



Expert Panel Report

BOGO SORT CONNOISSEURS



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Executive Summary

Our project addresses the need for a robust order management system for Rev's Grill that can track sales trends and maintain inventory levels. After discussing with some expert panelists who have tried our point-of-sale system, we outlined a variety of issues that needed to be solved in our system and have worked hard to implement them. This document outlines the expert panelists and their specific areas of expertise, the findings, and the proposed design moves for solving these problems. Through discussions with the panelists, more understanding of their expertise was gained to better help us make various creative and logical decisions for the project. Feedback from these panelists highlights various concerns regarding the platform. They note issues such as unintuitive navigation for cashiers and managers, security flaws in the login system, and inefficiencies in the ordering process. Recommendations include enhancing design consistency, improving security measures by implementing database storage for login credentials, and adding features for more efficient order processing. We will then outline our course of action for implementing solutions to these issues in our sprint based on the insights that we were provided.



Expert Panelists

Panelist Name (May be Changed for Privacy)	Specific Area of Expertise	Responsible Team Member
John Doe	User Experience	Surya
Jane Smith	Cybersecurity	Shweta
Bob Dylan	Restaurant Management	Warren
Meg Ryan	Food Service	Sua
Turkish Quandale Dingle	Marketing / Business	Andrew

Expert Panel Findings

Overall, discussing our product in front of a panel of experts really helped us gain a lot of insight as to how we can improve our product and what tasks to prioritize in our sprint. On the frontend side, we gathered a lot of useful insight from John regarding the user experience, especially about promoting accessibility and being more resilient to users making mistakes. On the security side, Jane gave us a lot of valuable information as to how we could secure our backend, especially regarding our login system. She worked extensively with cryptography and token-based web authentication in the past, so she was able to provide a lot of useful tips on how we could secure our platform. Bob, having worked in restaurant management for over 15 years, was able to give us a lot of information on the utility of our administrator and manager pages as well as some useful marketing and business tips for the customer side. Meg focused mainly on our cashier-facing interface and she gave us a lot of useful notes on how we could improve the interface to make it as easy and efficient as possible, given cashiers need to be able to process orders rather quickly. Lastly, Turkish gave us a ton of useful guidelines on how we should focus on marketing our MVP towards customers and managers separately, so that it would have a high chance of being integrated permanently into REVs Grill.

Proposed Design Moves

High-level Design Move	Detailed Description	Justification
Confirmation Popups	Add confirmation windows whenever a manager / cashier attempts to remove something like an item / order or an	Currently, without confirmation, it is very easy to make mistakes which cannot be recovered. If we add confirmation windows to crucial



	administrator tries to update something such as promoting or demoting a user's role	features, we prevent users from accidentally performing actions that mess up the underlying infrastructure.
Add dark theme and high contrast theme	We will add options next to the user profile to change the theme and layout of the webpage (eg. dark theme, high contrast, bigger text, etc.)	To promote accessibility of our webpage in accordance with our user studies, we need to add a dark theme and high contrast theme to our web page.
Add consistency to manager-side pages	Make the inventory, menu, and order history pages follow a similar design layout.	Currently, these pages require different modes of interaction because we designed them separately. We should now refactor and update these to follow a consistent design language.
Add security to textboxes to protect database	To prevent brute force attacks, the text boxes need to become secure. Ensure no SQL commands can be entered.	Currently, the database can be dropped if someone enters in an SQL commands for username or password.
Add ability to input quantity of an item manually on the ordering page	Allow the cashier to input a specific quantity of an item manually instead of having to click the + button multiple times. Keep the + and - buttons since it is easier for a smaller quantity.	Currently, you would need to click the + button however many times the quantity of the item the customer wants to order. This can be very inefficient when a customer wants to order a large quantity of an item.
Add filter/sorting abilities to tables	Managers should be able to sort tables based on columns such as price, name, or popularity.	Since the sales report can't cover every single instance or situation, it could be beneficial at times for managers to view a subset of data ordered in a particular manner in order to better understand the data given specific context or parameters
Include different data visualization displays	For the reports page it'll be beneficial to the manager if they're able to see both specific details regarding the data in the database as well as the relative numbers/percentages in order to get a higher-level understanding	Showing just one chart or graph could potentially be dangerous since there can be inherent biases in the way the charts are laid out that result in incorrect assumptions. As such, it's imperative to try to create not only more relevant visuals, but



	of trends and provide a more concrete level of analytics.	also more diverse in order to prevent possible misunderstandings/correlations.
Edit the main navigation bar	To ensure that users know where to login, update the navigation bar to not be exclusive for just managers.	By updating the navigation bar button from 'Manager Login' to 'Login'. This ensures that all users are aware of the login button being for cashier, customer, and admin.



