the “Seasonal item” manager feature over to the back-end server and create a view for this data in the UI
    - **Dependencies:** B3
    - **Time Estimate:** 2.5 hr, 3 pt
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Feature migrated successfully to the web server.  
**Implementation reviewed, tested, and functioning as expected.**
  - **B8:** Migrate the logic for the “Excess Report” manager feature over to the back-end server and create a view for this data in the UI
    - **Dependencies:** B3
    - **Time Estimate:** 3 hr, 4 pt
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Feature migrated successfully to the web server.  
**Implementation reviewed, tested, and functioning as expected.**
  - **B9:** Migrate the logic for the “Sales Report” manager feature over to the back-end server and create a view for this data in the UI
    - **Dependencies:** B3
    - **Time Estimate:** 3 hr, 4 pt
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Feature migrated successfully to the web server.  
**Implementation reviewed, tested, and functioning as expected.**
  - **B10:** Migrate the logic to add menu items and create an interactive component in the UI to support this functionality
    - **Dependencies:** B3
    - **Time Estimate:** 2.5 hr, 3 pt
    - **Priority:** High
    - **Status:** Completed



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- **Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B11:** Migrate the logic to update menu items and create an interactive component in the UI to support this functionality
    - **Dependencies:** B3
    - **Time Estimate:** 2.5 hr, 3 pt
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B12:** Migrate the logic to add inventory items and create an interactive component in the UI to support this functionality
    - **Dependencies:** B3
    - **Time Estimate:** 2.5 hr, 3 pt
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B13:** Migrate the logic to update inventory items and create an interactive component in the UI to support this functionality
    - **Dependencies:** B3
    - **Time Estimate:** 2.5 hr, 3 pt
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B14:** Migrate the logic to choose between three payment options
    - **Dependencies:** B3
    - **Time Estimate:** 2 hr, 2 pt
    - **Priority:** High
    - **Status:** To-do
    - **Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B15:** Migrate the logic to add items and remove items from the transaction and create an interactive component in the UI to support this functionality
    - **Dependencies:** B3
    - **Time Estimate:** 3.5 hr, 4 pt
    - **Priority:** High
    - **Status:** Completed



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- **Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B16:** Implement backend logic to support real-time menu board updates and create interactive components in the UI to support this functionality
    - **Dependencies:** B3
    - **Time Estimate:** 2hr, 2 pt
    - **Priority:** Medium
    - **Status:** Completed
    - **Definition of Done:** backend logic implemented to support real-time updates.  
Functionality reviewed and synchronized with the front end.
  - **B17:** Deploy the website using Vercel
    - **Dependencies:** B3
    - **Time Estimate:** 2hr, 2 pt
    - **Priority:** Medium
    - **Status:** Completed
    - **Definition of Done:** Site is successfully deployed and hosted using Vercel and is accessible through a link.
  - **B18:** Implement unit testing for all features of the UI backend and frontend.
    - **Dependencies:** B3
    - **Time Estimate:** 5hr, 5 pt
    - **Priority:** High
    - **Status:** To-do
    - **Definition of Done:** Features are largely tested with coverage of at least 50%.

**As a customer, I would like the POS system to be secure so that malicious people can't go in and take private data from the customers. (3 tasks) [C]**

- **C1:** Integrate Google Authentication (OAuth2) as a third-party authentication mechanism for a user login (cashier and more importantly the manager) and access control
  - **Dependencies:** A
  - **Time Estimate:** 4 hr, 4 pt
  - **Priority:** Medium
  - **Status:** To-do
  - **Definition of Done:** Google Authentication integrated for secure user login.  
Implementation reviewed, tested, and functioning as expected.
- **C2:** Configure authentication settings and permissions to authenticate users securely and authorize access to protected resources
  - **Dependencies:** A
  - **Time Estimate:** 3 hr, 3 pt
  - **Priority:** Medium
  - **Status:** To-do



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- **Definition of Done:** Authentication settings and permissions configured for secure access control. Implementation reviewed, tested, and functioning as expected.
  - **C3:** Implement user registration, login, and logout functionalities using Google Auth APIs and SDKs.
    - **Dependencies:** A
    - **Time Estimate:** 2 hr, 2 pt
    - **Priority:** Medium
    - **Status:** To-do
    - **Definition of Done:** User registration, login, and logout functionalities implemented using Google Auth APIs and SDKs. Implementation reviewed, tested, and functioning as expected.

