The Indian Channel's restaurant management system design 1st deliverable

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MEMO

The Indian channel

Date: 1/30/2024
To: Restaurant owners
From: Krish, Johnson, Gabe, David
Subject: The Indian Channel

Common Practices by Indian Channel:

- *Menu Innovation:* The Indian Channel stands out through its fusion approach, offering a diverse menu that seamlessly blends traditional Indian, Asian, and Western cuisines.
- *Luxurious Ambiance:* The restaurant emphasizes a luxurious dining environment, with attention to interior design, lighting, and rooftop seating to create a premium dining experience.
- *Rooftop Dining:* The rooftop setting adds an element of exclusivity, providing customers with scenic views and an elevated atmosphere.
- *Online Presence:* The Indian Channel maintains a strong online presence, with an Instagram account.
- *Culinary Fusion Events:* Regular culinary events, featuring live cooking demonstrations and fusion tastings, contribute to the restaurant's unique identity and engage customers beyond traditional dining.

Systems/ services in Use by Indian Channel:

- *Table Service:* The restaurant provides personalized table service, with well-trained staff offering recommendations and ensuring a high level of customer satisfaction.
- *Technology Integration:* The Indian Channel integrates technology for a modern dining experience, including digital menus, online ordering for takeout, and contactless payment options.
- *Culinary Staff Expertise:* A team of skilled chefs specializing in both traditional Indian and international cuisines, contributing to the successful execution of fusion dishes.

The restaurant industry

Date: 1/30/2024
To: Restaurant owners
From: Krish, Johnson, Gabe, David
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Common Practices seen in the restaurant Industry:

- Having an Online Presence: Nearly all successful restaurants maintain an online presence, including a website and social media profiles, to showcase their menu, ambiance, and garner customer reviews.
- Online Reservations: allowing customers to book tables in advance through the restaurant's website or third-party platforms or through phone.
- Mobile Ordering: Many restaurants offer mobile ordering applications, enabling customers to place orders for pickup or delivery using smartphones they have tie up online delivering services.
- Table Management Systems: Efficient tools for managing table turnover, optimizing seating arrangements, and reducing wait times for customers.

Restaurant industry Trends:

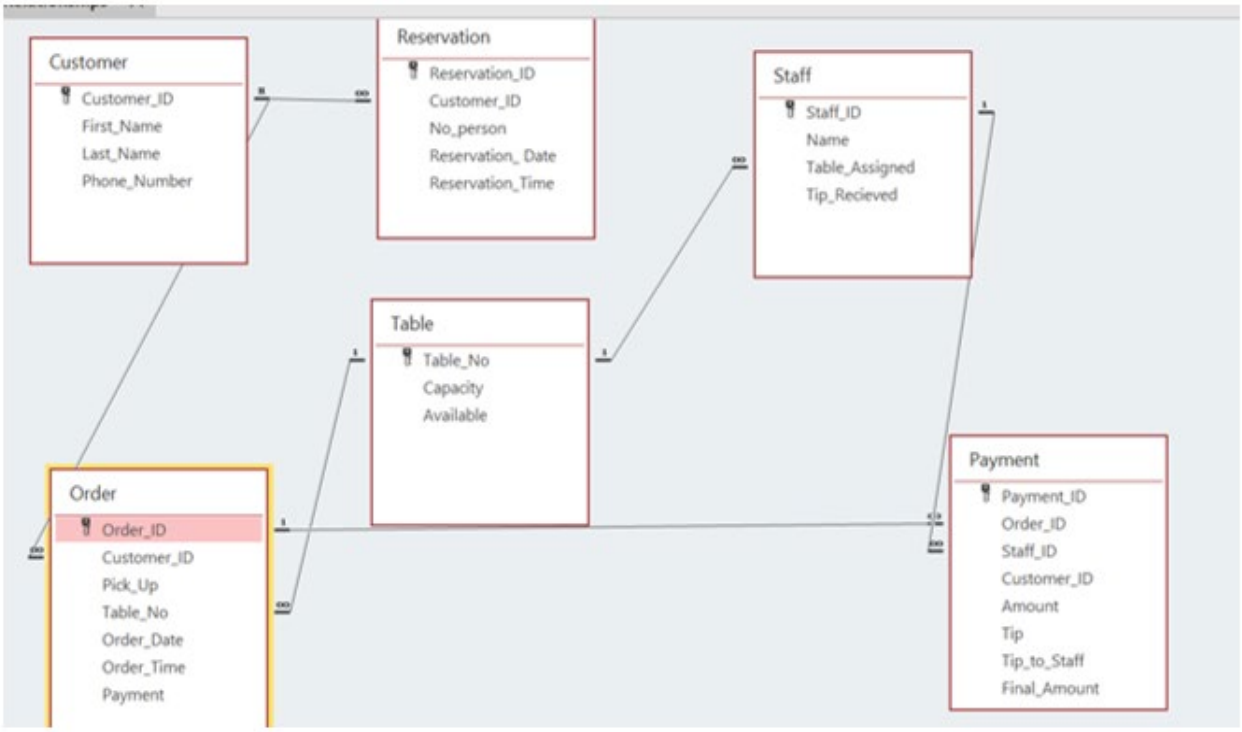
- *The growth of restaurant Industry:* There is a huge growth of industry where output is increasing. (Franchise industry: FSR output US 2022 | Statista)
- *Sustainability:* Restaurants are adopting sustainable practices, including eco-friendly packaging, locally sourced ingredients, and reduced food waste. (https://www.statista.com/statistics/1236233/cuisine-trends-in-india/)
- *Data-Driven Insights:* There is an increase in use of data analytics to gain insights into customer preferences, popular menu items, and peak hours for better decision-making.