Appendix 1: Expert Panel Interview Data

Panelist Name	Interview Data (Questions and Responses, Observations)	Important Insights and Previously Unconsidered Perspectives
John Doe	<ol style="list-style-type: none">How intuitive is the design of the platform?<ol style="list-style-type: none">The customer-facing pages are designed fairly well, but manager-side layouts and navigation are somewhat unintuitive and require a lot of extra thinking.How would you describe the accessibility of the platform?<ol style="list-style-type: none">The main issue is a lack of confirmation when performing tasks such as deleting and purging information such as orders, items, and ingredients. Additionally, there should be options for high contrast / dark themes.How is the navigability of the platform?<ol style="list-style-type: none">While customer-side navigation is more straightforward, the navigation for cashiers and managers is a lot less clear. Additionally, it's very hard to go back to the pages from which you came especially if you're switching between different views (eg. admin -> manager)Is the design consistent?<ol style="list-style-type: none">The design layout is consistent, and the website for the most part adheres to a standard design	<ul style="list-style-type: none">We need to add confirmation menus for deleting / updating essential items in the database from the manager sideNavigation needs to be clearer for cashier / manager side layouts. We can accomplish this by adding a back option to the navbar as well as a button to go back to the home page.To make the platform more accessible, we also need to add a dark theme and high contrast theme. These were both features we wanted to integrate from the start because they were part of fulfilling our user profiles, so we will definitely do those by the end of the sprint.The platform could also benefit from adding more consistency to the manager-facing pages, notably the inventory and menu pages which John explained had a fairly different look and interaction style.



	<p>language and color scheme. However, different pages within the manager experience have fairly different designs and modes of interaction.</p> <p>5. Overall, how would users feel about the interface?</p> <p>a. From what I can see, customers would definitely be satisfied with the interface, but it needs a bit more work for cashiers and managers to use it effectively.</p>	
Jane Smith	<p>1. How intuitive is the flow and navigation of the login system?</p> <p>a. The navigation bar is intuitive and showcases that managers can login and customers do not need to. The login page is simple and clean and allows for both normal and Google logins.</p> <p>2. What are some features and things you look for in a login system to ensure it is secure?</p> <p>a. There are various features like secure password handling, encryption, session management, protection from attacks, monitoring, and security compliance.</p> <p>3. How secure is the login system?</p> <p>a. The login system is not very secure. There is no database connection that stores passwords and login information</p>	<ul style="list-style-type: none">● Session management is very important in ensuring the person logged in is properly accessing the correct pages.● The intuitive flow of the login page is important and ensuring where to enter username and password.● We previously did not consider brute force attacks. Thus, if someone wanted to, they can destroy our database and website by entering a SQL command. Thus, this needs to be implemented.● The distinction between the various users have not be clearly set. This needs to be done to ensure that cashier, admin, and manager all have various different sessions.● Similarly, in the navigation bar, the tab should be changed to something different than 'Manager Login'. This implies that cashiers and admins are unable to access the site, which



	<p>securely. Additionally, the username and password areas are not secure so someone may be able to drop your database.</p> <p>4. Is the distinction between various users clear?</p> <p>a. The navbar states manager login, so it does not seem to be very clear for cashiers and admin. Renaming the component might be useful. However, based on the login, change the users access properly, which is currently not properly set up.</p> <p>5. Is there any security methodologies that the team should consider using?</p> <p>a. Try implementing a database approach in storing usernames and passwords securely. By connecting to the DB than just Google OAuth, you are open to various other implementation usages.</p>	<p>might make it difficult and not intuitive.</p>
Bob Dylan	<p>1. What trends or reports are missing from the MVP that would be useful as a manager?</p> <p>a. Reports and trends look fine, the sales report was a bit weird and would rather have it in table form since the graph would look funky as more items get added and also difficult to tell the exact numbers based on the graph. Pie</p>	<ul style="list-style-type: none">● Be more intentionally when the reports and how the information is being displayed. Also having the data displayed as both a table and a chart is helpful in better understanding how relevant the data is in context.● Add more consistent behavior between editable tables/pages, so that once the user understands how to perform operations on one page, it



