

**Name: Paalan, Cy Allene O.**

**Year block: BSIT3-B2**

Exer1

**Project Title**

**BI PAY**

**Subtitle**

Biometric Recognition Payment

**Client/Company/Project type**

This study is Biometric Recognition Payment for PSU student, staff and personnel. An innovative technology that allows individuals to make transactions and payments by using their finger print for authentication and verification.

**Project date**

October 2023 – January 2024

Exer2:

**Role**

I am responsible to the fingerprint sensor and security. Because it collects or distinguishes the unique properties of each individual's fingerprint, the fingerprint sensor is an essential component of the system. It is vital to precisely capture and scan the finger print, which is where my concentration is, so that my system can provide an exact identification of that individual. In terms of security, I concentrate on the most important aspects of payment systems, which include encryption and hashing to safeguard fingerprint data. Furthermore, access control is utilized to prevent unauthorized access.

## **Project Summary:**

The Biometric Recognition Payment is used in any kind of payment transaction in Palawan State University. Which you can registered your biometric through web along with your source of payment including bankcard, G cash, PayPal, mobile load or any online payment. It is very convenient for student, staff, and personnel of Palawan State University that forget cash or no cash bring and for people in hurry.

These systems strive to build a secure and efficient payment ecosystem while also addressing user privacy and regulatory compliance concerns. and ensuring that biometric data is used legally and ethically. Also, the other goal of biometric recognition payment systems is to improve security, convenience, and user experience while adhering to data protection and privacy requirements.

As a result, no more manual payment problem because in the help of Biometric Recognition Payment, users can finish transactions in a matter of seconds, minimizes any possible risk and the associated hassles carrying, losing, or forgetting cash. When compared to older methods such as cash handling and change handling, receipt handling, it reduces the likelihood of false positives and negatives. Making it accessible to a wide range of users, including those PWD.

## **Exer3:**

### **Problem Statement**

During payment transaction in Palawan State University, I conducted research to identify key challenges in our university's payment process. Through direct observation, engaging and in depth-interview on some student at the university.

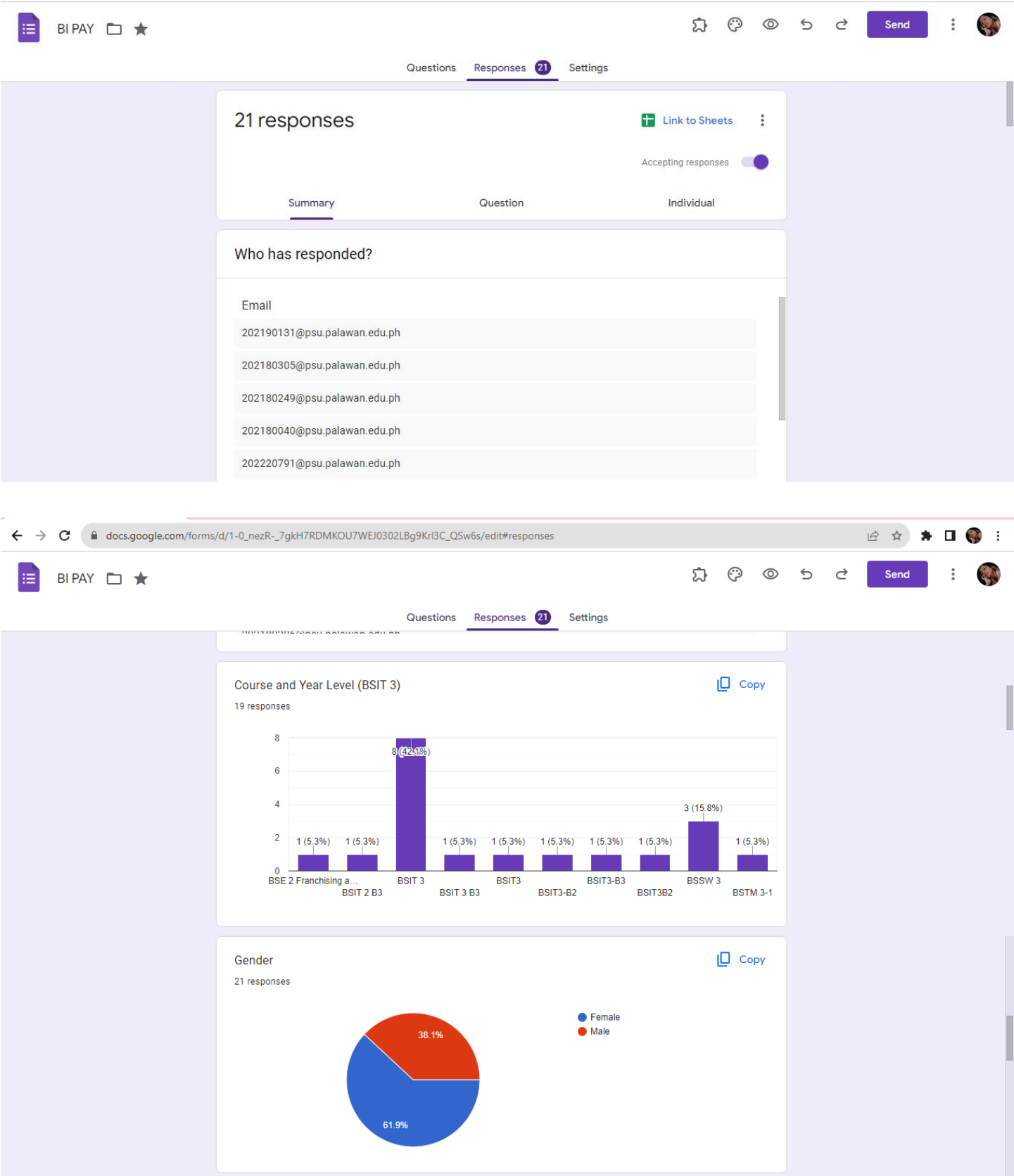
I discovered lot of weaknesses in manual payment processing such as;

