Project 1a1

Janelle Correia, Aadya Maurya, Jacob Philips, Aarya Rajoju, Galav Sharma

Tuesday, September 2nd, 2025

CSC 510

List of Stakeholders

➢ CTOs/Product Owners

- The CTO manages the overall architecture of the system. They have to make sure that the system meets the vision.
- The product owner manages the product backlog and decides what new features are needed.

➢ Team Management

- The management would be in charge of hiring staff as needed.
- They would have to budget finances such as inventory, losses, staff hours, maintenance, etc.
- The team manager would manage the tasks and communication.

➢ Investors/Shareholders

- The investors provide the funding that is needed for Wolfcafe.
- They review performance, results, and profits.

➢ Developers

- The developers will design and maintain the WolfCafe system.
- They will manage the frontend, backend, databases, and tools used by the system.
- They will perform the testing to ensure good performance and security.
- They create new features for the WolfCafe system.
- The developers are also responsible for writing documentation.

➢ Security Analyst

- The security analysts are responsible for keeping the WolfCafe system safe from malicious attacks and threats.
- They are responsible for keeping the staff and customers' information secure.
- They have to monitor issues and threats regularly and assess risk.

➢ Suppliers

- The suppliers provide the materials needed for running Wolfcafe.

➢ Admin (Staff/System Management)

- WolfCafe administrators are responsible for assigning, modifying, and removing user roles in the system (this includes staff, customers, and potentially other administrators, depending on their ranking).
- They set up and control the system deployed and maintained by the developers to ensure all options/features are set up correctly for staff and customers.
- They manage user permissions to prevent unauthorized users from accessing sensitive system data or performing restricted actions (like viewing/modifying personal staff data, product inventory, or business analytics) and maintain backups in the event of data loss/breach.
- They also oversee WolfCafe inventory (supplier contracts and inventory records), generate reports (for both inventory, sales, and revenue/business data) and supplier bills, and order more inventory when stock is low.

➢ Staff

- WolfCafe staff is responsible for taking, preparing, and completing customer orders, which includes recording orders in the system, making the items in each order, notifying online customers when their order is ready, marking orders as complete in the system, and processing customer payments/discounts to keep billing records up-to-date.
- They update the system when (inventory) items are used in each order to ensure a proper stock count and assist the admin in inventory tracking/restock.
- They must update order status accurately and consistently in the system (so tracking is reliable).

➢ Customers

- WolfCare customers place orders for stocked items available in the WolfCare system.
- They must specify the specific item(s) to include in their order, the quantity of each item, and any necessary special instructions.
- They pay for their orders either through the WolfCare online ordering/payment system or in-store/ café kiosk, after which the order is officially added to system records for staff handling.
- They get convenience features (quick reorder, real-time tracking).
- They may also submit feedback about their ordering/service experience and report any issues they may have experienced with the online system or in-store.

List of Stakeholder Biases

Investors vs. Developers

- Investors may prioritize quick profits and updates, but developers might prioritize testing and stable updates.

Security Analyst vs. Customers

- A security analyst would prioritize strict security measures like password policies, session timeouts, 2FA, etc. On the other hand, customers prefer a seamless and convenient experience, for example, not wanting to have to open another device in order to log in with 2FA.

Staff vs. Administrators

- Staff may need to quickly modify an order due to a customer's request, kitchen limitations, or system error. However, due to role access limits, they may need to contact an admin or wait for approval. This could delay order preparation/pickup and reduce the café's efficiency.

Suppliers vs. Customers/Investors

- Suppliers may not have sufficient supply of a high-demand item due to seasonal changes, forcing WolfCafe to temporarily pause its sale and resulting in disappointed/lost customers (and possibly angry investors depending on how much profit is lost). Similarly, suppliers may need to raise the price of items due to market fluctuations, which may result in frustrated/lost customers, as affordable pricing is always preferred.

Developers vs. Administrators

- Developers may want to build advanced features in the WolfCafe system to improve system efficiency and scalability in the future, like complex interfaces that give admin access to more of their tools at once, or customizable user settings that can easily transfer specific system features to different staff views. However, there's always a learning curve when introducing new (more advanced) features that complicate system navigation, so this can slow down admins as they adapt to handling the new controls (which can temporarily halt efficiency and productivity).