**As a customer, I would like to be able to see everyday useful content such as the time and weather (6 tasks)[D]**

- **D1:** Create a UI component in the front-end to show the current time
  - **Dependencies:** A
  - **Time Estimate:** 1 hr, 1 pt
  - **Priority:** Low
  - **Status:** To-do
  - **Definition of Done:** UI component created to display the current time. Implementation reviewed, tested, and functioning as expected.
- **D2:** Use a timer function to update the time display every second
  - **Dependencies:** A
  - **Time Estimate:** 1 hr, 1 pt
  - **Priority:** Low
  - **Status:** To-do
  - **Definition of Done:** A timer function implemented to update the time display every second. Implementation reviewed, tested, and functioning as expected.
- **D3:** Ensure the time display is accurate and automatically updates without needing a page refresh
  - **Dependencies:** A
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** Low
  - **Status:** To-do
  - **Definition of Done:** Time display accuracy ensured, and automatic updates implemented without page refresh. Implementation reviewed, tested, and functioning as expected.
- **D4:** Integrate weather service APIs to provide real-time weather information and forecasts
  - **Dependencies:** A
  - **Time Estimate:** 3 hr, 3 pt



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- **Priority: Medium**
  - **Status: To-do**
  - **Definition of Done: Weather service APIs integrated to provide real-time weather information and forecasts. Implementation reviewed, tested, and functioning as expected.**
  - **D5:** Display weather data, including current conditions, temperature, humidity, and forecasts, in relevant user interfaces
    - **Dependencies: A**
    - **Time Estimate: 3 hr, 3 pt**
    - **Priority: Medium**
    - **Status: To-do**
    - **Definition of Done: Weather data displayed in relevant user interfaces, including current conditions, temperature, humidity, and forecasts. Implementation reviewed, tested, and functioning as expected.**
  - **D6:** Customize weather display options and configurations based on geographic location
    - **Dependencies: A**
    - **Time Estimate: 2 hr, 2 pt**
    - **Priority: Medium**
    - **Status: To-do**
    - **Definition of Done: Weather display options and configurations customized based on geographic location. Implementation reviewed, tested, and functioning as expected.**

**As a bilingual user, I want built-in translation features to view the website with its contents written in my preferred language without needing to manually translate the content. (3 tasks)[E]**

- **E1:** Integrate translation services, such as Google Translate API, to support multilingual localization of the application
  - **Dependencies: B**
  - **Time Estimate: 4 hr, 5 pt**
  - **Priority: High**
  - **Status: To-do**
  - **Definition of Done: Translation services integrated to support multilingual localization of the application. Implementation reviewed, tested, and functioning as expected.**
- **E2:** Implement language selection options to allow users to switch between different language preferences
  - **Dependencies: B**
  - **Time Estimate: 2 hr, 2 pt**
  - **Priority: Medium**
  - **Status: To-do**



- **Definition of Done:** Language selection options are implemented to allow users to switch between different language preferences. Implementation reviewed, tested, and functioning as expected.
- **E3:** Translate static text content, labels, and messages dynamically based on the user's language preference
  - **Dependencies:** B
  - **Time Estimate:** 2.5 hr, 3 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Static text content, labels, and messages are translated dynamically based on the user's language preference. Implementation reviewed, tested, and functioning as expected.

**As a customer who is a health worker, I want to be able to see the dietary information and nutritional facts, as well as allergen warnings if the menu item contains any. (2 tasks)[F]**

- **F1:** Within each menu item, display important information regarding its dietary information and nutritional facts
  - **Dependencies:** B3 (If database modifications are needed for menu items, those can be made concurrently with task B3)
  - **Time Estimate:** 2 hr, 2 pt
  - **Priority:** Low
  - **Status:** To-do
  - **Definition of Done:** Dietary information and nutritional facts are displayed within each menu item. Implementation reviewed, tested, and functioning as expected.
- **F2:** If a menu item contains allergen risks, have a clear warning mentioning the risk
  - **Dependencies:** B3 (If database modifications are needed for menu items, those can be made concurrently with task B3)
  - **Time Estimate:** 1.5 hr, 2 pt
  - **Priority:** Low
  - **Status:** To-do
  - **Definition of Done:** Clear warning implemented mentioning allergen risks for menu items. Implementation reviewed, tested, and functioning as expected.

**As primarily a phone user, I want the website to be easily accessible with a mobile device and still readable on a smaller screen. (2 tasks)[G]**

- **G1:** Make the website easy on the eyes and readable on mobile devices
  - **Dependencies:** B
  - **Time Estimate:** 1 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do



- **Definition of Done:** Website optimized for readability and accessibility on mobile devices. Implementation reviewed, tested, and functioning as expected.
- **G2:** Maintain ease of navigation on mobile devices
  - **Dependencies:** B
  - **Time Estimate:** 3 hr, 4 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Ease of navigation maintained on mobile devices. Implementation reviewed, tested, and functioning as expected.

As a customer with bad eyesight, I want the ability to easily enlarge text on the website and make the website have high contrasting colors so that I can read without straining my eyes, and it should be expectedly be clean to look at. (11 tasks)[H]

- **H1:** Identify areas for improvement in the user layout
  - **Dependencies:** B
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Areas for improvement in the user layout identified.
- **H2:** Identify areas for improvement in the user navigation
  - **Dependencies:** B
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Areas for improvement in the user navigation identified.
- **H3:** Identify areas for improvement in the aesthetics
  - **Dependencies:** B
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** Medium
  - **Status:** To-do
  - **Definition of Done:** Areas for improvement in the aesthetics identified.
- **H4:** Identify color scheme(s) that work universally for individuals with varying levels of eyesight and apply these scheme(s) to the webpage
  - **Dependencies:** B
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Color schemes identified and applied universally for individuals with varying levels of eyesight.
- **H5:** Identify areas for improvement in the user experience