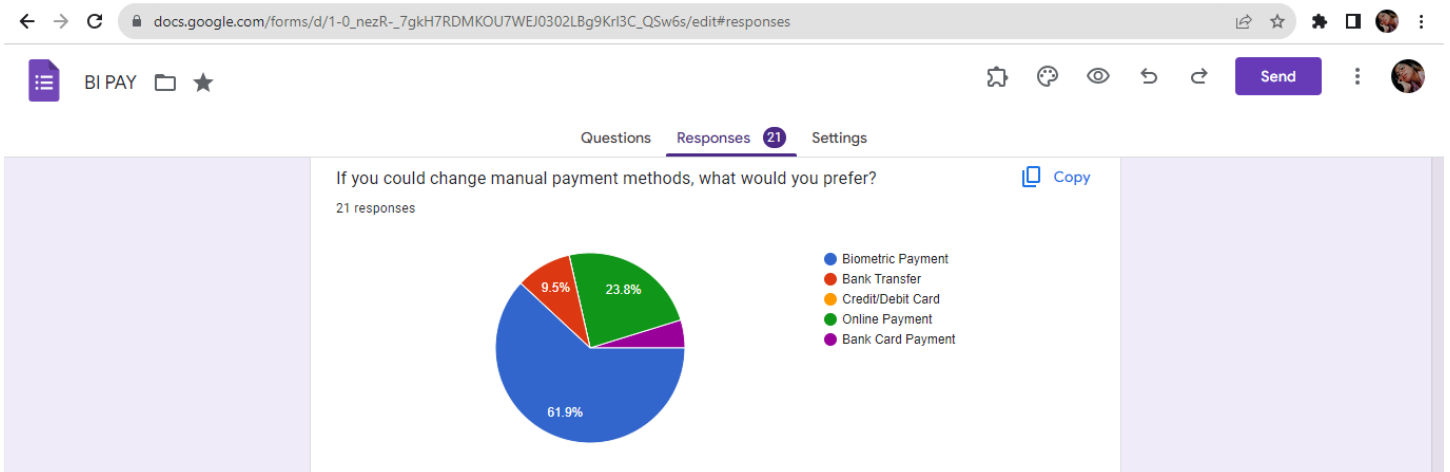
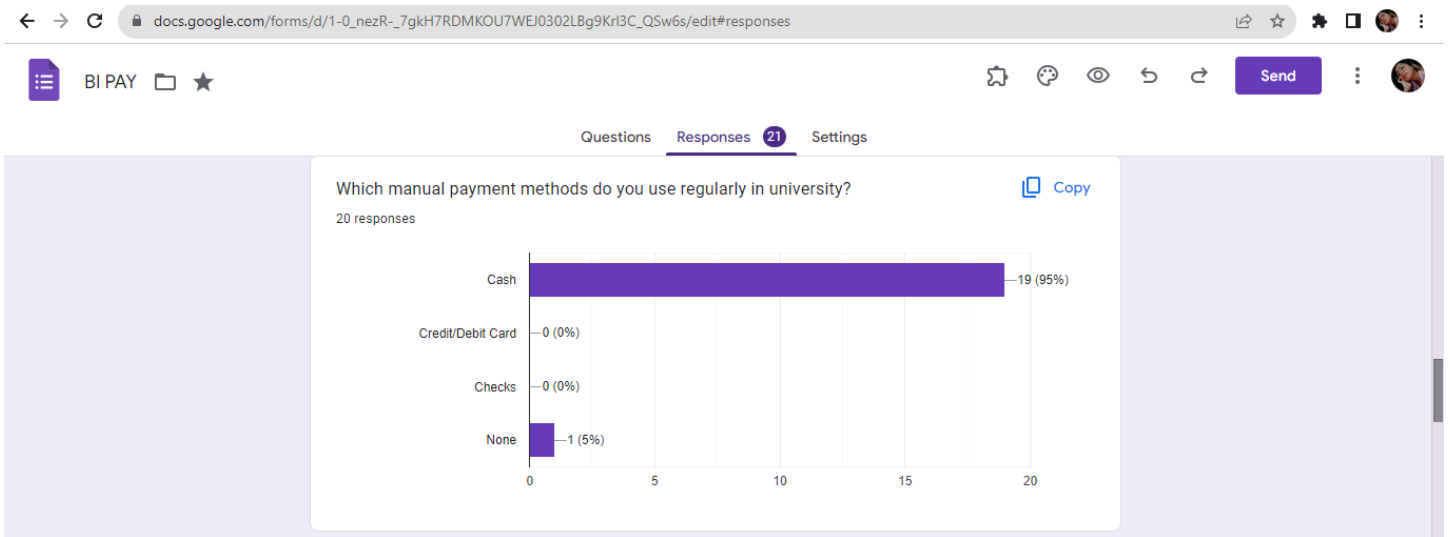
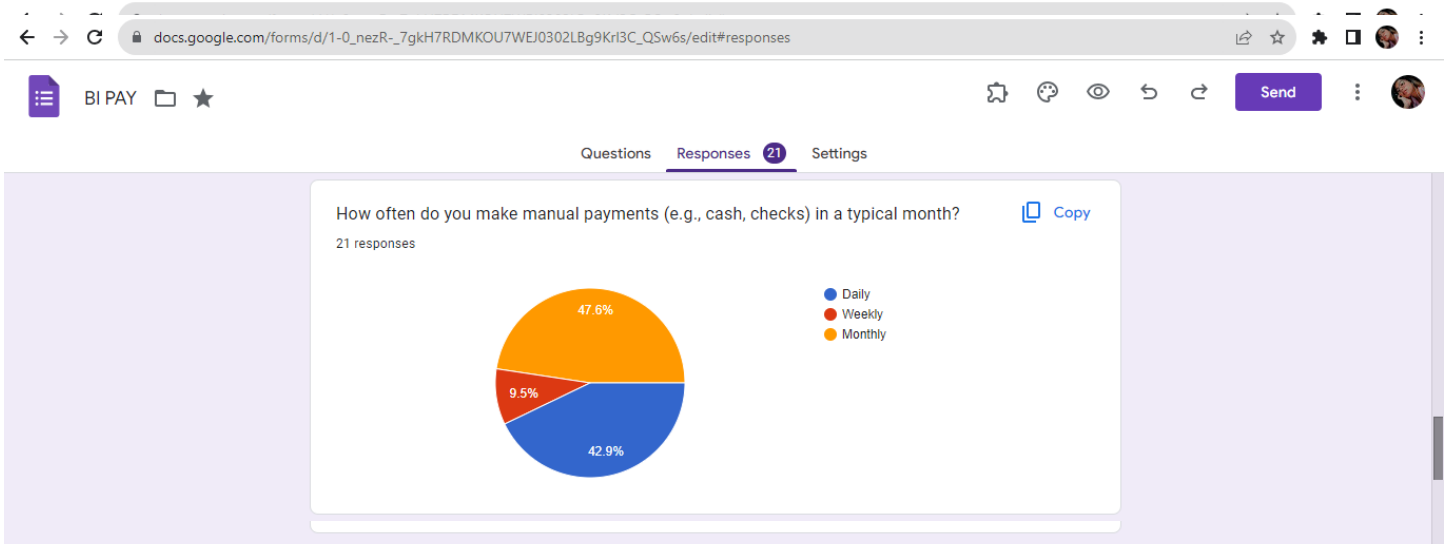
- Lot of student and personnel struggle with time-consuming in paying manually
- Cash payment manually as the only option
- Customer often carry cash
- Customer often loss their cash or wallet
- Cash change difficulties