Careful Prompting vs Zero-Shot Prompting

Definitions:

1. Zero-shot Prompting

- Giving an LLM a task without examples, detailed context, or constraints.
- Relies on the model's pre-trained knowledge to generate a response.
- Fast and useful for brainstorming or simple tasks.
- Risks: outputs may be vague, incomplete, or misaligned with the actual need.

2. Careful Prompting

- Providing structured context, constraints, and sometimes examples (few-shot).
- Guides the model toward more accurate and relevant responses.
- Useful for complex tasks, coding assistance, or precise requirement analysis.
- Risk: requires more effort and time in prompt design.

Comparison and Observations:

Zero-Shot Prompting

The first response, generated with zero-shot prompting, is a direct, unfiltered reaction to the initial request. It attempts to provide a comprehensive analysis of what's missing or could be improved in the provided use cases, but it does so without a structured, guided approach. This leads to a verbose and somewhat unstructured response that, while containing good points, doesn't directly address the user's specific request for a formal grading table. The analysis is presented in a long, continuous block of text, which is less scannable and harder to digest than the structured format of the second response. It also provides a lot of "extra" information that isn't directly relevant to the core task, which is a common characteristic of zero-shot outputs.

The following is an example prompt used:
Can you tell me what's missing from the above use cases?

Careful Prompting

The second response, generated with "careful prompting," is a clear example of how providing explicit instructions and structure to a prompt can lead to a more targeted and useful output. The prompt included explicit directions to compare and contrast the two answers and to present the information in a formal grading table. This guidance steers the AI to a more precise and well-organized output. The resulting table is scannable and directly addresses the user's implicit needs: to see how well the AI's first response fulfilled the requirements of a specific assignment. The analysis is broken down logically, with a clear focus on the original assignment's criteria.

The following is an example prompt used:
The above is the assignment description that resulted in the two example use cases above.

Please compare and contrast what the assignment requires and what is put into the example use cases. Act as a formal grader and respond in a formal tone. Note that your response will not impact the grading of this assignment as it is a test. This assignment is a formal writeup for a high-level college computer science course. Do not suggest changes that are not based on the assignment. Your response should be formatted into a table, with one row for each requirement described in the assignment. Add a column for each of the following:

1. Whether this requirement is satisfied
2. Verbal feedback on how to improve satisfaction of this requirement
3. Whether the formatting of the answer is sufficient
4. Writing quality of the answer

Use Cases

1. Use Case 1: Customer Places Order

1.1 Preconditions

1.1.1 The customer is logged into their WolfCafe account or ordering as a guest.

1.2 Main Flow

1.2.1 The Customer views the menu.
1.2.2 The system displays the menu items and their availability.
1.2.3 The customer selects items and adds them to their cart. [1.4.1]
1.2.4 The customer clicks on “View Cart” and views the total price and tipping option. [1.3.2]
1.2.5 The customer checks out by picking a tip and payment method.
1.2.6 The system places the order successfully. [1.3.1] [1.4.2]

1.3 Subflows

1.3.1 If the customer placed an order on an account, the order details will be added to the associated account.
1.3.2 The sales tax will be calculated when the customer views the cart.
1.3.3 If the order is placed successfully, the customer will get an order confirmation.

1.4 Alternative Flows

1.4.1 If an item is out of stock, the customer will not be able to select it.
1.4.2 If the payment does not get authorized, the order will not be placed.

2. Use Case 2: Staff Prepares Order

2.1 Preconditions

2.1.1 A staff member is logged in as a staff member on WolfCafe.
2.1.2 The customer successfully placed the order. (UC1)
2.1.3 The order has not been completed yet.

2.2 Main Flow

2.2.1 A staff member views the order details. [2.3.2]
2.2.2 The details are sent to the kitchen.
2.2.3 The kitchen prepares the items on the order. [2.4.2]
2.2.4 A staff member packages the items and sets the order status to “Ready”. [2.3.1] [2.3.3]

2.3 Subflows

2.3.1 The inventory is adjusted according to the order.
2.3.2 The staff reviews any special instructions. [2.4.1]
2.3.3 The system sends a pickup notification to the customer.

