Project 2

PROJECT GOAL

Shopping for groceries is a ubiquitous part of student lifestyle, with many students shopping multiple times a week for food and other convenience items. One of such places that SDU students shop at is SDU Canteen (located near Red Coffee). The current shopping experience of the canteen is not ideal, where there are often long lines of students waiting to buy their items. What new experiences could the physical store support that engage and delight the customer? Your goal is to understand the needs of the regular customer and use that knowledge to inform the design of an improved and refined experience for the canteen's customers.

Proper background and user research

BACKGROUND

The project we are working on is aimed at a campus market, located directly within the university. This market will offer students and faculty a range of products, including stationery, food and beverages, as well as personal items.

We aim to create a physical space where students can quickly and conveniently purchase everything they need between classes, without spending time searching for products in different stores. The market will focus on increasing shopping convenience for the university community, offering affordable products and creating a comfortable shopping experience, including a fast purchasing process and minimizing waiting times.

The goal of the project is to improve the operations of the market and increase user satisfaction by providing everything necessary in one place, right on the university campus.
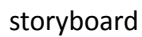
Interviews(another files)

Observation

During periods of high student traffic (usually during breaks or lunch), queues often occur in the market. There are several reasons for this:
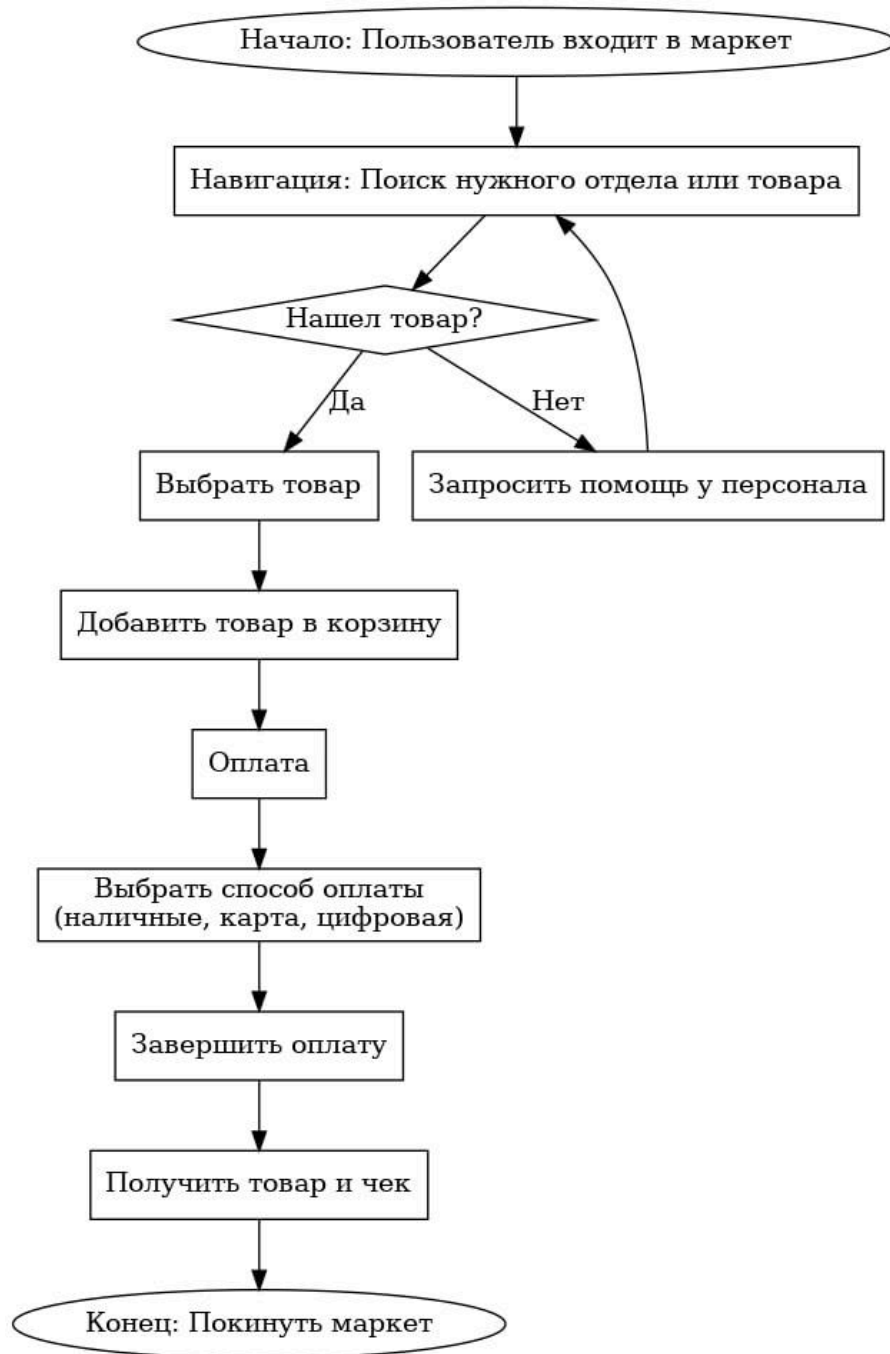- Some people experience payment issues due to internet problems.
- Often, only one checkout is open during high traffic times.
- Students almost always go to the checkout with a cashier rather than to the self-service checkout, which is not always functioning.
- Due to the small distance between the opposite product shelves and the narrow door, the market allows fewer people to pass through than it could.