Systems in Use by the restaurants:

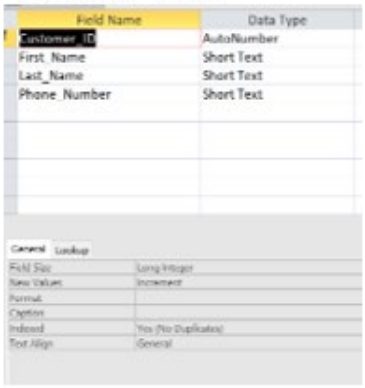
- *POS Systems:* Point-of-sale systems like Square, Toast, and Lightspeed are widely adopted for transaction processing, order management, and inventory tracking.
- *Reservation Systems:* OpenTable, Resy, and Bookatable are popular choices for managing reservations.
- *Online Ordering Platforms:* ChowNow, Grubhub, and DoorDash are commonly used for online food ordering and delivery services.
- *Table Management Tools:* Squirrel, ReServe, and Hostme assist in efficient table management

DATA FIELDS

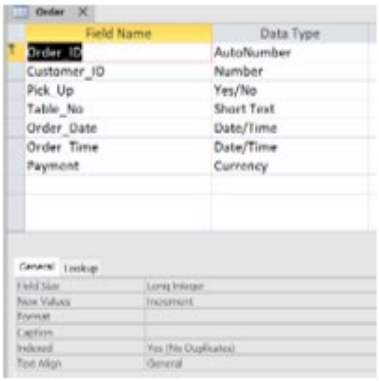
Relationship View:



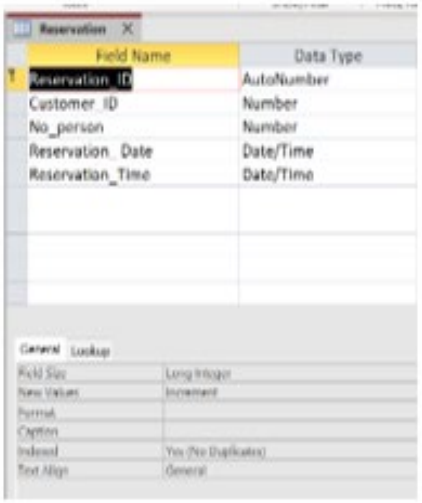
Customer Table:



Order Table:



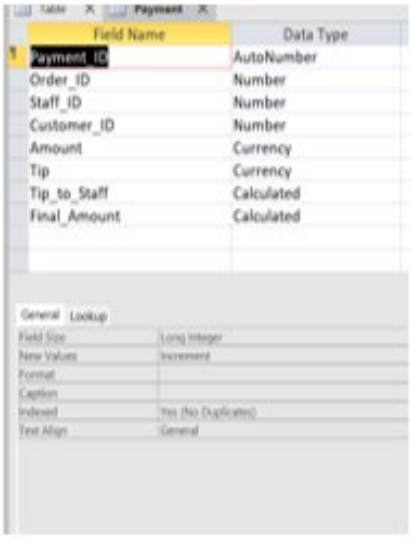
Reservation Table:



Tables Table:

Staff Table:

Payment Table:



INTERVIEW QUESTIONS

Owner:

1. Can you provide an overview of the restaurant's current systems and processes?
2. What are the primary challenges you experience with the existing system?
3. What specific goals or outcomes are you hoping to achieve with the new system?
4. How do you envision the new system improving overall operations and efficiency?
5. Are there any particular features or functionalities you believe are essential for the success of the restaurant?
6. How do you anticipate the new system impacting customer experience and satisfaction?
7. What are your expectations in terms of implementation timeline and budget for the new system?
8. How do you plan to measure the success or effectiveness of the new system once it's implemented?
9. Are there any specific integrations or compatibility requirements the new system must meet?
10. Can you share any insights or feedback from staff regarding the current system and potential improvements?