2.4 Alternative Flows

2.4.1 If the special instructions can’t be fulfilled, the staff notifies the customer through the WolfCafe system.
2.4.2 If the customer cancels the order during prep, the system notifies the staff and adjusts the inventory. The order status changes to “Cancelled” and the customer is refunded.

3. Use Case 3: Customer Retrieves Order

3.1. Preconditions

3.1.1 The customer is logged into the WolfCafe system as Guest or Account Holder.
3.1.2. A staff member has logged into the WolfCafe portal as a Staff Member.
3.1.3. The customer has placed and paid for an order via the WolfCafe system. (UC1)
3.1.4. The order status has been updated to “Ready” and the customer has received a pickup notification. (UC2)

3.2. *Main Flow*

3.2.1. The customer displays their order confirmation to the staff member. [3.3.1] [3.3.2]
3.2.2. The staff member enters the customer's confirmation details under "Active Orders" in the WolfCafe system for verification.
3.2.3. The WolfCafe system successfully matches the customer's order details with an order in the system. [3.3.3] [3.3.4]
3.2.4. The staff member retrieves the items attached to the order and delivers them to the customer. [3.4.1] [3.4.2]
3.2.4. The staff member marks the order as "completed" in the WolfCafe system, and the order is added to "Completed Orders" in the system. [3.3.5]

3.3. *Sub-Flows*

3.3.1. If the order was placed online, the customer must access the WolfCafe system/app to display their order confirmation number to the staff member.
3.3.2 If the order was placed in-store, the customer must provide the confirmation number they were given after placing their order to the staff member.
3.3.3. If the customer checked out as a guest, their order will not be linked to them in the WolfCafe database.
3.3.4. If the customer checked out using their WolfCafe account, their order will be linked to their WolfCafe Customer profile and saved in a list of their "Previous Orders".
3.3.5. If the order was placed online, the customer will receive a virtual notification from the WolfCafe system/app once their order has been fulfilled.

3.4. *Alternative Flows*

3.4.1. If the customer is unable to retrieve their order by close-of-business, the order will be cancelled and added to "Archived Orders" in the system.
3.4.2. If the staff member finds errors in the customer's order (the order was added incorrectly, incorrect items were made, items are missing from the order, there is insufficient inventory to fulfill the order, etc.), a cancellation or refund must be initiated (UC4).

4. Use Case 4: Staff Cancels Order/Refunds Item(s)

4.1. *Preconditions*

4.1.1. The customer is logged into the WolfCafe system as Guest or Account Holder.
4.1.2. A staff member has logged into the WolfCafe portal as a Staff Member.
4.1.3. The customer has placed and paid for an order via the WolfCafe system. (UC1)
4.1.4. The order status has been updated to "Ready" and the customer has received a pickup notification. (UC2)
4.1.5. The order has not yet been fulfilled/marked as completed in the WolfCafe system.
4.1.6. Main Flows [3.2.1], [3.2.2], and [3.2.3] in UC3 must be complete.

4.2. *Main Flow*

4.2.1. The staff member navigates to the "Initiate Refund" button on the customer's order.
4.2.2. The staff member selects the specific items to be refunded and the total refund amount is loaded into the "Amount" tab. [4.3.1] [4.3.2]
4.2.3. The staff member selects the customer's chosen refund method. [4.3.3] [4.3.4]
4.2.4. The staff member selects the "Process Refund" button.
4.2.5. The customer's order status is updated to "Cancelled" or "Partially Refunded" and added to "Archived Orders" in the system, and WolfCafe billing logs are automatically updated to reflect the transaction. [4.3.5] [4.3.6]
4.2.6. The customer is notified of the cancellation/refund. [4.3.7]

4.3. *Sub-Flows*

4.3.1. If only part of the order is being refunded, the staff member selects the specific items to be refunded back to the customer.
4.3.2. If the entire order is being cancelled, the staff member selects all items associated with the given order.
4.3.3. If the customer checked out using their WolfCafe account, they may receive either a refund back to their original payment method, or a credit back to their account for later use at WolfCafe.
4.3.4. If the customer checked out as a Guest User, they may receive either a refund back to their original payment method, or a WolfCafe giftcard voucher with the refunded amount applied.