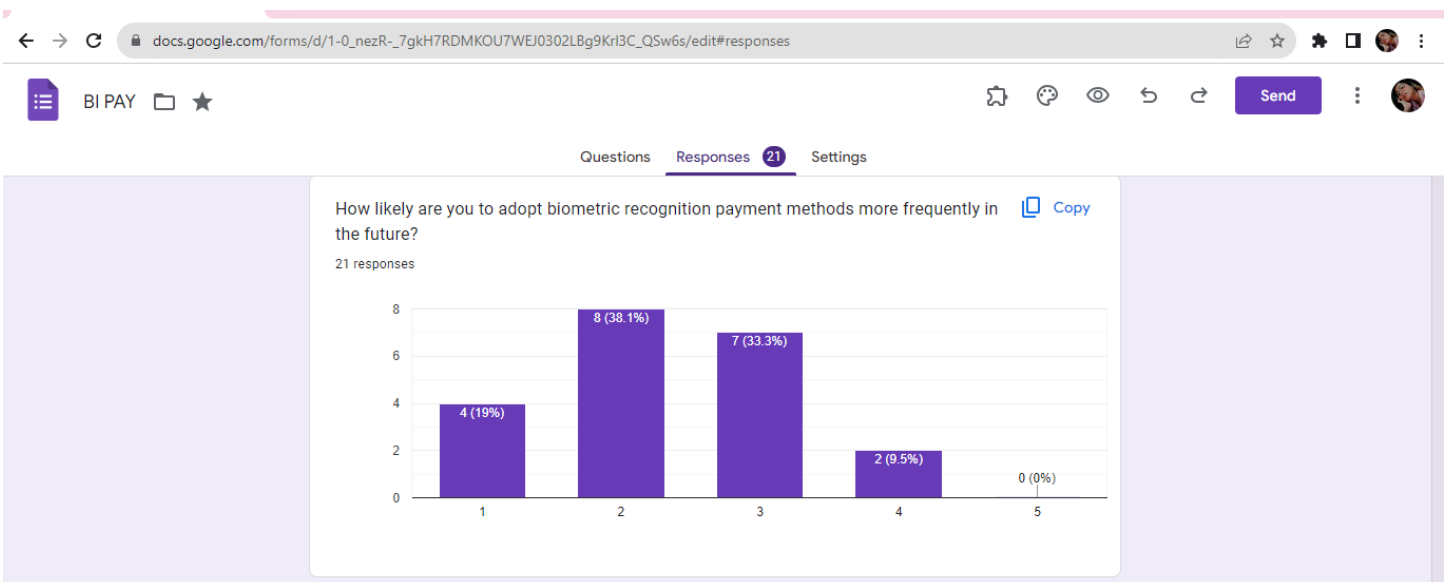
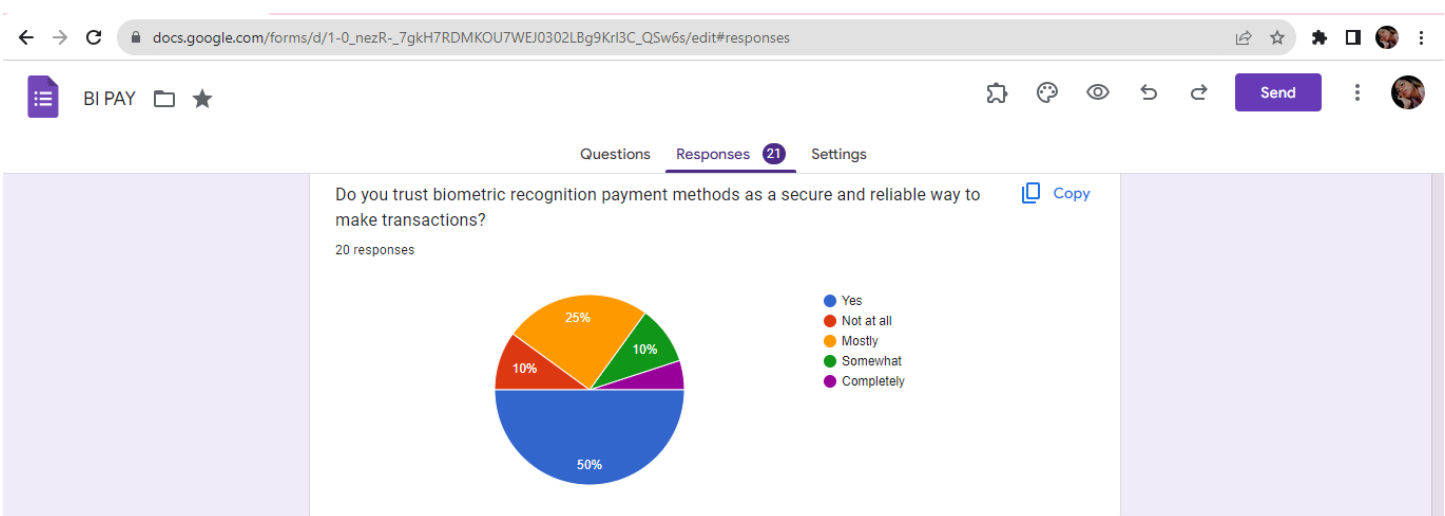
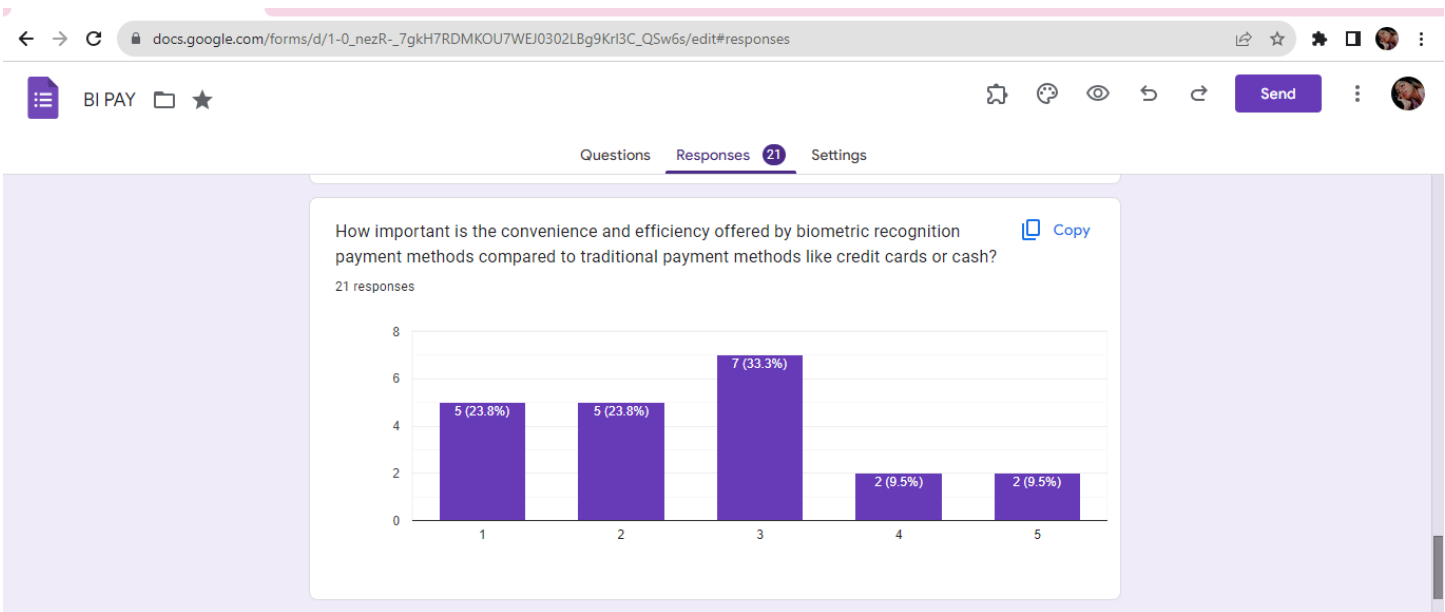
### **User Interviews**

