Phase 1 – Problem Statement

Group 14
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General Problem Description:

Domain- Food

Coffee is one of the most popular drinks worldwide with around more than 2 billion cups consumed every day. Since there are not much of flavored coffee available in the market, we are opening our shop "Impulse Coffee" which would be in the heart of Bengaluru city, India. We specialize in creating premium coffee that comes in five assorted flavors. Our coffee beans are harvested from one of the best coffee farms in Munnar, Kerala, and then processed and flavored in our own mill. There is also a facility to have coffee at our cafe where customers can try out assorted flavors. As our business expands, we need an efficient way to manage the coffee import, processing, managing the flavor and ensuring timely inventory replacement.

The system would capture the data of the coffee beans being shipped from the farm, track the delivery system, production of the coffee in our own mill which is a part of the shop, packaging, sales, and customer review. The primary goal is to provide actionable insights for business growth, optimize operational efficiency, and enhance customer satisfaction through informed decision-making.

Data to be captured for your business:

Participants:
1. Coffee Supplier
2. Delivery Agent
3. The coffee shop
4. Employees of Coffee shop
5. The customers
6. The coffee

1. Coffee Supplier:
→ They would supply raw coffee beans and flavors.
→ They supply to only 1 delivery agency which is DHL
→ They should have: ID, Name, multiple phone numbers, multiple addresses which will contain street, city, state and zip code, multiple email addresses, multiple types of products (Beans/Flavors) being supplied.
→ Capture the quantity, date of supply, status, Tracking number.
→ Coffee and flavors will be supplied from supplier.

2. Delivery Agent
→ There is only one delivery agent, DHL.
→ They will pick up from the source and drop it at coffee shop. In case they meet with any accident, lose the shipment while delivering it to the shop, the company must refund the amount.
→ They should have: ID, Name, multiple phone numbers, single address which will contain city, state and zip code, multiple email addresses.
→ Capture the tracking number, status, delivery cost, date picked up, date delivered, expected date of delivery.

3. Coffee Shop
→ There is one physical shop and there is no online ordering or services.

→ Only pick-up is available, there is no tasting.
→ The delivery agent will deliver the coffee beans and flavors from the supplier.
→ In the shop the grinding and adding of flavors takes place, then it is packed in containers.
→ The coffee to be sold will have weights of 100gm,250gm, 500gm and 1kg and their respective costs.
→ There are 4 different types of coffee and 5 flavors to choose from. (i.e. there will be 20 types of coffee available in our shop)
→ They should have: ID, Name, multiple phone numbers, single address which will contain street, city, state and multiple email addresses, employees.

4. Employees of Coffee shop
→ There are 6 employees in our coffee shop, 1 manager, 2 helpers, 1 for grinding, 1 for flavoring and 1 for packing.
→ For the shop to function in a day, 4 employees must be present. All leaves must be planned accordingly.
→ All employees will report to the manager.
→ Employees are provided with uniforms, gloves, masks, and caps to maintain hygiene.
→ Employees are required to report 1 hour early and set up the shop before opening and make sure everything is well organized and cleaned before closing.
→ They should have EmpID, Name, phone number, single address which will contain street, city, state and zip code, mail id, Designation, salary, DOB, Age, gender, Date of joining, PAN card.
→ Capture the working hours (in and out times) to document number of leaves.

5. Customers
→ Customers can order multiple flavors and items at the coffee shop.
→ They become a customer only after their first purchase and can buy multiple times.
→ Customers can provide feedback on the iPad placed at the billing counter each time they purchase.
→ Transaction dates, Modes of payment (Cash or UPI or Card), transaction id should be captured.
→ They should have: CustID, Name, Phone number, Address which will contain city, state and zip code, Mail id, DOB, age, Gender, Preferred flavor

6. Coffee
→ Coffee, various coffee types supplied to the coffee shop.
→ Different types/quality of coffee beans for customers to choose from Arabica, Robusta, Excelsa and Liberica.
→ Quantity supplied to the coffee shop.
→ Cost per unit may vary accordingly for various coffee types.
→ They should have id, name, cost.

7. Flavors:
→ The supplier will supply different flavors that will be added to the coffee in the coffee shop.
→ Customers can choose from flavors like vanilla, chocolate raspberry, mocha, chocolate, and hazelnut.
→ The flavors will have an id, name, cost.

Business Goals:

1. To understand the coffee preferences of customers who prefer any flavor, aiding in personalized marketing strategies, inventory management, and product recommendations.
2. Analysis of the top-selling coffee types and their distribution across different customer cities can help the business identify new geographic markets with high demand for its popular coffee products. This information can guide the company's expansion strategy, allowing it to open new retail locations or distribution channels in these high-potential areas.
3. To identify the top-selling coffee based on transaction count, aiding in marketing strategies, and understanding customer preferences.
4. To identify the most popular mode of payment among customers and understand individual customer preferences, facilitating efficient payment processing to enhance for promotions by targeting specific payment methods.
5. To identify customers who exclusively purchase dark roasted coffee, due to its premium pricing, this analysis also allows for cost-cutting measures in the coffee shop if fewer customers are inclined towards this product.
6. Analyze customer purchasing behavior for each coffee type within specific periods to identify seasonal trends, quarterly performance, and the popularity of different coffee types over time. These insights empower businesses to make data-driven decisions, fostering overall business development and growth.
7. To obtain a comprehensive overview of total sales revenue for each coffee type, facilitating a thorough analysis of sales performance to inform decisions regarding pricing strategies.
8. To analyze the distribution of customers across different age groups and determine which age groups are the most frequent consumers of coffee. This information can be valuable for targeted marketing campaigns, product development, and understanding consumer behavior.
9. To identify preferred flavors among customers that do not correspond to any available coffee options. This information can guide product development decisions and help in expanding the coffee menu to better cater to customer preferences.