Husky Bites

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Mariana Chagoyan, Smriti Dahal, Brian Mostrom, Neil Prakasam, Dwina Solihin, Sasha Stavila

Internet Of Things (IoT) for Students

Group 3 - The Dream Team

CSS 480 - Human Computer Interaction

Overview of Product

Husky Bites

- A mobile application designed for UW Bothell students to facilitate the purchase of food, beverages and/or snack bar items Involves all the cafe locations on campus Common Grounds & Food for Thought
- Offers convenience by
  - Ordering & paying online ahead of time without standing in line
- Incorporating the Retail aspect of Internet of Things by
  - Allowing connection to a Point-of-Sales system
  - Processing payments and keeping track of inventory by updating quantity of items sold and items needed

Husky Bite Goals

1. Maximize productivity by reducing waiting time and lines
2. Providing convenience by ordering and paying ahead of time
3. Accommodate various students' needs
4. Improve production time by reducing interaction time between customer & barista
5. Eliminate waste of resources by preventing possible ordering mistakes
6. Improve "customer service experience" for students while being on campus cafes
7. Return of Investment by keeping track of inventory automatically

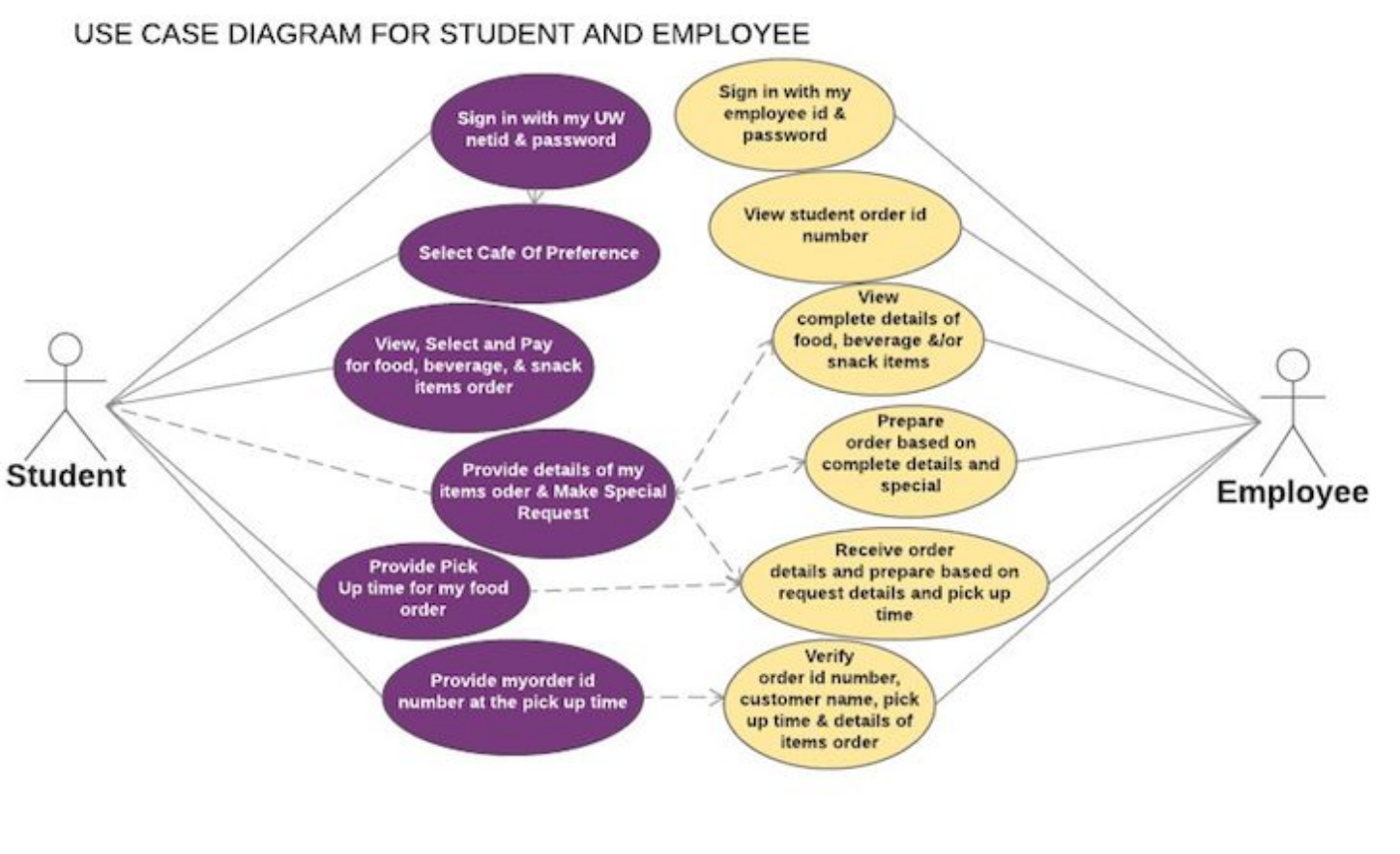
Interview Analysis - Underlying Problems