Product assortment: Sometimes there is a shortage of common items, for example, there might be no regular bottled water or no 0.5L or 2L bottles available. Some stationery items are simply unavailable. This is partially solved by the nearby store, but it is often closed at the most inconvenient times, especially on weekends.

- **Inaccurate store hours** (the exact opening hours are not displayed on the outside sign).
- **Lack of cashiers on-site**.
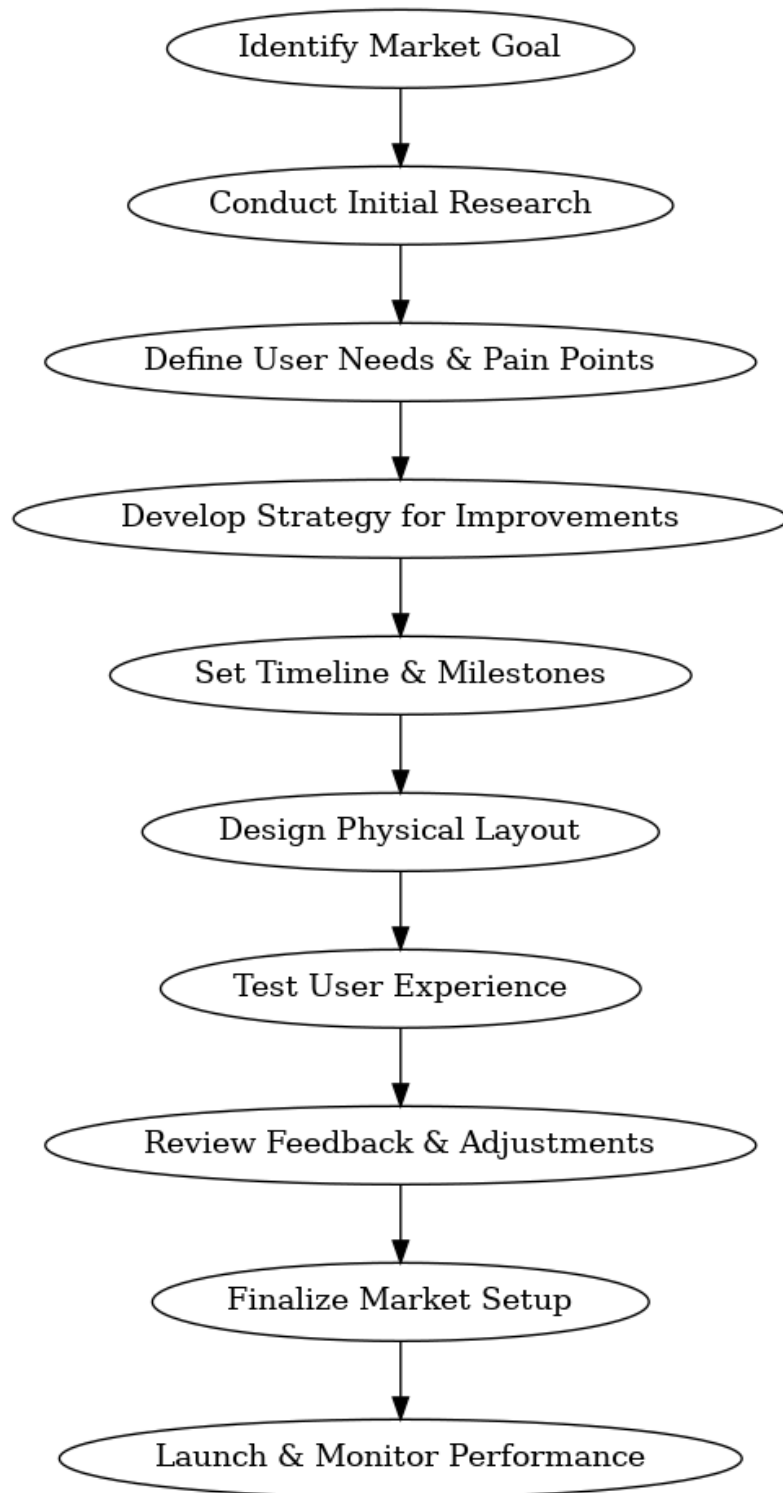- **Poor Wi-Fi connectivity** (SDU Wi-Fi signal is weak).
- **Long queues**.