Manager:

1. From your perspective, what are the most critical functionalities required in a new system for the restaurant?
2. How do you currently manage inventory, reservation, order systems and how could a new system streamline these processes?
3. What reporting and analytics capabilities do you find most valuable for decision-making and performance tracking, for example the table turnover rate, number of people in day, types of order etc.?
4. How important is mobility and remote access in the context of managing restaurant operations?
5. What are the key considerations for you regarding user interface and ease of use for the staff?
6. How do you handle scheduling staff, orders and what improvements do you foresee with the new system?
7. Can you provide examples of any specific pain points or inefficiencies you encounter with the current system?
8. How do you envision the new system impacting staff productivity and workload distribution?
9. Are there any regulatory or compliance requirements that the new system must address?
10. What level of training and support do you anticipate will be necessary for staff to effectively use the new system?

Accountant:

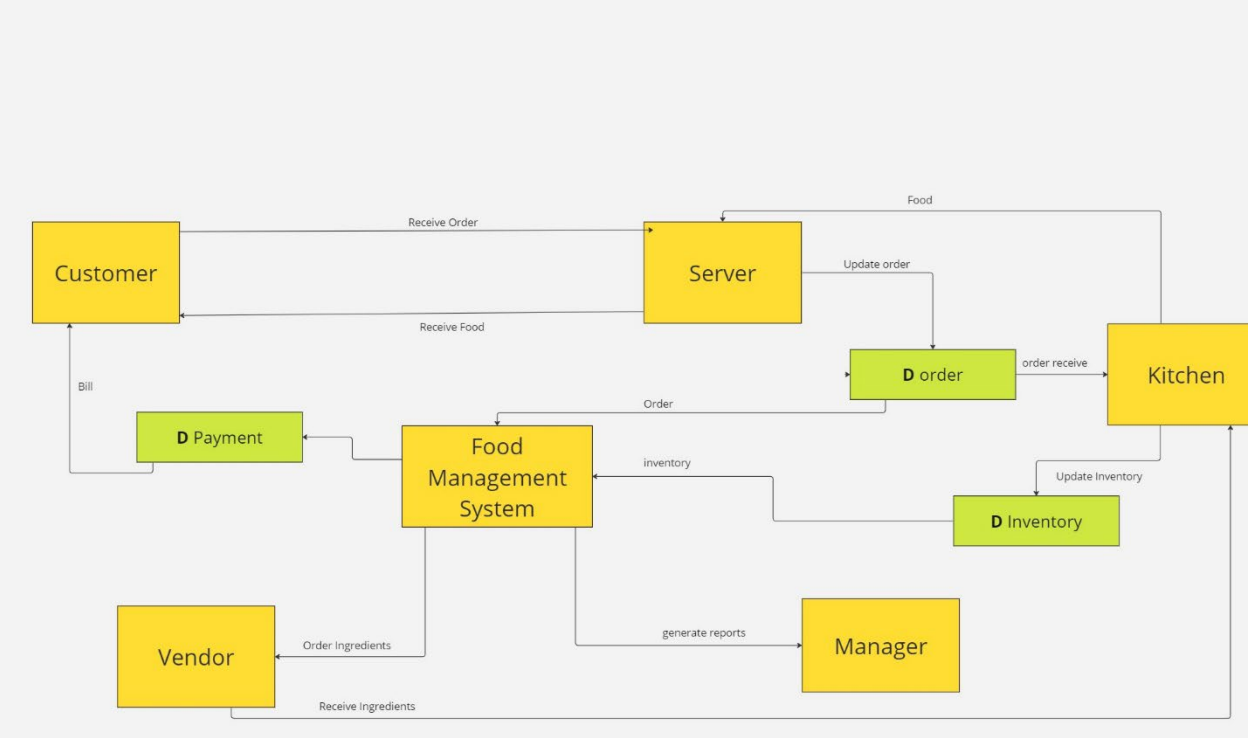
1. What are the primary financial challenges or objectives you're aiming to address with a new system?
2. How do you currently manage accounting, payroll, and financial reporting processes for the restaurant?
3. What features or functionalities do you consider essential for financial management in a restaurant setting?
4. How do you handle budgeting and forecasting, and how could a new system enhance these activities?
5. What integration capabilities do you require between the financial system and other operational systems?
6. What level of detail and granularity do you need in financial reports and analysis?
7. How do you currently manage vendor payments and invoicing, and what improvements do you see with a new system?
8. How do you handle taxes and compliance requirements, and what role should the new system play in this regard?
9. Are there any specific security or data protection considerations you have regarding financial information?
10. What insights or recommendations do you have based on your experience with financial systems in other restaurant businesses?