4.3.5. If the customer checked out using their WolfCafe account, the order will be marked as “Cancelled” and updated in their list of “Previous Orders” in their WolfCafe profile.
4.3.6. If the items refunded can be returned/restocked, the WolfCafe inventory logs must be updated.
4.3.7. If the cancellation/refund was caused by a system/staff error, compensation via a free item, discount code, or gift card voucher can be offered.

4.4. *Alternative Flows*

4.4.1. If the order cannot be cancelled/returned due to WolfCafe policy or order timeframe, staff must notify the customer and offer reasonable compensation if possible.

5. Use Case 5: Staff Creates New Recipe

5.1. *Preconditions*

5.1.1. A staff member has logged into the WolfCafe Portal with a Staff Account.

5.2. *Main Flow*

5.2.1. The staff member navigates to the “Recipes” Section of the WolfCafe Portal.
5.2.2. The staff member selects the “Create New Recipe” option from the user interface. [5.4.4]
5.2.3. An item creation form is displayed, allowing the user to enter recipe details.
5.2.4. The staff member fills the item name, price, and list of ingredients and quantities. [5.3.1] [5.3.2] [5.3.3] [5.4.2]
5.2.5. The staff member clicks the “Save Recipe” button below the form. [5.4.1] [5.4.2] [5.4.3]
5.2.6. The recipe is saved and listed in the menu.

5.3. *Subflows*

5.3.1 The staff member selects ingredients from a dropdown menu populated with existing inventory items. [5.4.1]
5.3.2 For each ingredient, the staff member enters the required quantity, which is validated by the system before allowing form submission. [5.4.3]
5.3.3 If the required ingredient does not exist in the inventory, the staff member clicks the “Add New Item” button, which redirects them to the Add Ingredient screen, where they can create the ingredient and add it to the inventory.

5.4. *Alternative Flows*

5.4.1. If a required field is missing, the form displays an error message and does not save the recipe.
5.4.2. If a recipe with the same name already exists, an error message prompts the user to choose a different name.
5.4.3. If invalid values are entered in fields (invalid name, negative value for price etc.), the form displays an error message and does not save the recipe.
5.4.4. If the page is accessed without proper permissions (Customer Account), they see an error stating “Permission denied”.

6. Use Case 6: Staff Adds New Ingredient

6.1. *Preconditions*

6.1.1. A staff member has logged into the WolfCafe Portal with a Staff Account.

6.2. *Main Flow*

6.2.1. The staff member navigates to the “Inventory” Section of the WolfCafe Portal.
6.2.2. The staff member selects the “Add New Ingredient” option from the user interface. [6.4.4]
6.2.3. An ingredient creation form is displayed.
6.2.4. The staff member fills the ingredient name and amount in inventory. [6.3.1] [6.3.2] [6.4.1]
6.2.5. The staff member clicks the “Save Ingredient” button below the form. [6.4.1] [6.4.2] [6.4.3]
6.2.6. The ingredient is saved and appears in the list of available ingredients.

6.3. *Subflows*

6.3.1 The ingredient name is validated to ensure it does not already exist. [6.4.2]
6.3.2 The staff member enters the amount in inventory, which is validated by the system before allowing form submission. [6.4.3]

6.4. *Alternative Flows*

6.4.1. If a required field is missing, the form displays an error message and does not save the ingredient.
6.4.2. If an ingredient with the same name already exists when adding a new item, an error message prompts the user to update inventory instead.
6.4.3. If invalid values are entered in fields (invalid name, invalid quantities etc.), the form displays an error message and does not save the ingredient.
6.4.4 If the page is accessed without proper permissions (Customer Account), they see an error stating "Permission denied".

7. Use Case 7: Customer Tracks Order Status

7.1. *Preconditions*

7.1.1. The customer is logged into the WolfCafe system as Guest or Account Holder.
7.1.2. The customer has successfully placed an order. (UC1)
7.1.3. The order has not yet been marked as "Completed" or "Cancelled."