	<p>charts could also be effective to illustrate the differences in popularity between items on a relative basis. Also having an absolute metric or having a comparison graph would be nice to isolate 2 time frames.</p> <p>2. Are there any difficulties or annoyances when interacting with the interface?</p> <p>a. Interface was pretty intuitive, nothing much to comment on except for dates with keypad has a weird behavior. Some things also felt a bit inconsistent when editing menus or inventory.</p> <p>3. Is the information being synthesized in a useful, insightful, and readable manner?</p> <p>a. Information definitely useful, ordering was readable, not so much for the menu although the images helped a lot. Pairs of items seemed pretty insightful, although it would be nice to see additional trends and add additional filters when looking at the data.</p> <p>4. What are the most common tasks you perform as a manager?</p> <p>a. Making sure that everyone is staying on task and to address any questions or concerns</p>	<p>transfers over to all other pages</p> <ul style="list-style-type: none">• Adding additional filter and sorting options would be good additional feature to allow for more thorough looks at the resulting data• Can be more inclusive/efficient with ordering methods by allowing input number mode or having combo meals as options based on popularity
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	<p>from either fellow coworkers or customers. Additionally reviewing the numbers and ensuring that sales go well.</p> <p>5. What shortcuts or automations do you think would be good to have?</p> <p>a. For ordering some people might prefer to quickly insert item numbers rather than click on buttons and also modifying quantity is definitely a must. Also instead of manually checking for low stock, creating an algorithm to check low stock, the number of sales associated with the ingredient, then automatically ordering a good amount would be great for inventory management.</p>	
Meg Ryan	<p>1. Can you share your experience interacting with POS as a cashier?</p> <p>a. I've been a cashier at two places now, and I've worked with two different POS with fairly significant differences. One of them had pictures of each menu item with no search bar and the other had a search bar but no pictures. I would say the search bar helps a lot when taking down an order from a customer</p>	<ul style="list-style-type: none">• Add an ability to adjust the quantity of each item manually on top of the + and - buttons• The search bar is really useful so keep it• The efficiency and intuitiveness of the cashier ordering page are very important as it directly relates to the wait time of customers which directly impacts the overall image of the restaurant, ultimately impacting the sales• The order confirmation pop-up could be designed more consistently with the rest of the UI.



	<p>especially when you are getting trained and are unfamiliar with the menu items. The pictures are not that necessary since as a cashier, you just need to know the name of the items that the customer wants.</p> <p>2. Why is it important to have an intuitive ordering page?</p> <p>a. It is very important to have a good, easy-to-navigate ordering page because it makes ordering much faster and efficient so that the customers don't have to wait a long time. Also, it is easy to train new employees as they will be able to pick up things quickly.</p> <p>3. How intuitive is the ordering page?</p> <p>a. The ordering page is fairly intuitive as you can see the entire menu board on one page and adjust the amounts. The menu items are also set up under different categories which also makes ordering more intuitive.</p> <p>4. Do you think it's easy to take orders from customers while they're speaking?</p> <p>a. Yes, because you can see all the menu items at once and they are organized by categories so it's very easy to locate a specific menu item. You can also use a search</p>	
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	<p>bar and just search for the name of the item while listening to a customer's order.</p> <p>5. Are there any improvements that need to be made?</p> <p>a. It would be nice if you could adjust the quantity by inputting a specific number rather than clicking the + and - buttons. For example, if a customer orders 50 bacon cheeseburgers, then with the current interface, the cashier would have to click the + button 50 times which makes the ordering process very inefficient.</p>	
Turkish Quandale Dingle	<p>1. How was the overall feel of the POS system from a consumer standpoint?</p> <p>a. The overall feel of the POS system was fine. There were a couple of problems with navigation and such but overall, the design is professional and appealing to customers.</p> <p>2. How can we market our POS system efficiently so that restaurants will find it appealing?</p> <p>a. To market our POS system efficiently to restaurants, we should emphasize its tailored features and benefits, and showcase these in any demos we do to appeal better.</p> <p>3. How can we extend the reach of</p>	<ul style="list-style-type: none">• Make the application more navigatable and user friendly.• Be sure to emphasize tailored and impressive features in any demos we do (like for our final presentation). Make sure to go above-and-beyond for selling these new features• Make a more comprehensive admin page and features for it such as adding users, editing user roles, and a dashboard.• Look into more scalable solutions



	<p>our POS system to be more universal for more restaurants?</p> <ul style="list-style-type: none">a. Make a more comprehensive admin menu that should seamlessly be able to do things such as add users such as cashiers, promote users to positions such as managers, and have a general overview of everything. <p>4. How can we differentiate our POS system from others and make ours stand out as above-and-beyond?</p> <ul style="list-style-type: none">a. Focus on key differentiators such as user-friendly interfaces, robust reporting and data analytics, and seamless integration with outside/custom features (such as the weather api that we already have) <p>5. How can we ensure scalability in our POS system from a business standpoint?</p> <ul style="list-style-type: none">a. The most important thing is to utilize scalable infrastructure when creating it. SQL databases are good for this and is why we use it as apposed to a no-SQL approach. Look to host more things on the cloud besides the database.	
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