- Reasons students choose not to buy food at school:
  - Long Lines
  - Wait time
  - Convenience
  - Lack of food option variety

Interview Analysis - Suggestions

- Social media sharing
  - Students can share and post their purchases to social media to show their friends
- UberEats
  - Integrating the application with UberEats
- Reward Points/Coupons for using the app
- Happy Hour

Student and Employee Objectives



Use Case Scenario involving Student & Employee

Cross Referencing Scenario documentation with PACT framework & Analysis:

People(Main Actors)	Student & employee
Activities(Actions):	Order and pay for food and a beverage items from Common Grounds Cafe via online using app
Context(Goals):	Provide the food and beverage order id number and items based on his/her requirements
Preconditions:	Student has signed into Husky Bites App, placed and paid order Employee has signed into cafe system, viewed, confirmed, prepared student order
Triggers (Wants)	Student wants to eat and/or drink, places and pays for an order on Husky Bites App
Postconditions:	Student picks items up by providing its order ID number, and employee provides items by verifying order ID number and student's info and pulls it off from the queue system
Technologies	Mobiles devices (smartphones, tablets, laptop) from all different platforms

Functional/Non-Functional Requirements

FR/NFR-ID	REQUIREMENT DESCRIPTION	PRIORITY
FR-STU-11	Pay using various payment options i.e. PayPal, Credit/Debit, depending on merchant	High
FR-STU-06	Make special requests by selecting or typing including various dietary restrictions	High
FR-EMP-03	Provide estimation time for order pick-up	Medium
FR-EMP-06	The system could keep track of inventory for the employee	Low
NFR-03	Should deal securely with payment information and customer-sensitive information	High
NFR-06	Should be available in all mobile platforms	High

HCI Concepts Leveraged

PACT Analysis

People	Students and cafe employees
Activities	Going to class, buying food, beverages, snacks through mobile apps
Context	Avoid waiting in line during break in classes or between classes
Technology	Mobile applications, smartphones, tablets, point-of-sale systems

HCI Concepts Leveraged

MoSCoW Analysis

Must have	• Verification of order system for all users (students and employees) • Secure system for monetary transactions
Should have	• System that completes transactions within 2 minutes
Could have	• Implementation that suggest additional items the user may be interested in
Wishes	• Will work on a broader lever instead of just for UW Bothell

HCI Concepts Leveraged

Main Elements of Design

Understanding	Actors: Students, cafe employees Scenario: Student buying a drink while in a 10-minute break during class
Envisionment	Creating a sketch of the system: how it may look, the steps it needs to take to order a drink
Design	Creating a lo-fi prototype, have users test out their understanding and interest in the lo-fi prototype; use results to generate a hi-fi prototype
Evaluation	Conducting interviews, focus groups, questionnaires and other forms of gaining feedback to improve the design