Staff (Server):

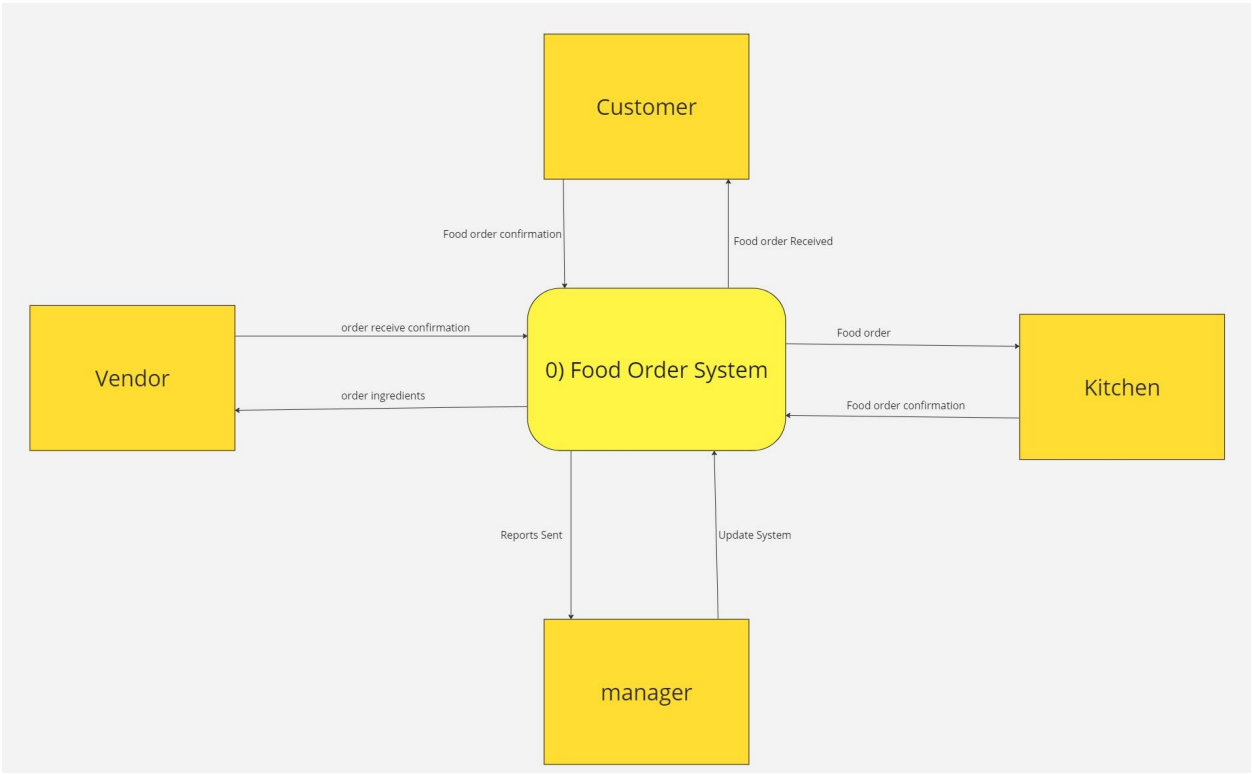
1. Can you describe your typical workflow for taking orders and processing payments at the restaurant?
2. What aspects of the current ordering and payment system do you find most efficient and user-friendly?
3. Conversely, are there any challenges or frustrations you encounter with the current system's interface or usability?
4. How important is speed and simplicity in the order-taking process during peak hours, and how could a new system improve in this area?
5. What features or functionalities would you like to see implemented in a new system to enhance your efficiency in taking orders and processing payments?
6. Can you provide examples of any specific tasks or actions that take longer than necessary with the current system, and how you believe they could be streamlined?
7. How comfortable do you feel with the current user interface for the ordering and payment system, and what improvements do you think could be made to enhance user experience?
8. Are there any particular devices or technologies (such as tablets, mobile apps, etc.) that you believe would improve your ability to take orders and process payments effectively?
9. How do you handle special requests or modifications to orders, and how could a new system better accommodate these requirements?
10. In your opinion, what training or support would be most beneficial for staff members to adapt to and utilize a new ordering and payment system efficiently?