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- **Dependencies:** B
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** Medium
  - **Status:** To-do
  - **Definition of Done:** Areas for improvement in the user experience identified.
  - **H6:** Incorporate interactive components to enhance user experience
    - **Dependencies:** B
    - **Time Estimate:** 3 hr, 3 pt
    - **Priority:** Medium
    - **Status:** To-do
    - **Definition of Done:** Interactive components incorporated to enhance user experience. Implementation reviewed, tested, and functioning as expected.
  - **H7:** Incorporate animations to enhance visual appeal
    - **Dependencies:** B
    - **Time Estimate:** 3 hr, 3 pt
    - **Priority:** Medium
    - **Status:** To-do
    - **Definition of Done:** Animations incorporated to enhance visual appeal. Implementation reviewed, tested, and functioning as expected.
  - **H8:** Add in pictures of the menu items
    - **Dependencies:** B
    - **Time Estimate:** 2 hr, 2 pt
    - **Priority:** Low
    - **Status:** To-do
    - **Definition of Done:** Pictures of menu items added. Implementation reviewed, tested, and functioning as expected.
  - **H9:** Implement responsive design principles to ensure the GUI adapts smoothly to different screen sizes and devices
    - **Dependencies:** B
    - **Time Estimate:** 2 hr, 2 pt
    - **Priority:** Medium
    - **Status:** To-do
    - **Definition of Done:**
  - **H10:** Create a toggle that would make everything larger so that it is easier to view
    - **Dependencies:** B
    - **Time Estimate:** 2 hr, 3 pt
    - **Priority:** High
    - **Status:** To-do
    - **Definition of Done:** Toggle created to enlarge everything for easier viewing. Implementation reviewed, tested, and functioning as expected.



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- **H11:** Create another toggle button for light and dark mode
    - **Dependencies:** B
    - **Time Estimate:** 2 hr, 2 pt
    - **Priority:** Low
    - **Status:** To-do
    - **Definition of Done:** Toggle button created for light and dark mode. Implementation reviewed, tested, and functioning as expected.

**As a customer with unsteady hands, I want the buttons to be large enough and easily clickable so that I do not have excessive trouble navigating. (3 tasks) [I]**

- **I1:** Ensure buttons are amply sized so people can easily navigate without trouble
  - **Dependencies:** H
  - **Time Estimate:** 1 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Buttons ensured to be amply sized for easy navigation. Implementation reviewed, tested, and functioning as expected.
- **I2:** Make sure interactive elements are spaced out enough so that customers do not accidentally click on the wrong element
  - **Dependencies:** H
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** Medium
  - **Status:** To-do
  - **Definition of Done:** Interactive elements spaced out to prevent accidental clicks. Implementation reviewed, tested, and functioning as expected.
- **I3:** Make it so that the text and buttons are concise enough to understand at a glance. An example of this can be high contrast between the buttons and the screen
  - **Dependencies:** H
  - **Time Estimate:** 0.5 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Text and buttons are made concise and high contrast for easy understanding at a glance. Implementation reviewed, tested, and functioning as expected.

**As a blind user (stretch goal), I want an inbuilt text-to-speech reader so that I can understand what is on the website and to ensure I can navigate the page properly (5 tasks)\* THIS IS A STRETCH GOAL**

- **J1:** Research and Select a Text-to-Speech (TTS) Technology
  - **Dependencies:** None



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- **Time Estimate:** 2 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** A TTS technology that is compatible with the website and meets the needs of blind users is selected.
  - **J2:** Design button for the TTS Feature
    - **Dependencies:** B
    - **Time Estimate:** 2 hr, 2 pt
    - **Priority:** High
    - **Status:** To-do
    - **Definition of Done:** A button is designed and implemented for activating and controlling the TTS feature.
  - **J3:** Implement the TTS Feature
    - **Dependencies:** B
    - **Time Estimate:** 4 hrs, 3 pt
    - **Priority:** High
    - **Status:** To-do
    - **Definition of Done:** The TTS feature is implemented on the website, allowing users to listen to the content read aloud in an orderly fashion. All website text is accessible through the TTS functionality.
  - **J4:** Test the TTS Feature with Blind Users
    - **Dependencies:** J2
    - **Time Estimate:** 4 hr, 4 pt
    - **Priority:** High
    - **Status:** To-do
    - **Definition of Done:** The TTS feature is tested with blind users to gather feedback on usability, understandability, and overall experience. Necessary adjustments are identified.
  - **J5:** Refine and Optimize the TTS Feature
    - **Dependencies:** J4
    - **Time Estimate:** 3 hr, 3 pt
    - **Priority:** Low
    - **Status:** To-do
    - **Definition of Done:** Based on user feedback, the TTS feature is refined and optimized for better performance, usability, and user satisfaction.

**As a user who orders items, I want to be able to customize the ingredients for menu items I order (2 tasks) [J]**

- **K1:** Create back-end functionality to allow a menu item to use different ingredients than the default.