To better understanding user needs and pain points, I conducted user interviews through Google Forms. These structured surveys involve gathering feedback from stakeholders. Survey questions focused on their experience with their current payment transaction, specific problems, and their ideal features for an improved system.

Here is a screenshot of my survey questions together with the summary of responses:





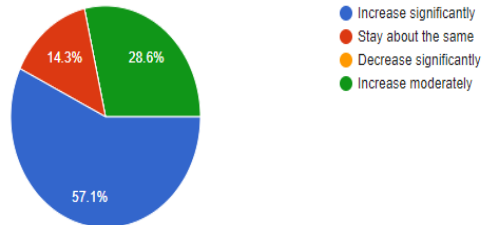


Questions Responses 21 Settings

In your opinion, how do you expect the usage of biometric recognition payment methods to change in the next five years?

Copy

21 responses



Questions Responses 21 Settings

What do you see as the most significant benefits of biometric recognition payment methods?

19 responses

I think biometric recognition payment methods can offer numerous benefits such as security, convenience, reduced fraud, lower transaction costs and etc.

it can be efficient and the process of payment would be shorten

more easier and beneficial

convenient

cash

Easy to recognize user

Easy transaction

Reduce consuming time

Faster transaction

## Pain Points

### Time-Consuming

- Numerous manual processes must be completed.
- Customer may have to wait in long lines, which takes time away from students, faculty, and staff.

### Limited Payment Method

- Only cash on cash as a payment
- Can cost customer to end up not buying or not paying.