- **Inaccurate self-checkout system**.
- **Limited product variety**.
- **Limited space**.

sketches

storyboard

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           ┌─────────────────────────────────────────────┐
           │  Начало: Пользователь входит в маркет        │
           └─────────────────────────────────────────────┘
                              │
                              ▼
           ┌─────────────────────────────────────────────┐
           │  Навигация: Поиск нужного отдела или товара  │
           └─────────────────────────────────────────────┘
                         │              ▲
                         ▼              │
                   ◇ Нашел товар? ◇
                    │            │
                  Да│            │Нет
                    ▼            ▼
           ┌──────────────┐  ┌──────────────────────────┐
           │ Выбрать товар│  │ Запросить помощь у персонала │
           └──────────────┘  └──────────────────────────┘
                    │
                    ▼
           ┌──────────────────────────┐
           │ Добавить товар в корзину  │
           └──────────────────────────┘
                    │
                    ▼
           ┌──────────┐
           │  Оплата  │
           └──────────┘
                    │
                    ▼
           ┌──────────────────────────────────┐
           │ Выбрать способ оплаты            │
           │ (наличные, карта, цифровая)      │
           └──────────────────────────────────┘
                    │
                    ▼
           ┌──────────────────┐
           │ Завершить оплату │
           └──────────────────┘
                    │
                    ▼
           ┌──────────────────────┐
           │ Получить товар и чек │
           └──────────────────────┘
                    │
                    ▼
           ┌──────────────────────────┐
           │ Конец: Покинуть маркет    │
           └──────────────────────────┘
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Proper analysis of data: task flow diagrams, user journey maps

task flow

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                    ┌─────────────────────┐
                    │  Identify Market Goal │
                    └─────────────────────┘
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                   ┌──────────────────────────┐
                   │  Conduct Initial Research │
                   └──────────────────────────┘
                               │
                               ▼
                ┌────────────────────────────────┐
                │  Define User Needs & Pain Points │
                └────────────────────────────────┘
                               │
                               ▼
              ┌─────────────────────────────────────┐
              │  Develop Strategy for Improvements   │
              └─────────────────────────────────────┘
                               │
                               ▼
                  ┌─────────────────────────────┐
                  │  Set Timeline & Milestones   │
                  └─────────────────────────────┘
                               │
                               ▼
                   ┌─────────────────────────┐
                   │  Design Physical Layout  │
                   └─────────────────────────┘
                               │
                               ▼
                   ┌─────────────────────────┐
                   │  Test User Experience    │
                   └─────────────────────────┘
                               │
                               ▼
               ┌──────────────────────────────────┐
               │  Review Feedback & Adjustments   │
               └──────────────────────────────────┘
                               │
                               ▼
                   ┌─────────────────────────┐
                   │  Finalize Market Setup   │
                   └─────────────────────────┘
                               │
                               ▼
              ┌─────────────────────────────────────┐
              │  Launch & Monitor Performance        │
              └─────────────────────────────────────┘
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Stages:

1. **Defining Project Goals**

   o   Analyzing the current situation.

