**Ideation Phase**

**Defining the Problem Statements**

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| **Date** | **27-09-2023** |
| **Team ID** | **689** |
| **Project Name** | **Market basket analysis for fresh product location improvement** |

**Market basket analysis for fresh product location improvement**

**Problem Definition and Design Thinking**

**Introduction**

Market basket analysis is a data-driven approach that analyzes customer purchase patterns to strategically place fresh products in retail stores, ultimately boosting sales and enhancing the shopping experience.

**Problem Statement**

**Objective**:The objective is to strategically place fresh products in a retail store by analyzing customer purchase data, optimizing layout, and enhancing sales and customer satisfaction.

**Data**:Data consists of customer purchase records, detailing items bought together, enabling analysis to optimize fresh product placement in a retail store for improved sales and customer experience.

**Key Challenges:**

1. **Data Quality**: Ensuring accurate and complete transaction data is crucial for meaningful insights.

2. **Seasonal Variations:**Fresh products often have seasonal demand, making year-round optimization challenging.

3. **Inventory Constraints**: Limited shelf space may restrict optimal placement options.

4. **Customer Preferences**: Individual shopping habits and preferences can vary widely, making it complex to generalize placement decisions.

5. **Dynamic Shopping** Patterns: Customer behavior evolves over time, necessitating continuous analysis and adjustment of product placement.

**Design Thinking Approach**

**1. Empathize:**

- Understand customer shopping behaviors, preferences, and pain points through surveys, interviews, and observations.

2. **Define**:

- Clearly define the problem and goals. For instance, improving sales and customer experience through better fresh product placement.

3. **Ideate**:

- Brainstorm ideas and potential solutions. Consider innovative ways to optimize fresh product placement based on customer insights.

4. **Prototype**:

- Create mock layouts or store designs based on the ideated solutions. Experiment with different placements virtually or physically.

5. **Test**:

- Implement the prototype in a controlled store environment or simulate changes in a virtual setting.

- Collect data on customer responses, sales, and satisfaction.

6. **Iterate**:

- Analyze the test results and gather feedback from customers and store staff.

- Refine the placement strategy based on the findings.

7. **Implement**:

- Roll out the optimized fresh product placement strategy across the store or chain.

8. **Evaluate**:

- Continuously monitor sales, customer satisfaction, and other relevant metrics.

- Make further adjustments as needed to maintain and enhance the solution**.**

**Conclusion**

Market basket analysis is a powerful tool that, when combined with a thoughtful design thinking approach, can significantly enhance the placement of fresh products in retail stores. By understanding customer behaviors and iterating on placement strategies, businesses can boost sales and improve the overall shopping experience.