DATA FLOW DIAGRAMS:

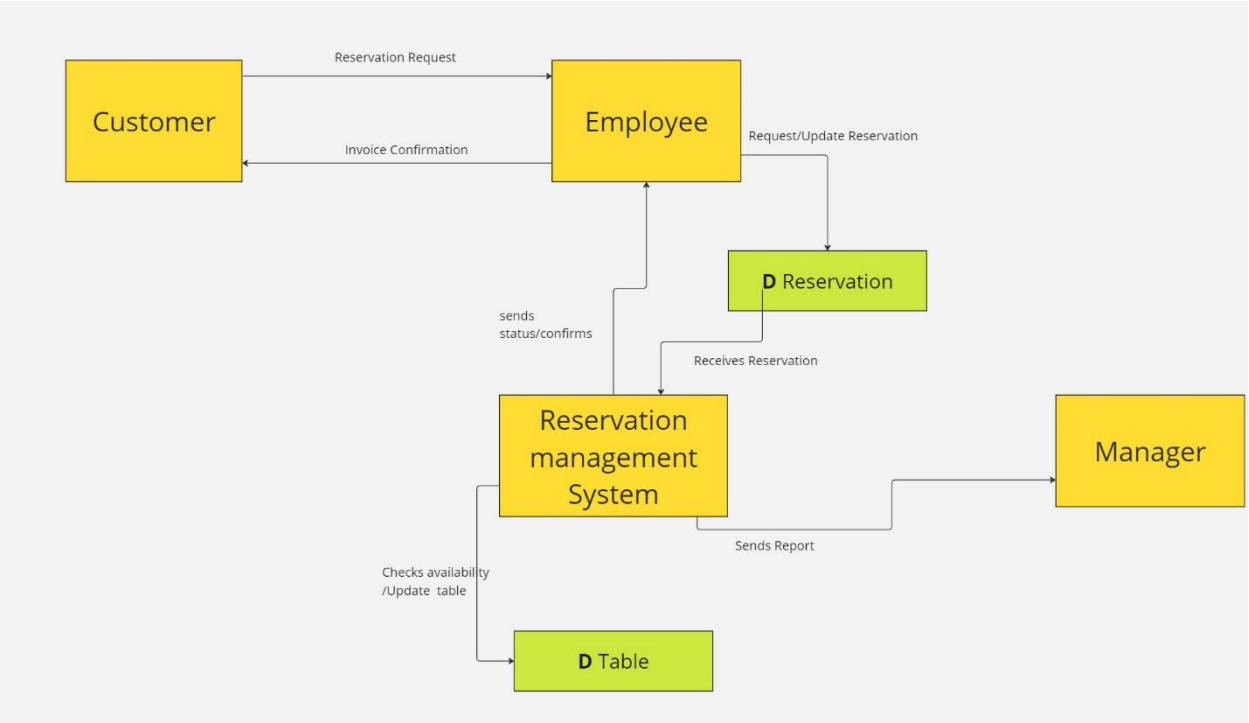
Food Management Data Flow Diagram:



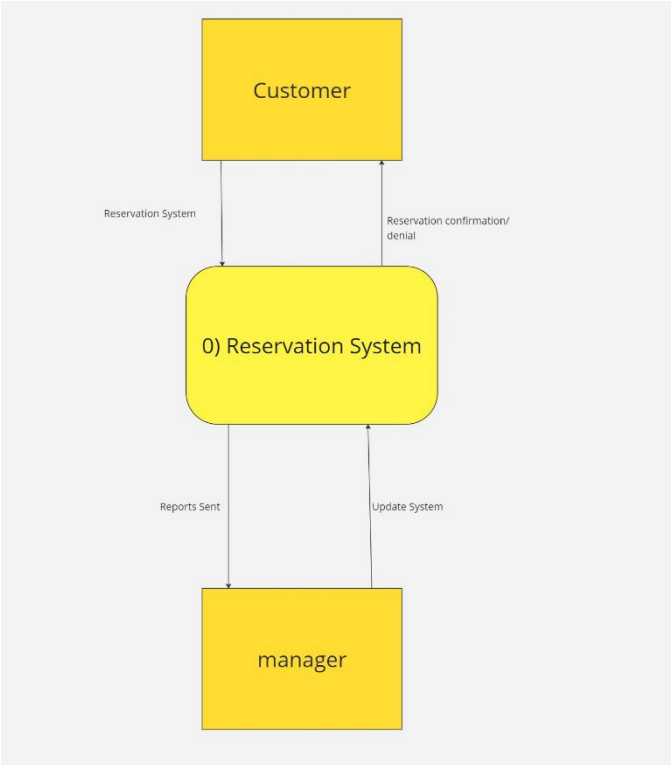
Food Management System Context Diagram:



Reservation Management System Data Flow Diagram:



Reservation Management System Context Diagram:



SYSTEM REQUIREMENTS

To: The Indian Channel
From: Krish Patel, Johnson, Gabe, David
Date: 2/20/2023
Subject: System Requirements for Reservation and Order Management

Dear ma'am.