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- **Dependencies:** B
  - **Time Estimate:** 3.5 hr, 4 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** The back end successfully allows for functionality to customize menu items. Implementation reviewed, tested, and functioning as expected.
  - **K2:** Create front-end functionality to allow a user to customize menu items when placing an order.
    - **Dependencies:** B
    - **Time Estimate:** 4.5 hr, 5 pt
    - **Priority:** High
    - **Status:** To-do
    - **Definition of Done:** The front end successfully allows for functionality to customize menu items. Implementation reviewed, tested, and functioning as expected.

**As a manager, I want to be able to view past orders and modify/delete them (3 tasks) [L]**

- **L1:** Create front and back end functionality to view all orders within a given time window.
  - **Dependencies:** B
  - **Time Estimate:** 1 hr, 1 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Order viewing integrated to allow managers to view orders within a valid time window. Implementation reviewed, tested, and functioning as expected.
- **L2:** Create front and back end functionality to update an order.
  - **Dependencies:** B
  - **Time Estimate:** 3 hr, 3 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Order modification integrated to allow managers to add/remove items from the order and change the status of the order. Implementation reviewed, tested, and functioning as expected.
- **L3:** Create front and back end functionality to remove an order from the order history.
  - **Dependencies:** B
  - **Time Estimate:** 2 hr, 2 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Order removal integrated to allow managers to remove an order from the order history. Implementation reviewed, tested, and functioning as expected.



**As an administrator, I want to be able to have access to user management tools. (4 tasks) [M]**

- **M1:** Create front and back end functionality to create new users.
  - **Dependencies:** C
  - **Time Estimate:** 3 hr, 3 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** User creation implemented to allow an admin to create new users for the website. Implementation reviewed, tested, and functioning as expected.
- **M2:** Create front and back end functionality to view current users.
  - **Dependencies:** C
  - **Time Estimate:** 2 hr, 2 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** User viewing implemented to allow an admin to view all registered users. Implementation reviewed, tested, and functioning as expected.
- **M3:** Create front and back end functionality to update attributes corresponding to current users.
  - **Dependencies:** C
  - **Time Estimate:** 4 hr, 4 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** User updating implemented to allow an admin to modify a user's name, role/privileges, contact info, etc. Implementation reviewed, tested, and functioning as expected.
- **M4:** Create front and back end functionality to remove a user from the system.
  - **Dependencies:** C
  - **Time Estimate:** 3 hr, 3 pt
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** User removal implemented to allow an admin to remove a user from the system. Implementation reviewed, tested, and functioning as expected.

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## Sprint Backlog

Link to our GitHub project board, the sprint backlog is currently our sprint 1:

<https://github.com/orgs/csce-315-331-2024a/projects/26/views/1>

For the Initial Sprint Backlog, we selected two user stories in the product backlog intended to be done by the end of sprint 1, and assigned each task to a team member:

### As a developer, I would like to have the front-end code served on one server (5 tasks) [A]

- **A1:** Research and select a suitable framework for rebuilding the GUI of the POS system.
  - **Dependencies:** None
  - **Assigned to:** Wyatt and Kunal
  - **Time Estimate:** 1HR, 1 pt
  - **Time Spent:** 1 hr
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Framework selected based on research
- **A2:** Assess the compatibility, scalability, and usability of potential frameworks to determine the best fit for the project
  - **Dependencies:** A1
  - **Assigned to:** Wyatt and Kunal
  - **Time Estimate:** 0.5 HR, 1 pt
  - **Time Spent:** 0.5 hr
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Frameworks assessed for compatibility, scalability, and usability.
- **A3:** Plan and execute the migration process to transition the existing GUI components to the new framework seamlessly.
  - **Dependencies:** A2
  - **Assigned to:** All
  - **Time Estimate:** 1.5 HR, 2 pt
  - **Time Spent:** 1.5 hr
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Migration plan executed seamlessly. Implementation reviewed, tested, and successfully transitioned.
- **A4:** Create a dedicated menu board view to display product offerings, prices, and promotions in a visually appealing and informative manner
  - **Dependencies:** A3
  - **Assigned to:** Kunal



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- **Time Estimate:** 2.5 HR, 3 pt
  - **Time Spent:** 0 hr
  - **Priority:** High
  - **Status:** To-do
  - **Definition of Done:** Menu board view created with product offerings, prices, and promotions. Implementation reviewed, tested, and visually appealing.
  - **A5:** Implement a customer view. This should be different from the cashier view, it should be more accessible and easier to navigate
    - **Dependencies:** A3
    - **Assigned to:** Karan and Kelvin
    - **Time Estimate:** 4 hr, 5 pt
    - **Time Spent:** 4 hrs 30 mins
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Customer view implemented for accessibility and ease of navigation. Implementation reviewed, tested, and distinct from the cashier view.