### Change Handling

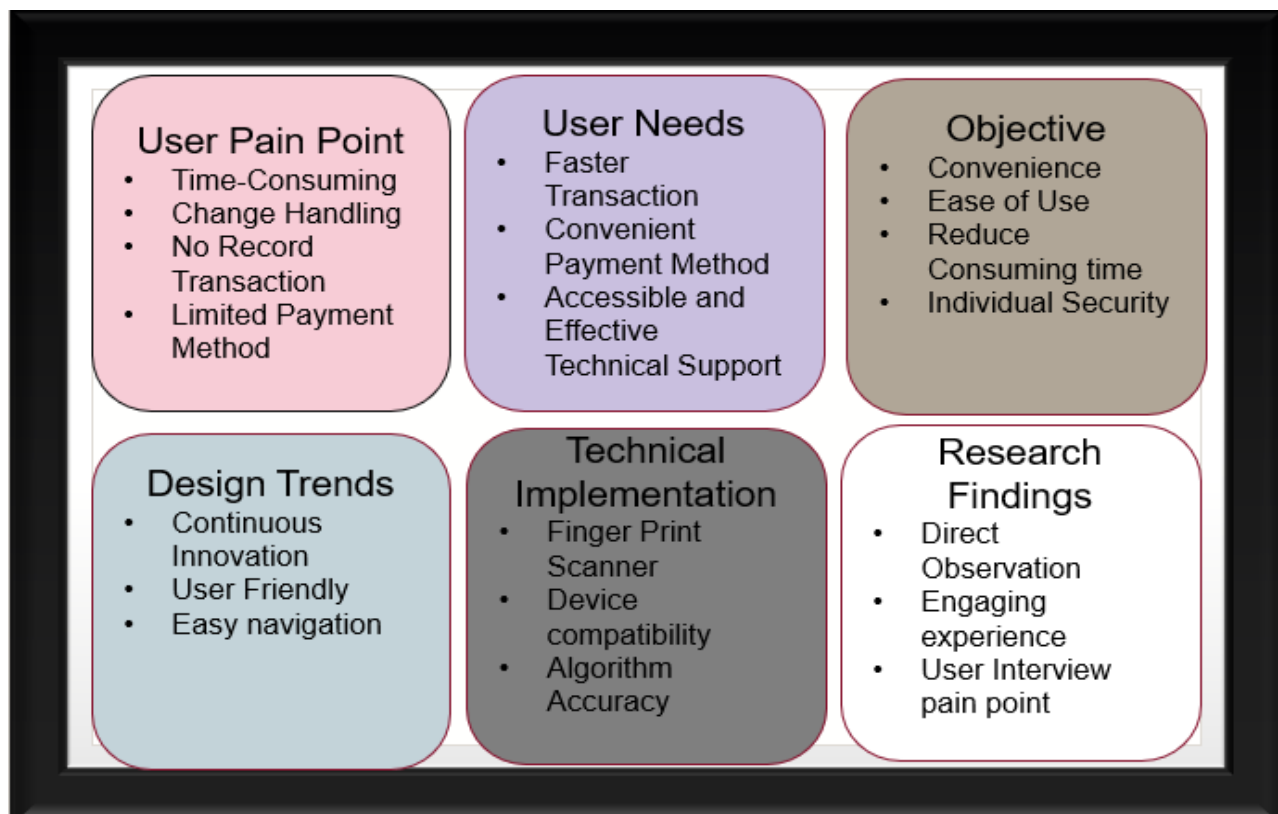
- Staff does not have enough change; the staff will need to ask numerous people for change in order to process the customer's payment.
- Change has chance of given wrongly, it may result in mistakes or disagreements.

### No Record Transaction

- Challenging to track if paid or not paid
- Lack to provide proof of payment transaction

## Affinity Mapping

- Affinity Mapping for BI Pay



## Personas

For better understanding in our target users, I conducted user interviews and collected real data from these interactions.

Here are insights of some respondents:

[https://docs.google.com/forms/d/e/1FAIpQLSdQqQb4w-X0qXFhsJutuOTSHyBCE2pQleGsu4W0ZSzNa\\_eAYA/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSdQqQb4w-X0qXFhsJutuOTSHyBCE2pQleGsu4W0ZSzNa_eAYA/viewform?usp=sf_link)

Email: [202110220@psu.palawan.edu.ph](mailto:202110220@psu.palawan.edu.ph)

Course and Year Level (BSIT 3): BSSW 3

Gender: Female

Question: Have you heard about biometric recognition payment methods before taking this survey?

Answer: No

Question: Which manual payment methods do you use regularly in university?

Answer: Cash

Question: How often do you make manual payments (e.g., cash, checks) in a typical month?

Answer: Daily

Question: What are the main challenges you encounter when making manual payments? (Select all applicable)

Answer:

- Time Consuming
- Inconvenience

Question: If you could change manual payment methods, what would you prefer?

Answer: Biometric Payment

Question: How important is the convenience and efficiency offered by biometric recognition payment methods compared to traditional payment methods like credit cards or cash?

Answer: 1- Very Important

Question: Do you trust biometric recognition payment methods as a secure and reliable way to make transactions?

Answer: Yes

Question: How likely are you to adopt biometric recognition payment methods more frequently in the future?

Answer: 2 – Very Likely

Question: In your opinion, how do you expect the usage of biometric recognition payment methods to change in the next five years?



Answer: Increase significantly

Question: What do you see as the most significant benefits of biometric recognition payment methods?

Answer: Lessen the time and speed the process and make it more secure.

Email: [202130520@psu.palawan.edu.ph](mailto:202130520@psu.palawan.edu.ph)

Course and Year Level (BSIT 3): BSIT 3

Gender: Female

Question: Have you heard about biometric recognition payment methods before taking this survey?

Answer: No

Question: Which manual payment methods do you use regularly in university?

Answer: Cash

Question: How often do you make manual payments (e.g., cash, checks) in a typical month?

Answer: Daily

Question: What are the main challenges you encounter when making manual payments? (Select all applicable)

Answer:

- Time Consuming
- Delay in processing

Question: If you could change manual payment methods, what would you prefer?

Answer: Biometric Payment

Question: How important is the convenience and efficiency offered by biometric recognition payment methods compared to traditional payment methods like credit cards or cash?

Answer: 2- Very Important

Question: Do you trust biometric recognition payment methods as a secure and reliable way to make transactions?