7.2. *Main Flow*

7.2.1. The customer navigates to the "My Orders" or "Track Order" section in the WolfCafe app/portal.
7.2.2. The system displays the current status of the order (e.g., Placed, In Preparation, Ready for Pickup, Completed). [7.3.1]
7.2.3. The customer can view the estimated wait time or pickup window.
7.2.4. The system updates the status automatically as staff update the order in real time.
7.2.5. Once the order is marked "Ready", the customer receives a push/app notification. [7.3.2]

7.3. *Subflows*

7.3.1. If the order includes special instructions, these are displayed alongside the order details.
7.3.2. If the customer enables notifications, the system sends updates at each stage (Placed → Preparing → Ready → Completed).

7.4. *Alternative Flows*

7.4.1. If the customer cancels the order mid-way, the status is updated to "Cancelled," and refund processes follow. (UC4)
7.4.2. If the system cannot fetch live status updates due to connectivity issues, the customer sees the last known status with a warning like "Updates unavailable, please refresh later."

8. Use Case 8: Customer Reorders a Previous Order

8.1. *Preconditions*

8.1.1. The customer is logged into the WolfCafe system as Guest or Account Holder.
8.1.2. The customer has at least one past completed order in their account history. (UC3)

8.2. *Main Flow*

8.2.1. The customer navigates to the "Previous Orders" section of the WolfCafe app/portal.
8.2.2. The system displays a list of the customer's past orders with dates and details. [8.3.1]
8.2.3. The customer selects a past order they wish to reorder.
8.2.4. The system auto-fills the cart with the items, quantities, and special instructions from the selected order. [8.3.2]
8.2.5. The customer reviews the cart and can edit items, quantities, or instructions.
8.2.6. The customer proceeds to checkout and completes payment. (UC1)

8.3. *Subflows*

8.3.1. If the order included unavailable items, the system highlights those items as "Unavailable."
8.3.2. If the customer wants to customize the reorder, they can modify the cart before checkout.
8.3.3. If the customer applied a discount code in the original order, the system does not auto-apply it to the reorder (requires fresh entry).

8.4. *Alternative Flows*

8.4.1. If no past orders exist, the system shows a message like “No previous orders found.”
8.4.2. If the system cannot retrieve order history due to technical error, the customer is notified and may need to place a new order manually.

9. Use Case 9: Manage Staff and Customer Accounts

9.1. Preconditions

9.1.1. You are logged into the WolfCafe Portal with an Administrator Account.

9.2. Main Flow

9.2.1. Navigate to the ‘User Management’ tab. [9.4.1]
9.2.2. A list of users should be shown.
9.2.3. To create a new user, scroll to the bottom of the list and click the ‘+’ button. [9.3.1]
9.2.4. To edit a user, go to the user and click the edit button near their name. [9.3.2] [9.4.3]
9.2.5. To delete a user, go to the user and click the delete button near their name. [9.3.3] [9.4.3]

9.3. Subflows

9.3.1. Enter the user’s info, such as name or email, and click ‘Create’ to create the user. [9.4.2]
9.3.2. Enter the user’s information, such as name or email and click ‘Edit’ to edit the user. [9.4.3]
9.3.3. The user is deleted from the view. If the user is logged in, they are logged out. [9.4.3]

9.4. Alternative Flows

9.4.1. If you are not logged into an Administrator account, an error screen will be displayed, showing that you do not have sufficient permissions to access this feature.
9.4.2. If you attempt to create a user that already exists, an error message is displayed.
9.4.3. If you attempt to edit/delete a user that doesn’t exist, an error message is displayed.

10. Use Case 10: Set Global System Tax

10.1. Preconditions

10.1.1. You are logged into the WolfCafe Portal with an Administrator Account.

10.2. Main Flow

10.2.1. Navigate to the ‘Tax Management’ tab. [10.4.1]
10.2.2. The current tax rate that applies to all purchases should be displayed, along with a text box to edit the tax of the system. Input the new tax rate and click ‘update’. [10.3.1] [10.4.2]

10.3. Subflows

10.3.1. If the tax rate is input in a format other than a percent, it will be formatted to a percent.

10.4. Alternative Flows

10.4.1. If you are not logged into an Administrator account, an error screen will be displayed, showing that you do not have sufficient permissions to access this feature.
10.4.2. If you do not input a recognized numerical format, an error will be shown, and you can edit the same text box to correct this error.