**As a developer, I would like to have the back-end code served on another server (19 tasks) [B]**

- **B1:** Analyze the impact of GUI redesign on the database schema and data structure
  - **Dependencies:** A
  - **Assigned to:** All
  - **Time Estimate:** .5 hr, 1 pt
  - **Time Spent:** .5 hr
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Analysis completed, and necessary adjustments identified. Changes reviewed and aligned with the revamped GUI.
- **B2:** Modify database schema as necessary to align with the revamped GUI
  - **Dependencies:** B1
  - **Assigned to:** All
  - **Time Estimate:** 1 hr, 2 pt
  - **Time Spent:** 0 hr
  - **Priority:** High
  - **Status:** Completed
  - **Definition of Done:** Database schema modified successfully to align with GUI changes. Any new/modified relations are normalized appropriately. Changes reviewed and tested for compatibility.
- **B3:** Update database queries and data relationships to support new GUI features
  - **Dependencies:** B2
  - **Assigned to:** All



- 
- Time Estimate:** 3 hr, 4 pt
    - Time Spent:** 3 hr
    - Priority:** High
    - Status:** To-do
    - Definition of Done:** Database queries and relationships updated to support new GUI features. Changes reviewed and tested for accuracy.
  - **B4:** Migrate the logic for the “What Sells Together” manager feature over to the back-end server and create a view for this data in the UI
    - Dependencies:** B3
    - Assigned to:** Wyatt
    - Time Estimate:** 3 hr, 4 pt
    - Time Spent:** 1.5 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Feature migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B5:** Migrate the logic for the “Restock Report” manager feature over to the back-end server and create a view for this data in the UI
    - Dependencies:** B3
    - Assigned to:** Aditya
    - Time Estimate:** 3 hr, 4 pt
    - Time Spent:** 7 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Feature migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B6:** Migrate the logic for the “Product Usage” manager feature over to the back-end server and create a view for this data in the UI
    - Dependencies:** B3
    - Assigned to:** Kelvin
    - Time Estimate:** 3 hr, 4 pt
    - Time Spent:** 2 hrs 30 mins
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Feature migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B7:** Migrate the logic for the “Seasonal item” manager feature over to the back-end server and create a view for this data in the UI
    - Dependencies:** B3
    - Assigned to:** Isaac



- 
- Time Estimate:** 2.5 hr, 3 pt
    - Time Spent:** 3 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Feature migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B8:** Migrate the logic for the “Excess Report” manager feature over to the back-end server and create a view for this data in the UI
    - Dependencies:** B3
    - Assigned to:** Karan
    - Time Estimate:** 3 hr, 4 pt
    - Time Spent:** 2 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Feature migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B9:** Migrate the logic for the “Sales Report” manager feature over to the back-end server and create a view for this data in the UI
    - Dependencies:** B3
    - Assigned to:** Kelvin
    - Time Estimate:** 3 hr, 4 pt
    - Time Spent:** 3 hrs
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Feature migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B10:** Migrate the logic to add menu items and create an interactive component in the UI to support this functionality
    - Dependencies:** B3
    - Assigned to:** Isaac
    - Time Estimate:** 2.5 hr, 3 pt
    - Time Spent:** 3 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B11:** Migrate the logic to update menu items and create an interactive component in the UI to support this functionality
    - Dependencies:** B3
    - Assigned to:** Isaac



- 
- Time Estimate:** 2.5 hr, 3 pt
    - Time Spent:** 5 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B12:** Migrate the logic to add inventory items and create an interactive component in the UI to support this functionality
    - Dependencies:** B3
    - Assigned to:** Isaac
    - Time Estimate:** 2.5 hr, 3 pt
    - Time Spent:** 4 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B13:** Migrate the logic to update inventory items and create interactive component in the UI to support this functionality
    - Dependencies:** B3
    - Assigned to:** Isaac
    - Time Estimate:** 2.5 hr, 3 pt
    - Time Spent:** 4 hr
    - Priority:** High
    - Status:** Completed
    - Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B14:** Migrate the logic to choose between three payment options
    - Dependencies:** B3
    - Assigned to:** Kelvin
    - Time Estimate:** 2 hr, 2 pt
    - Time Spent:** 0 hr
    - Priority:** High
    - Status:** To-do
    - Definition of Done:** Functionality migrated successfully to the web server.  
Implementation reviewed, tested, and functioning as expected.
  - **B15:** Migrate the logic to add items and remove items from the transaction and create an interactive component in the UI to support this functionality
    - Dependencies:** B3
    - Assigned to:** Wyatt
    - Time Estimate:** 3.5 hr, 4 pt