Answer: Yes

Question: How likely are you to adopt biometric recognition payment methods more frequently in the future?

Answer: 2 – Very Likely

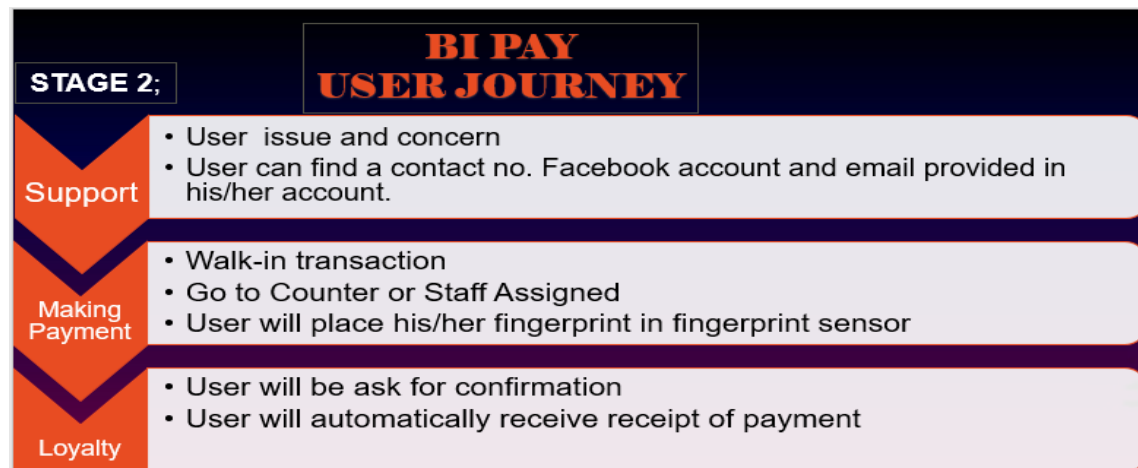
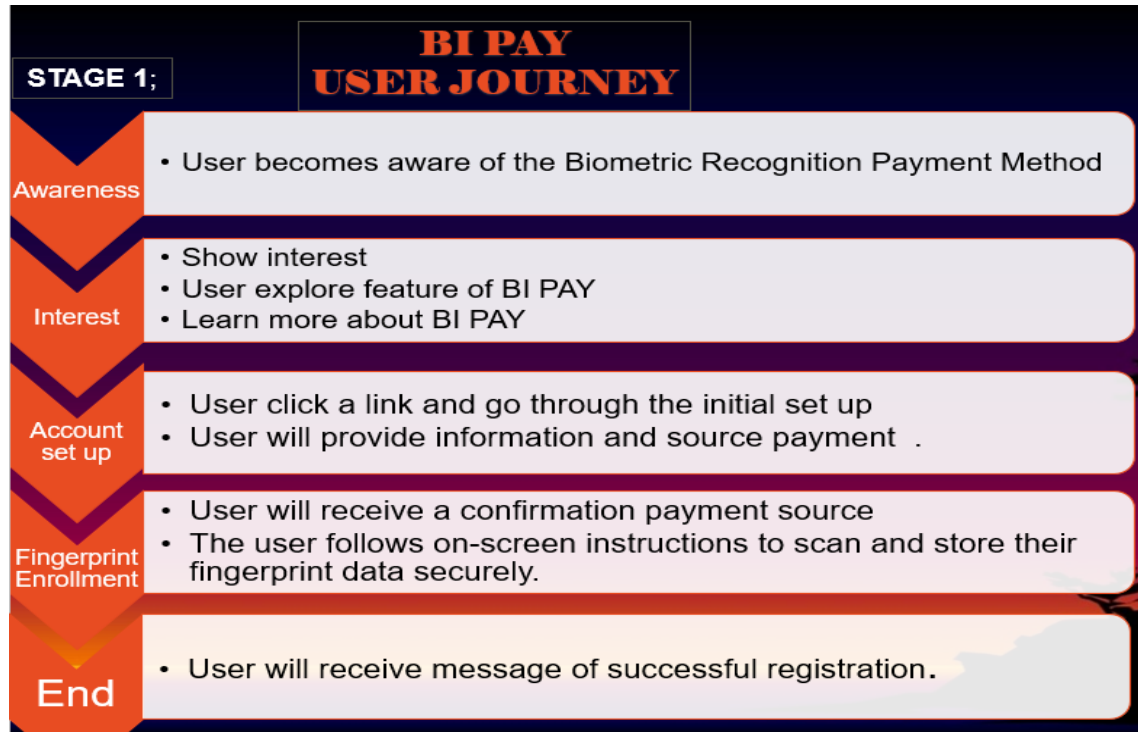
Question: In your opinion, how do you expect the usage of biometric recognition payment methods to change in the next five years?

Answer: Increase significantly

Question: What do you see as the most significant benefits of biometric recognition payment methods?

Answer: fast, easy, convenient.

## Customer Journey Mapping



## Exer4

### Problem: Manual Payment Method

#### User Need & Pain Points:

- User at Palawan State University face frustration with manual payment methods.
- Cash is the only accepted option, causing inconvenience and time consumption.
- Student, staff, and personnel experience delay and inefficiencies in transaction.