- o   Identifying key problems and challenges.

2. **Conducting Research**

   - o   Data collection (surveys, interviews, observations).
   - o   Identifying needs and expectations of students and staff.

3. **Formulating Ideas**

   - o   Analyzing research findings.
   - o   Generating ideas for improving the user experience in the canteen.

4. **Creating a Prototype**

   - o   Designing a layout for the physical space of the canteen.
   - o   Adding proposed features (e.g., digital screens or comfortable zones).

5. **Testing the Prototype**

   - o   Engaging students to test the convenience of the new canteen format.
   - o   Collecting feedback for further improvements.

6. **Implementing the Project**

   - o   Implementing changes based on testing.
   - o   Installing new equipment, redesigning areas, and ensuring integration with other systems.

7. **Evaluation and Optimization**

   - o   Continuous monitoring of the canteen's operations.
   - o   Analyzing user satisfaction.
   - o   Making further improvements based on feedback.

User journey map

Stage	User Action	Pain Points	Touchpoints/Interactions	Solution/Improvement	Emotions	Opportunity for Improvement
1. Arrival at Store	Student approaches the store and looks at the store hours displayed outside.	**Inaccurate store hours:** The exact opening hours are not displayed clearly.	**Physical Signage:** A sign outside the store showing store hours.	**Improvement:** Install a digital display showing the accurate hours of operation.	Confused, Frustrated	Clear, visible hours reduce confusion and frustration.
2. Entering the Store	Student enters the store and looks for a way to pay or order food.	**Lack of cashiers:** No cashiers available at certain times.	**Self-checkout System:** Digital screens for self-service.	**Improvement:** Add self-checkout kiosks and streamline the ordering process.	Slight confusion, curious	More self-checkout options can improve speed and convenience.
3. Finding Wi-Fi	Student tries to connect to SDU Wi-Fi to order or browse.	**Poor Wi-Fi connectivity:** SDU Wi-Fi signal is weak or unreliable.	**Wi-Fi Network:** Public Wi-Fi in the store.	**Improvement:** Improve Wi-Fi infrastructure and signal strength in the store.	Annoyed, frustrated	Ensuring stronger Wi-Fi connection will reduce frustration.

4. Waiting in Line	Student waits in line to order or checkout.	**Long queues:** Crowded, inefficient checkout process.	**Physical Space:** Overcrowded areas where students wait.	**Improvement:** Redesign layout to minimize congestion and add more self-checkout options.	Impatient, stressed	Reducing wait times can enhance overall satisfaction.
5. Using Self-Checkout	Student uses self-checkout system to complete purchase.	**Inaccurate self-checkout system:** System errors or confusion during checkout.	**Self-Checkout Kiosks:** A self-service terminal for students.	**Improvement:** Test and refine the self-checkout system for accuracy and user-friendliness.	Frustrated, confused	Fixing checkout errors improves satisfaction and reduces frustration.
6. Paying for Items	Student completes the payment process, using either self-checkout or cashier.	**Unclear payment options:** Students may not know how to complete payment on self-checkout.	**Payment System:** Digital payment options at self-checkout or cashier.	**Improvement:** Provide clear instructions for self-checkout payments and visible prompts.	Unsure, stressed	Clear instructions and visible payment options help smooth the process.

6. Paying for Items	Student completes the payment process, using either self-checkout or cashier.	**Unclear payment options:** Students may not know how to complete payment on self-checkout.	**Payment System:** Digital payment options at self-checkout or cashier.	**Improvement:** Provide clear instructions for self-checkout payments and visible prompts.	Unsure, stressed	Clear instructions and visible payment options help smooth the process.
7. Leaving the Store	Student leaves the store after purchasing.	**Limited product variety:** The product range is not large enough to cater to various preferences.	**Physical Space:** Limited space and product selection in the store.	**Improvement:** Expand product offerings to cater to more tastes and dietary preferences.	Neutral, satisfied if needs met	Variety of products would meet more needs and enhance satisfaction.