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- **Time Spent:** 6 hr
    - **Priority:** High
    - **Status:** Completed
    - **Definition of Done:** Functionality migrated successfully to the web server.  
**Implementation reviewed, tested, and functioning as expected.**
  - **B16:** Add the ability to customize menu items and create interactive components in the UI to support this functionality
    - **Dependencies:** B3
    - **Assigned to:** Kunal
    - **Time Estimate:** 3 hr, 3 pt
    - **Time Spent:** 0 hr
    - **Priority:** Medium
    - **Status:** To-do
    - **Definition of Done:** Feature implemented and tested successfully. Customization options reviewed and functioning as expected.
  - **B17:** Integrate menu board data dynamically with the database to ensure real-time updates and synchronization with the POS system
    - **Dependencies:** B3
    - **Assigned to:** Kunal
    - **Time Estimate:** 2 hr, 2 pt
    - **Time Spent:** 1 hr
    - **Priority:** Medium
    - **Status:** To-do
    - **Definition of Done:** Integration completed successfully, ensuring real-time updates.  
**Functionality reviewed and synchronized with the POS system.**
  - **B18:** Implement backend logic to support real-time menu board updates and create an interactive component in the UI to support this functionality
    - **Dependencies:** B3
    - **Assigned to:** Karan
    - **Time Estimate:** 2hr, 2 pt
    - **Time Spent:** 3 hr
    - **Priority:** Medium
    - **Status:** Completed
    - **Definition of Done:** Backend logic implemented to support real-time updates.  
**Functionality reviewed and synchronized with the front end.**
  - **B19:** Deploy the website using Vercel
    - **Dependencies:** B3
    - **Assigned to:** Kunal and Wyatt
    - **Time Estimate:** 2hr, 2 pt
    - **Time Spent:** 2 hr



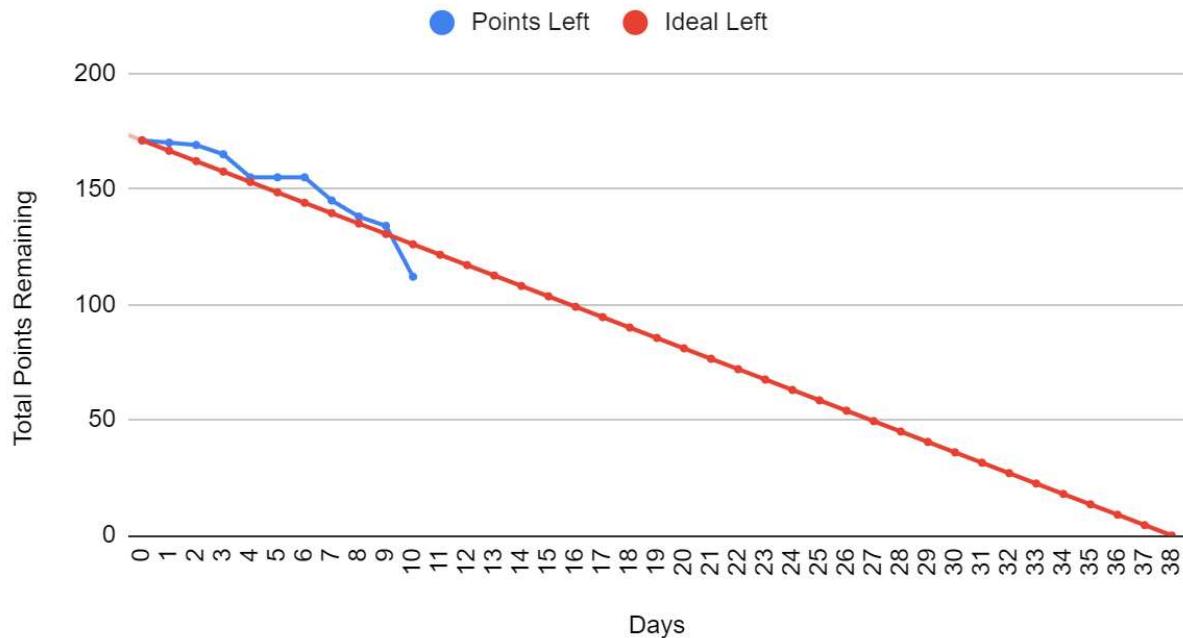
- 
- **Priority:** Medium
  - **Status:** Completed
  - **Definition of Done:** Site is successfully deployed and hosted using Vercel and is accessible through a link.
  - **B20:** Implement unit testing for all features of the UI backend and frontend.
    - **Dependencies:** B3
    - **Assigned to:** All
    - **Time Estimate:** 5hr, 5 pt
    - **Time Spent:** 2 hr
    - **Priority:** High
    - **Status:** In Progress
    - **Definition of Done:** Features are largely tested with coverage of at least 50%.

	Sprint 1	Sprint 2	Sprint 3
Isaac Ambro	24		
Wyatt Cade	21		
Kelvin Su	18		
Aditya Biradar	13		
Karan Bhalla	20		
Kunal Jain	15		