Following our discussion, we have conducted research on systems tailored to reservation and order management in the restaurant industry. We have outlined below the essential features, as well as optional features, for the new system. Considering the potential expansion of restaurant by the end of 2023, scalability is a key consideration in our recommendations.

Must Haves:

- Reservation Management: The system must allow for efficient reservation management, including the ability to book, modify, and cancel reservations, as well as track availability and table assignments.
- Order Management: It should have robust order management capabilities, including the ability to input, modify, and track orders seamlessly.
- Integration: Ensure the system integrates with existing systems such as point-of-sale (POS) systems and kitchen display systems for streamlined operations.
- Scalability: The system must be scalable to accommodate an increase in reservation volume and order throughput as the business grows.

Nice to Have features (Optional features):

- Table Management: Advanced table management features to optimize seating arrangements and manage waitlists efficiently.
- Customer Relationship Management (CRM): CRM functionality to capture customer preferences, dining history, and contact information for personalized service.
- Mobile App Integration: Integration with a mobile app for customers to make reservations, view menus, and track order status.
- Analytics and Reporting: Advanced reporting capabilities for insights into reservation trends, order performance, and customer behavior.

Building a custom reservation and order management system with the specified functionality requires careful planning, development, and integration efforts. Here's an approximate breakdown of the costs involved:

- Development Time and Resources:
  - Frontend Development: Designing and developing the user interface for reservation and order management.
  - Backend Development: Creating the backend infrastructure to handle reservation booking, modification, cancellation, order input, modification, tracking, and scalability.
  - Database Development: Setting up a database system to store reservation, order, and customer data securely.
  - Designing for Scalability: Implementing scalable architecture and infrastructure to handle increased reservation volume and order throughput.

  This will all cost around: Rs 3,00,000 ($ 3,618.91) with hiring software developers.
- Maintenance and Support: Providing ongoing maintenance, updates, and technical support to ensure the system remains functional, secure, and up to date. ***This will all cost around: Rs 50,000 ($ 603.15) monthly for maintenance.***
- Training Staff for new system: staff needs to be trained for the new system; manuals need to be created. ***Which will cost around Rs 5,000 – 10,000 ($ 200-300).***

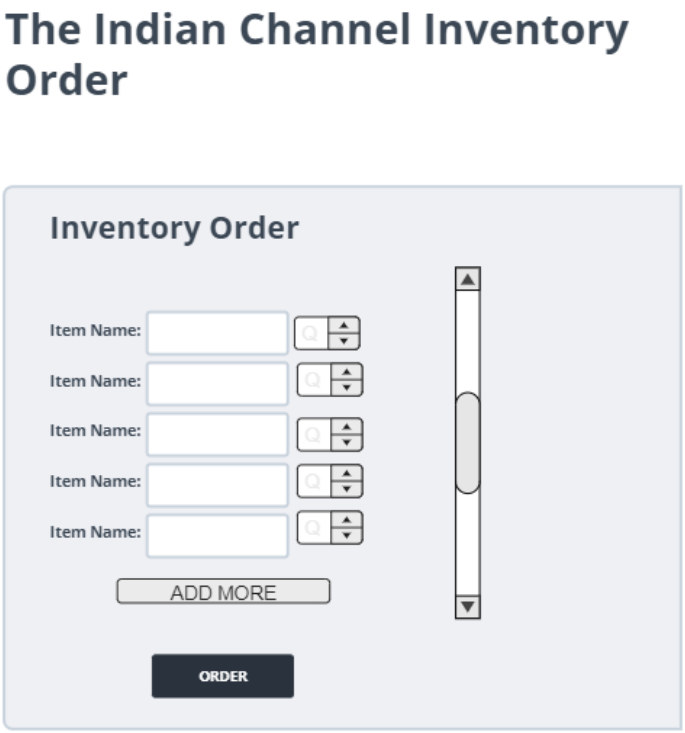
MOCKUPS

Customer reservation Form (Data entry):

Description: This form is for customers to reserve tables online without calling the restaurant (one of the ways to reserve tables in our system).