Key Insights:

1. **Clear Information**: Installing digital displays or signage with the store's hours helps students quickly and accurately know when the store is open, reducing confusion.
2. **Payment Process Efficiency**: Implementing and optimizing the self-checkout system speeds up the process and reduces queues.
3. **Reliable Wi-Fi**: Improving the Wi-Fi network ensures that students can connect seamlessly and use digital resources without issues.
4. **Space and Layout**: Redesigning the store's layout and adding new features will help create a more convenient and comfortable atmosphere.

Evaluation Method Choice (Correct Choice)

Usability Testing: We will test how well the new features work for users.

How This Solves the Problems:

- **Inaccurate store hours**: Usability testing of digital displays or signage with accurate operating hours to ensure they are visible and understandable.
- **Lack of cashiers or self-checkout stations**: Testing the self-checkout system to ensure it is user-friendly and addresses the issue of staff shortages at cash registers.
- **Poor Wi-Fi connectivity**: Testing the improved Wi-Fi connection to ensure users can connect without issues and perform tasks like ordering or paying.
- **Long queues**: Measuring how effectively the new layout and self-checkout systems help reduce queues and improve service speed.

Correct Execution (Proper Execution)

Usability Testing:

- **Digital Displays or Signage with Store Hours**: During surveys, it was found that displaying accurate store hours reduced confusion and waiting time for students trying to figure out when the store was open.
- **Self-Checkout System**: The self-checkout system proved to be a much-needed and convenient addition, reducing the need to wait for cashiers or check product prices manually.
- **Wi-Fi**: The introduction of dedicated Wi-Fi for the store reduced queues, as students could quickly pay for their purchases and easily connect to SDU Wi-Fi (Market).
- **New Queues and Layout**: Tests conducted with students during peak hours showed noticeable improvements, including reduced queue times with two registers and two self-checkout stations. The new layout made it easier to locate items, and the extra space prevented overcrowding.

Evidence of Change(s) That Happened Because of the Evaluation Method(s)

1. **Clear Store Hours:**

   o **Change Implemented:** Digital displays with accurate store hours were installed at the entrance and throughout the store.
   o **Evaluation Method:** Usability testing revealed that students found the new displays helpful in easily identifying the store's hours.
   o **Evidence of Change:** Post-test feedback showed that confusion about store hours significantly decreased, as students no longer had to guess the opening times, leading to better planning and fewer unnecessary visits.

2. **Self-Checkout System:**

   o **Change Implemented:** A self-checkout system was introduced to reduce queues and improve the checkout process.
   o **Evaluation Method:** Usability testing focused on ease of use and efficiency, with students directly interacting with the self-checkout stations.
   o **Evidence of Change:** Feedback indicated that the self-checkout system was well-received, with students preferring it over waiting in line for a cashier. The system helped to minimize the impact of cashier shortages and reduced overall wait times.

3. **Improved Wi-Fi:**

   o **Change Implemented:** Wi-Fi infrastructure was upgraded to ensure reliable and fast connections.
   o **Evaluation Method:** Usability testing for Wi-Fi connectivity involved checking how easily students could connect to the network and complete digital tasks (e.g., making payments).
   o **Evidence of Change:** The improved Wi-Fi was praised for providing seamless connections, and students experienced fewer disruptions while completing transactions. This resulted in a smoother shopping experience, particularly for those using mobile payment systems.