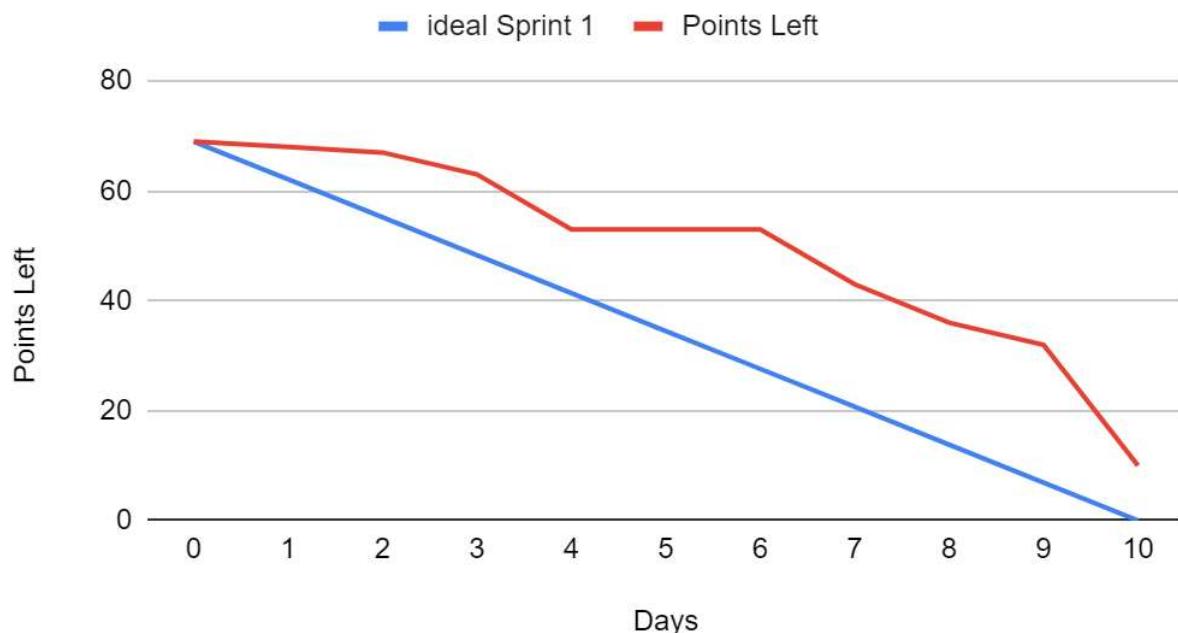
## Burn-down Charts

Total Burndown Chart





## Sprint 1 backlog





## Next Sprint's SCRUM Meeting Schedule

In the previous design document, the team initially scheduled our planning meetings to be held before labs on Monday. However, due to class time conflicts, this will now be changed to this Tuesday (April 2, 2024) from 7:30 PM to 8:15 PM. As of right now, we are unsure if this is a change specifically for the next sprint, or if this will be the time for planning meetings going forward on this project.

Our daily stand-up meeting times have not changed. Currently, it is planned for Monday, Wednesday, and Thursday either in person or at ZACH from 3:35 PM to 3:50 PM. These times can be flexible depending on whether group members are busy during the week, however, this is the current plan for the next sprint.

Retrospective meetings will also be done either in person or at ZACH, however rather than Saturday, it will be on the day after the next sprint is due. This is the plan going forward for all of our retrospective meetings. For the next sprint in particular, because it is due on Sunday, April 14th, our next retrospective meeting will be on Monday, April 15th from 7 PM to 7:45 PM.

### Summary:

**Planning Meeting:** April 2, 2024 (Wednesday) at 7:30 PM - 8:15 PM. Meet on Discord.

**Daily Stand-Up Meetings:** April 8 (Monday), April 10 (Wednesday), April 11 (Thursday) at 3:35 PM - 3:50 PM. Meet on Discord or at ZACH depending on our group's preference.

**Retrospective Meetings:** April 15, 2024 (Monday) from 7 PM to 7:45 PM. Meet on Discord or at ZACH depending on preference.



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## Appendix 1: SCRUM Meeting Agendas and Minutes

SCRUM Meeting 1 for Rev's Grill Website

Prepared by: Karan Bhalla

Meeting Date: Mar 26, 2024

### Meeting Attendees

1. Kunal Jain
2. Karan Bhalla
3. Kelvin Su
4. Isaac Ambro
5. Wyatt Cade
6. Aditya Biradar

### Meeting Agenda Items

- Obtain a status report of what task each team member was working on
- Assess if tasks need to be reassigned

### Status Update Since Last Meeting

Accomplishments:

- The tech stack was decided unanimously by all developers
- Product backlog was formed with tasks being broken down into atomic units
- User stories were assigned to Sprint I

Tasks Completed:

Task Description	Assigned to	Completed? (yes/no)
A1: Research and select a suitable tech stack to rebuild the GUI of the website	Wyatt	YES
A2: Assess the compatibility and usability of frameworks to determine the best fit for the project	Wyatt	YES

### Before The Next Meeting

Plans:



- 
- Each team member is to continue working on their assigned tasks
  - Pay special attention to certain tasks about updates in the database and its schema, and the impact of GUI redesign on the database

Task Assignments:

Task Description	Assigned to
A4	Kunal + Aditya
Reassigned below tasks:	
A5: Implement a customer view	Karan + Kelvin
B6: Implement product usage feature	Kelvin
B12: Migrate the logic to add inventory items and create a corresponding component in the UI	Isaac
B13: Migrate the logic to update inventory items and create corresponding components in the UI	Isaac

## Minutes from Previous Meeting

During the previous meeting, project deliverables and timelines were discussed to ensure that each team member was aware of these aspects. The Agile and Scrum methodologies were reviewed since the team was assigned to use them during the project. The team deliberated over the goals of Sprint 1. The team eventually decided that the goal for Sprint 1 would include reproducing the front end of Project II, adding customer and menu board views, and modifying databases as necessary. The team formed a high-level overview of the tasks with estimations and assignments. Any questions regarding the user stories and tasks were also answered.