- The customer needs to select the available Date, Time and Number of people going to dine.
- The customer is also required to provide their first name, last name, email address, phone number.
- Also, there is an optional field where customers can write any preferences or notes they want the restaurant to see before booking. For example, the preferred table I want on the first floor, I want corner table etc.
- After that the user/customer can click submit, If the required field is not filled the data won't be processed.
- These data entered in the field will then go to the reservation system and booking will be done.

Order Inventory (Data entry):



Description: Kitchen head/chef use this to order needed ingredients.

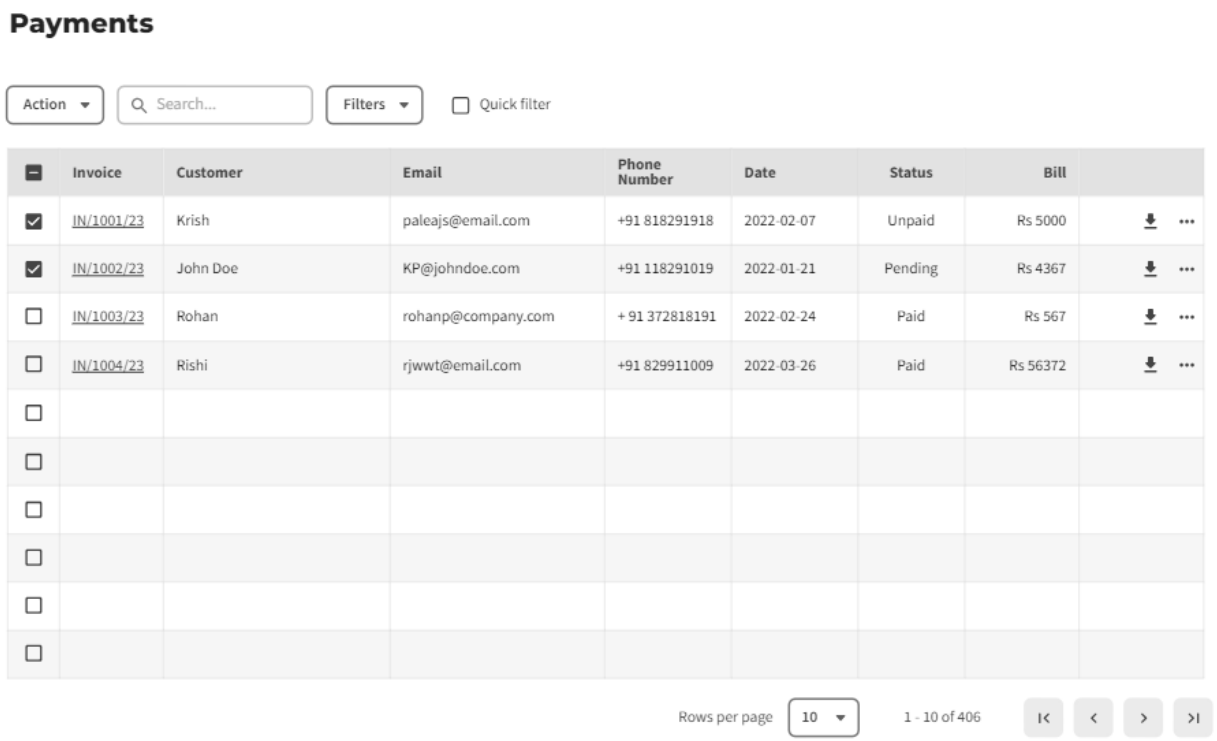
- Before this page user needs to click order inventory on front page of the system
- When this page opens the user needs to enter the Item name and quantity needed.
- Users can also click on add more which will add one more data field to add more items needed to order.
- After that the user can click order to order items which will be delivered in span on hours.

This sends data to inventory database updates the data which is then sent to food management system which will finally send order to the vendor.

Notes:

- **The price is not mentioned** here as the data first will be processed and the cost will be later added to payment database because most restaurant specifically this (asked owner) pay for the bulk cost at the end of the month as restaurants mostly needs to order food daily and sometimes urgently.
- **There is no mention of vendor** because this restaurant has tie-up with only one vendor that is why the order is first sent to the food management system and then directly to the vendor.
- **There is no specification of dates** because when ordered, the order is immediately processed and delivered during working hours as assumed the restaurant needs it on a daily basis. Only when ordering for an event or party, they need to specify date, but this order can only take place on phone because of specifications.