4. **Revised Store Layout and Queue Management:**

   o **Change Implemented:** The layout was restructured to create more space, with additional self-checkout stations and registers.
   o **Evaluation Method:** Observations and usability testing during peak hours were conducted to assess the effectiveness of the new layout and queue management.
   o **Evidence of Change:** Testing during high-traffic times showed a noticeable reduction in queue length and time spent in line. The new layout also allowed students to navigate the store more easily, making it more comfortable and efficient to shop. The addition of clear signage and better product organization contributed to this improvement.
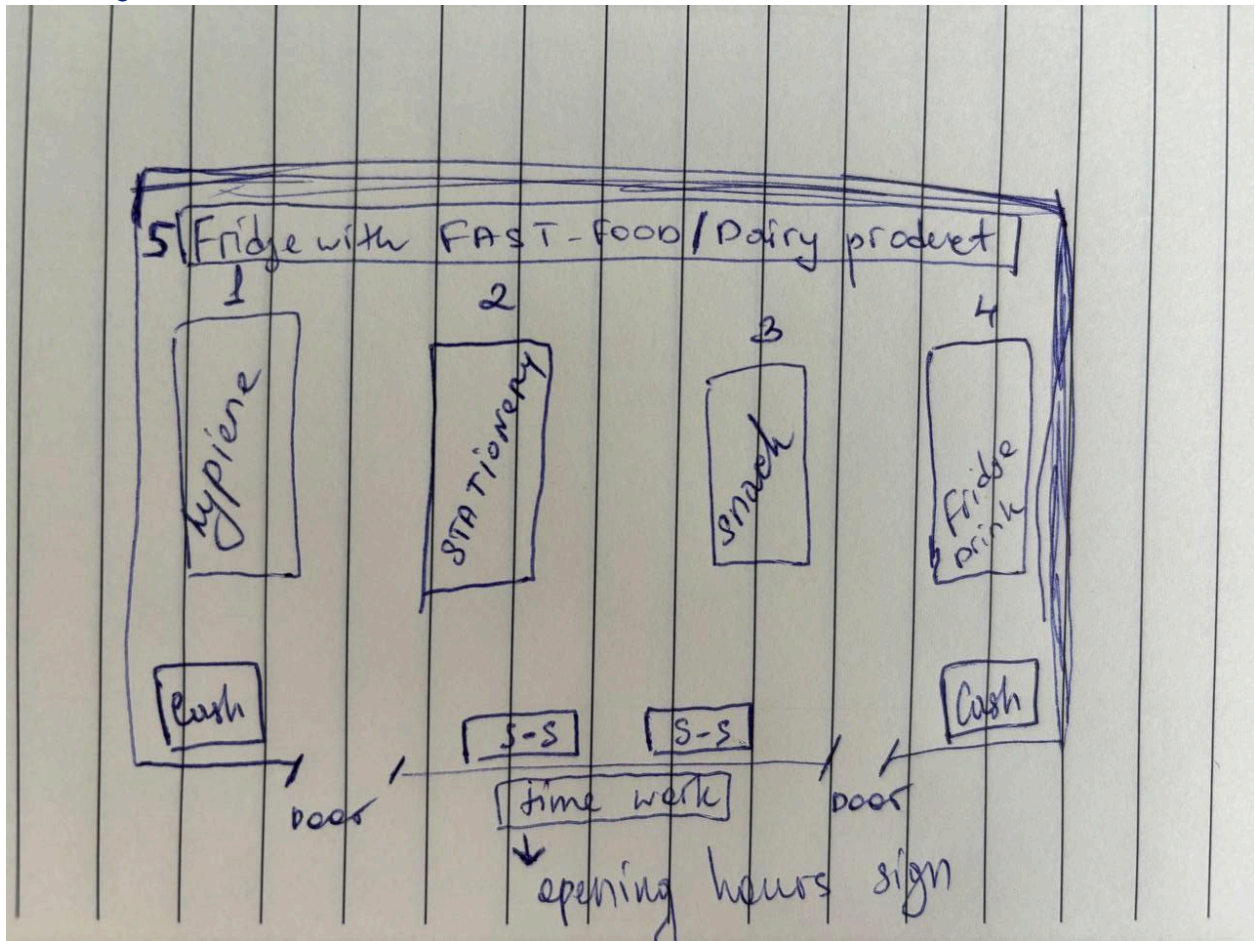
In the new design, upon entering, there are two cash registers and two self-checkout stations on either side. Then, there are five signs indicating product shelves, which are as follows:

1. **Hygiene Products** (detergent, wipes, masks, etc.)
2. **Stationery**
3. **Snacks** (candies, noodles, various sweets, chips, etc.)
4. **Refrigerator with Drinks**
5. **Fast Food, Dairy Products, and Ice Cream**

The shelves are placed at a reasonable distance from each other to allow space for two people to comfortably pass through.