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SCRUM Meeting 2 for Rev's Grill Website

Prepared by: Kelvin Su

Meeting Date: Mar 28, 2024

## Meeting Attendees

1. Kunal Jain
2. Karan Bhalla
3. Kelvin Su
4. Isaac Ambro
5. Wyatt Cade
6. Aditya Biradar

## Meeting Agenda Items

- Discuss what tasks have been completed, and if anyone is having trouble with any specific ones.
- Discuss how we want to do testing in this sprint
- Another update on the tasks that are not completed, and if people need to get moved around
- Discuss blockers that have been encountered that can affect our progress in this sprint

## Status Update Since Last Meeting

### Accomplishments:

- Tasks b6, b8, b9, b10, b12, and b13 completed
- Testing has begun for some of the backend
- Aditya has been brought on to help Karan and Kelvin with customers when he has time

### Tasks Completed:

Task Description	Assigned to	Completed? (yes/no)
B6: Implement Product Usage Feature	Kelvin	YES
B8: Implement Excess Report Feature	Karan	YES
B9: Implement Sales Report Feature	Kelvin	YES
B10: Implement logic to add menu items	Isaac	YES
B12: Implement logic to add inventory items	Isaac	YES

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B13: Implement logic to update inventory items	Isaac	YES
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## Before The Next Meeting

Plans:

- Get deployment (Vercel) and testing (Jest) figured out
- Finish the customer and employee views

Task Assignments:

Task Description	Assigned to
Reassigned below tasks:	
A5: Implement a customer view	Karan + Kelvin + Aditya

## Minutes from Previous Meeting

During the previous meeting, the team had a generally positive outlook on the sprint, with the fist of five resulting in an average of 4.33. The discussion primarily focused on the progress of tasks from the sprint backlog, with tasks A1 and A2 already completed. The team decided that Kunal would be mainly involved with the front-end implementation and routing, so Kelvin took over the task of migrating his product usage manager feature. No new tasks were added during the meeting, and there were no reported blockers hindering progress. The team agreed to continue working on their respective assigned tasks to meet sprint objectives.

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## SCRUM Meeting 3 for Rev's Grill Website

Prepared by: Kelvin Su

Meeting Date: Mar 31, 2024

## Meeting Attendees

1. Kunal Jain
2. Karan Bhalla
3. Kelvin Su
4. Isaac Ambro
5. Wyatt Cade
6. Aditya Biradar

## Meeting Agenda Items

- Get a final update on how the tasks are going and if any need to be pushed to the next sprint
- Discuss further testing options and how we will be implementing them
- Reflect on the workload of sprint 1 and discuss how to better distribute tasks for the next sprint
- Discuss about the blockers in the last meeting and if they have been resolved

## Status Update Since Last Meeting

### Accomplishments:

- All tasks have been completed besides a4, b14, b16, b17, and b20
- Wyatt has begun Jest and got a baseline for some of the backend testing
- The team has also gained a better understanding on how to test the frontend

### Tasks Completed:

Task Description	Assigned to	Completed? (yes/no)
A3: Plan and execute the migration process to transition the existing GUI components to the new framework seamlessly	All	YES
A4: Implement a menu board	Kunal	NO
A5: Implement a customer view	Kelvin + Karan + Aditya	YES

B1: Analyze the impact of GUI redesign on the database schema and data structure	All	YES
B2: Modify database schema as necessary to align with the revamped GUI	All	YES
B3: Update database queries and data relationships	All	YES
B4: Implement the What Sells Together feature	Wyatt	YES
B5: Implement Restock Report	Aditya	YES
B7: Implement Seasonal Item	Isaac	YES
B11: Implement Updating menu items	Isaac	YES
B14: Implement three payment options	Kelvin	NO
B15: Implement a way to add and remove items to transactions	Wyatt	YES
B16: Implement a way to customize menu items for customers	Kunal	NO
B17: Integrate the menu board with the database	Kunal	NO
B18: Implement back-end logic to ensure menu board updates in real-time	Karan	NO

## Before The Next Meeting

Plans:

- Finish out the tasks left in sprint 1
- Continue working on Jest testing for both front and back-end
- Look for possible UI improvements that can be done in future sprints

Task Assignments:

No further changes to task assignments were made in this meeting. Everyone still had the same tasks assigned to them in the previous meeting and worked hard to complete them to the best of their abilities.



## Minutes from Previous Meeting

During the previous meeting, the entire team had another fist-of-five score that resulted in an average score of 3.67. This dropped from the very first SCRUM meeting because the team had begun to realize that the workload for this sprint was too heavy. The team concluded that we will get most of the tasks done, however, the menu board and testing might have to get pushed onto the next sprint. Aditya was designated to assist with the customer view as well after he finished with his restock report. New tasks for deployment and testing were also mentioned to be done before the end of the sprint. We also discussed blockers that intervened with our progress, and what can be done about them.