Lo-Fi Prototypes

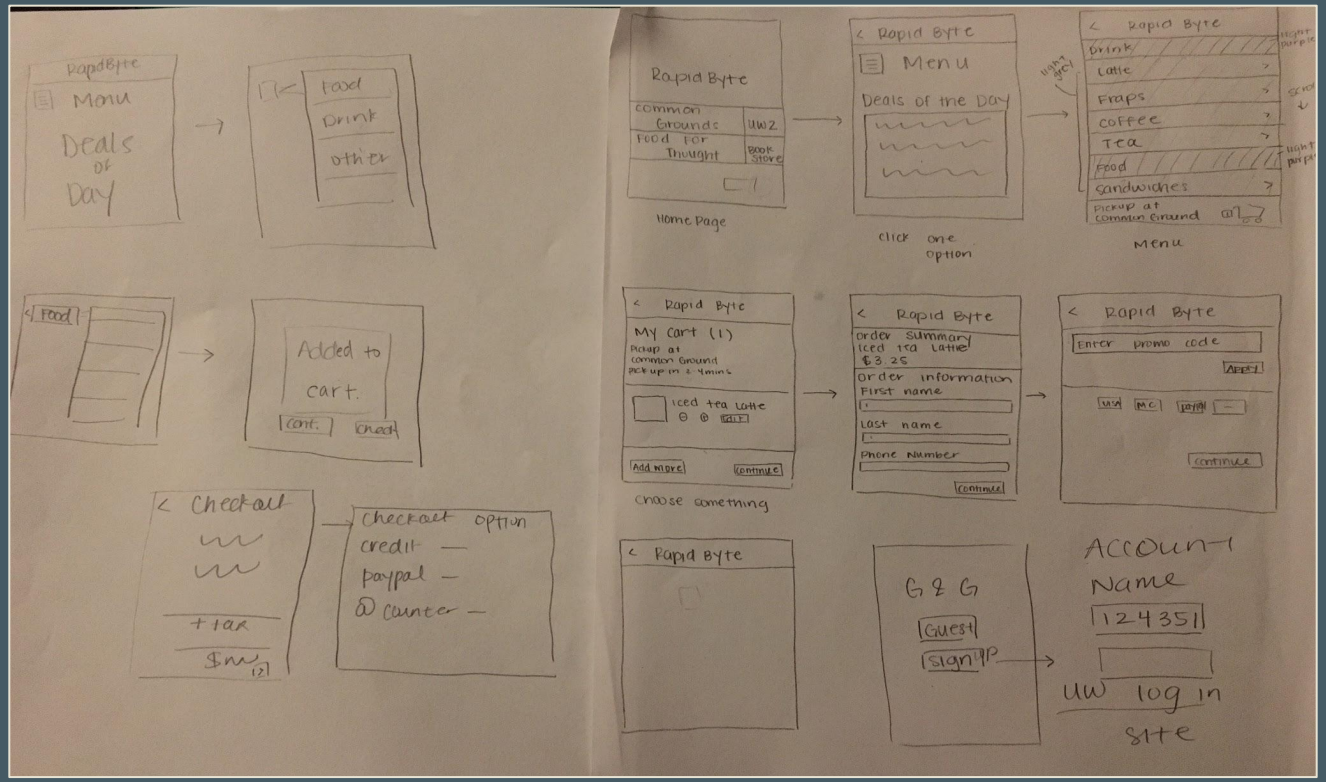


Figure 1.1, Lo-Fi Prototype - First Draft

Hi-Fi Prototypes

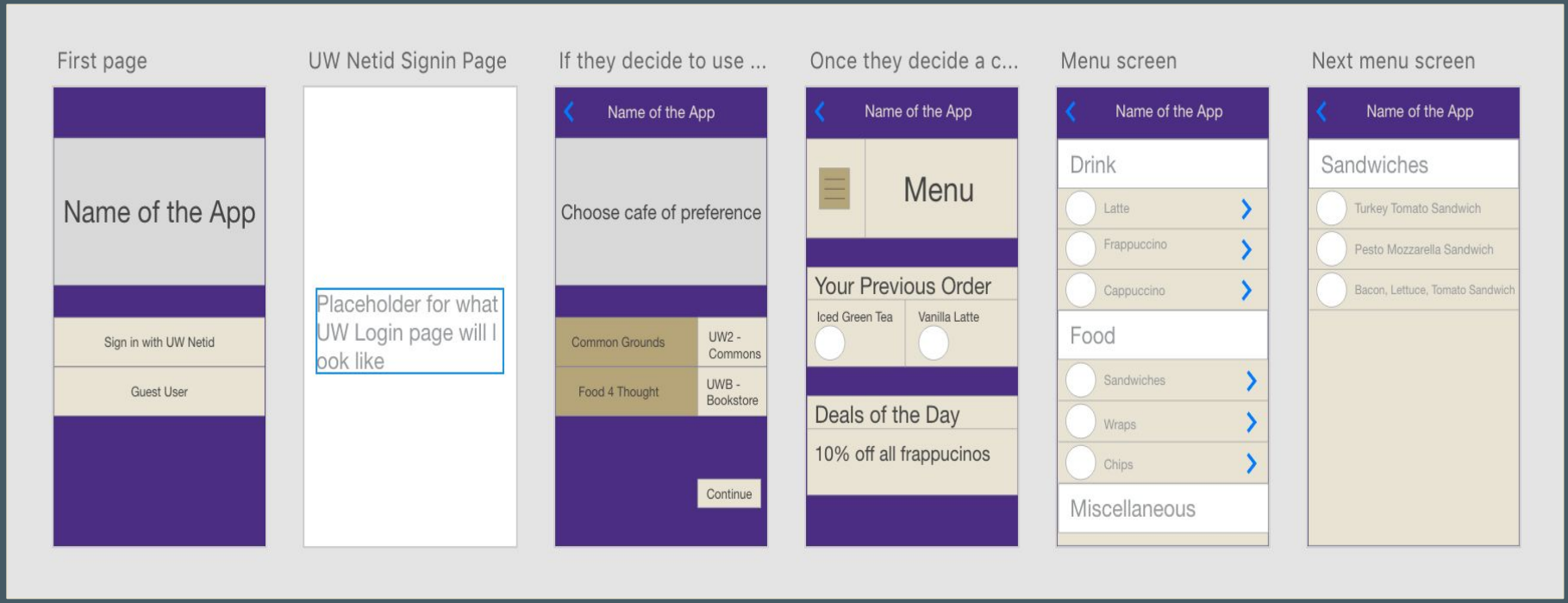


Figure 1.2, Hi-Fi Prototype - First Draft

Hi-Fi Prototype - Final Draft

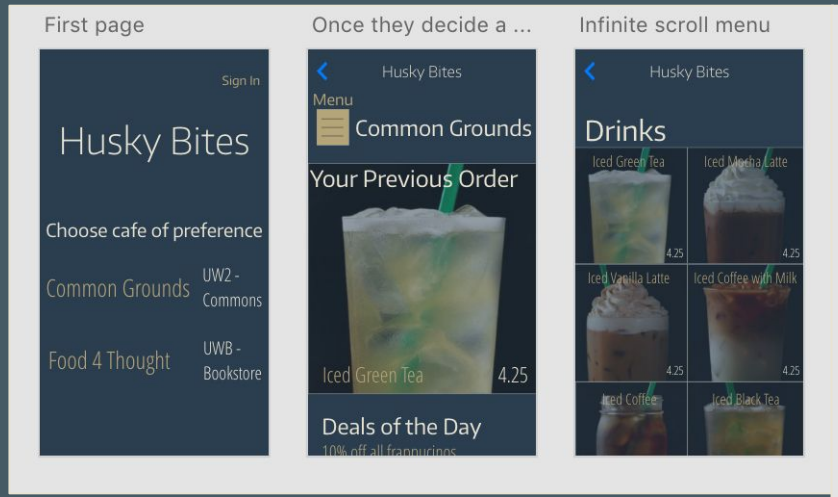


Figure 1.6, Hi-Fi Prototype - Final Draft

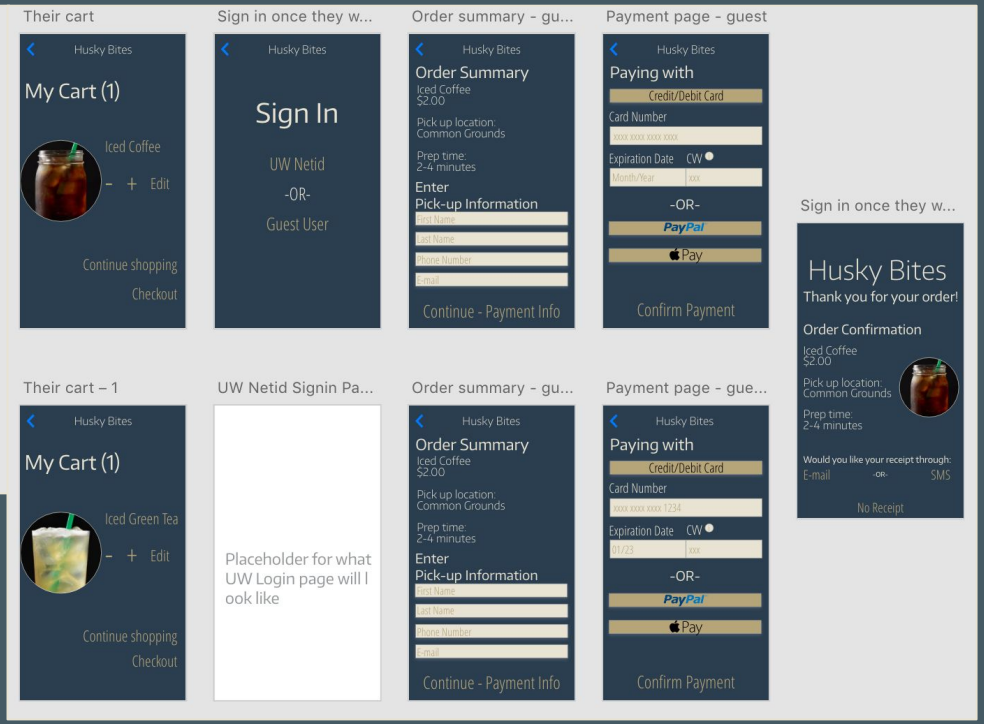


Figure 1.5, Hi-Fi Prototype - Final Draft

Wireframe: https://xd.adobe.com/view/6b2ffaa2-dd7a-4e20-9dd9-57edc6b7f838/

Strengths & Limitations

Strengths

- Fills a niche which does not have a solution yet
- Accepts multiple payment methods
- Improves flow and reduces congestion in lines between classes
- Allows customers to spend time selecting exactly what they want
- Can enable tracking of specific customer trends

Limitations

- Only usable at cafes which have joined the app
- Reduces opportunities for impulse purchases
- Potential for confusion at product pickup
- Requires access to a smartphone to use
- Backups can still occur when making beverages
- Requires cafe to have a connection to

Conclusion

Interesting Aspects

- Could increase the income of UWB cafes, possibly spread to other campuses

Findings

- Has some interest and desire
- A potential market at UW Bothell

Lessons Learned

- Naming is hard

Presentation Order Sequence

1. Smriti Dahal : Intro, Overview, Goals, Interview Analysis Slides 1-5
2. Mariana Chagoyan : Pact Analysis, Design Process-understanding & design slides 6-7
3. Sasha Stavila : Functional and Nonfunctional Requirements
4. Dwina Solihin : Design & Eva, sketches, wireframes prototyping, Moscow
5. Brian Mostrom : Strengths and Limitations (the rest)