#### Business Requirements:

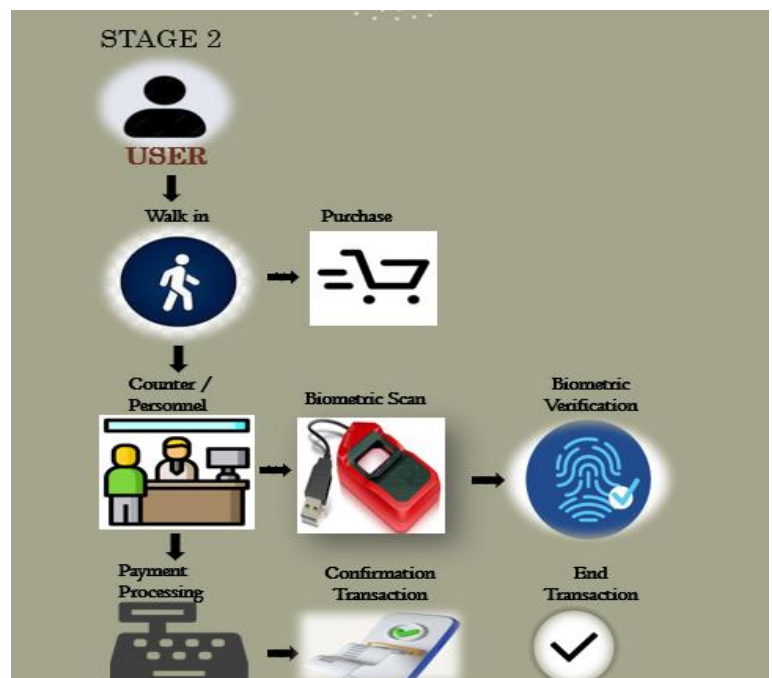
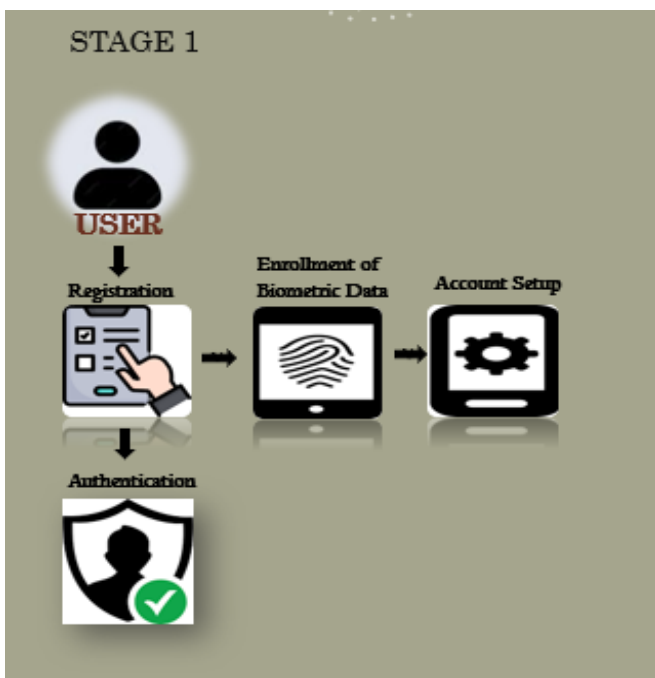
- Improve payment efficiency and user experience.
- minimize cash handling
- Implement a secure and convenient payment solution
- Reduce time consumption

### Solution: Finger Print Recognition Payment

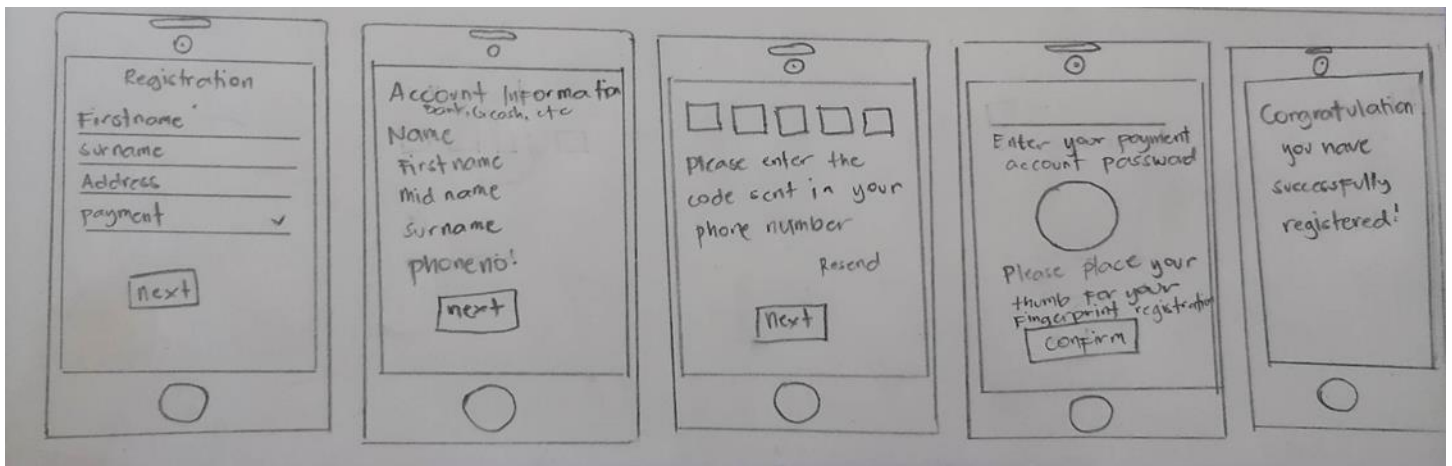
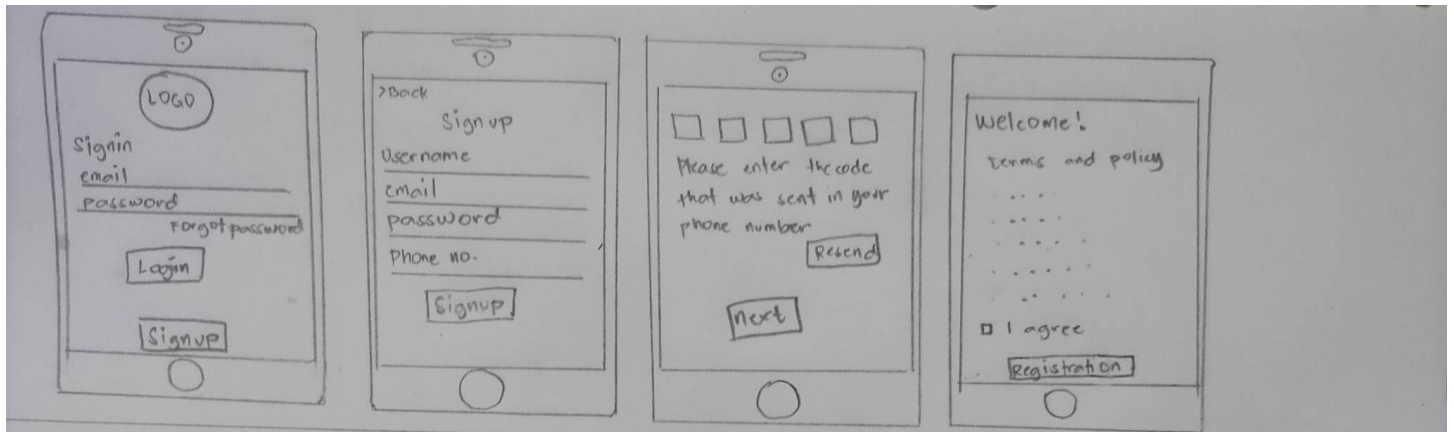
#### Design Solutions:

1. Finger Print Recognition Payment: Implement a biometric payment system using fingerprint recognition. This solution will provide a secure and efficient way for users to make payment
2. Finger Print Reader: Develop a finger print reader device that allow user link their fingerprint to their accounts. This device will facilitate payments with a simple fingerprint scan
3. Automated Record Keeping: Create a centralized database to store payment records, making it easy to track transaction and ensure accuracy

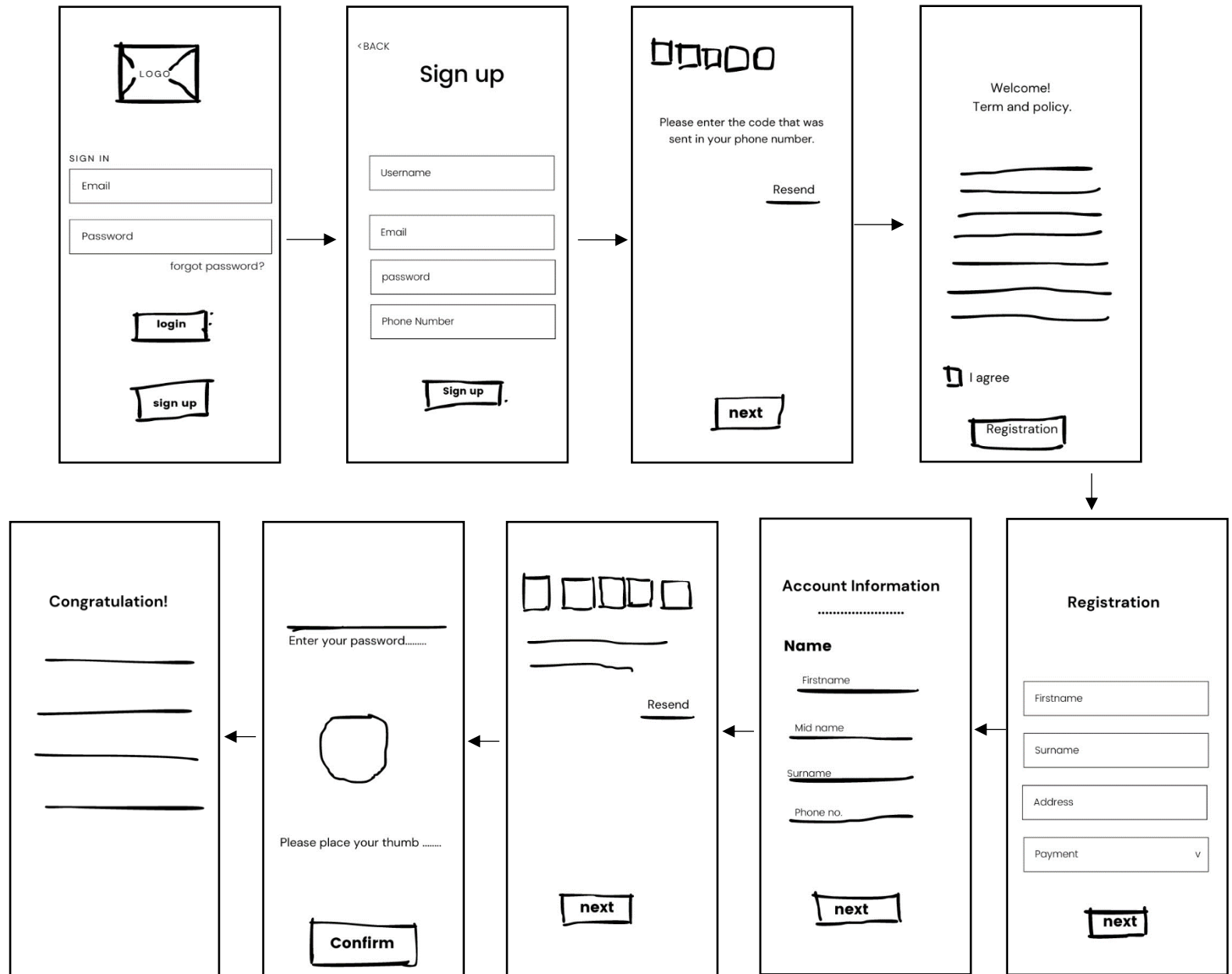
#### User Flow



## Sketches



Wireframes - You have likely worked on the wireframes for the project. Presenting them after the sketches and before the visual designs helps illustrate how the design evolves from ideas to real life.



Visual UI Design - Describe design choices such as colors and styles, explain how a particular design solves the user pain point mentioned before, present a few screens together to show user flow, or zoom in on details of a specific component.



Prototype - You can embed a live prototype or record video clips of essential interactions that you'd like to explain further. Briefly describe the points you wish readers to notice when reviewing the prototype.