Payment (Output Screen):



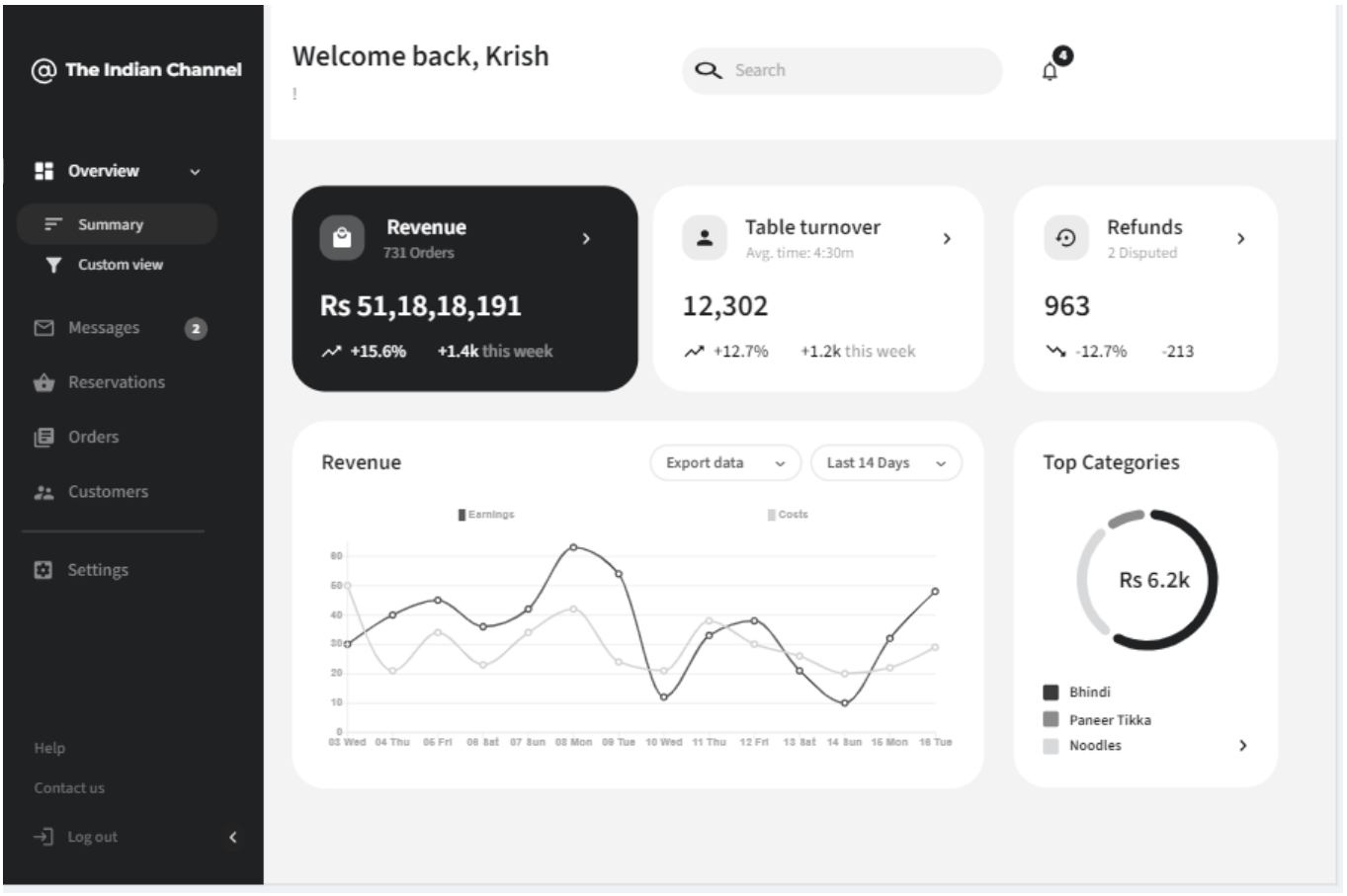
Description: Shows the payment screen linked with order database. This is generated by the food management system where servers can see the payment and their tip (not shown in screen).

Overall, this output screen shows the payments made by customers.

Data fields explanation:

- Invoice: Unique identifier for the transaction.
- Customer: Name of the customer who made the payment.
- Email: Contact email of the customer.
- Phone number: Contact phone number of the customer.
- Date: Date and time when the payment was made.
- Status: Indicates the current status of the payment.
- "Unpaid": Payment has not yet been made or processed.
- "Pending": Customer is still dining.
- "Paid": Customer has dined and left; payment has been processed.
- Bill: Total amount due for the order.

Report (Output screen):



Description: This is a generated report as mentioned in the data flow diagram which is sent to the manager. This one contains revenue, table turnover rate (meaning how many people occupied table on certain time and number of customers a day), refunds, top food item ordered etc. The side panels also include the reservation made and customer information. All the data is linked to all databases with the help of the food management system. This information could be used to make informed decisions for restaurant by manager.