

Design Portfolio

The results of the needfinding study displayed the importance of creating a more accessible and efficient government-issued ID system, with the focused designed problem addressing the lack of informative and responsive government-ID applications. This design portfolio presents the group's artifacts, brainstorming process, candidate solutions, and prototype iterations that were made to align with the goals of the focused design problem thus far.

Design Artifacts

Work models provide visualizations on the different interactions and environment the respondents are in when applying for government issued IDs. It tells which aspects are influencing the respondents to act in a certain way and to see pain points that applicants experience along the process. The group first created the following model types: (1) Flow Model, (2) Cultural Model, (3) Sequence Model. Three respondents were selected from the survey and used in the creation of these models.

A **flow model** is made to understand how different users and objects interact and get their work done. This considers places, artifacts, and breakdowns to respectively describe where communication happens, what is used for it, and what negatively impacts it. The group decided to use a flow model for this problem due to the fact that understanding just how the User interacts and processes different aspects of the I.D. application system is crucial to understanding where solutions need to be made, and where improvements can be implemented. The three flow models are displayed below.

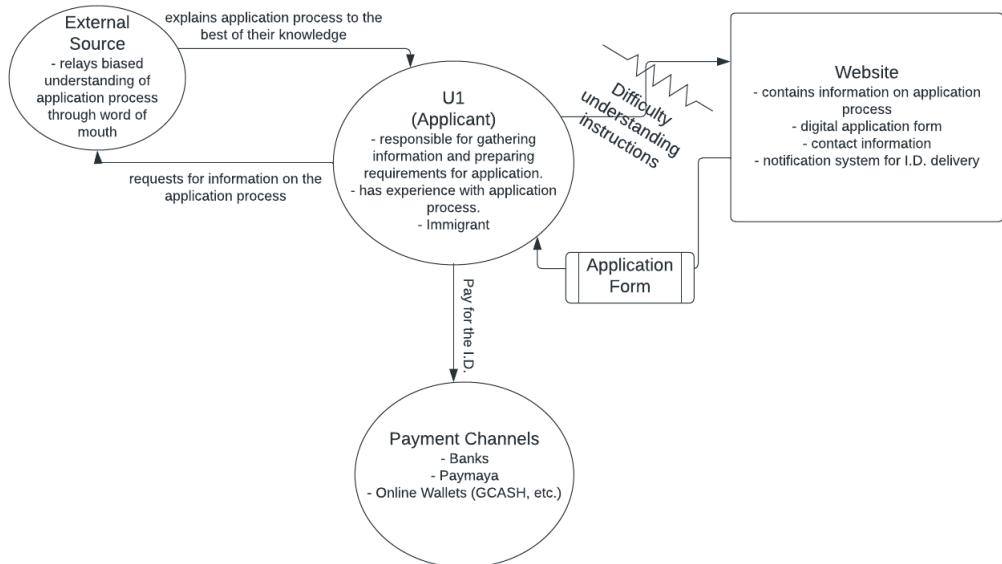


Figure 1. Flow Model (User 1)

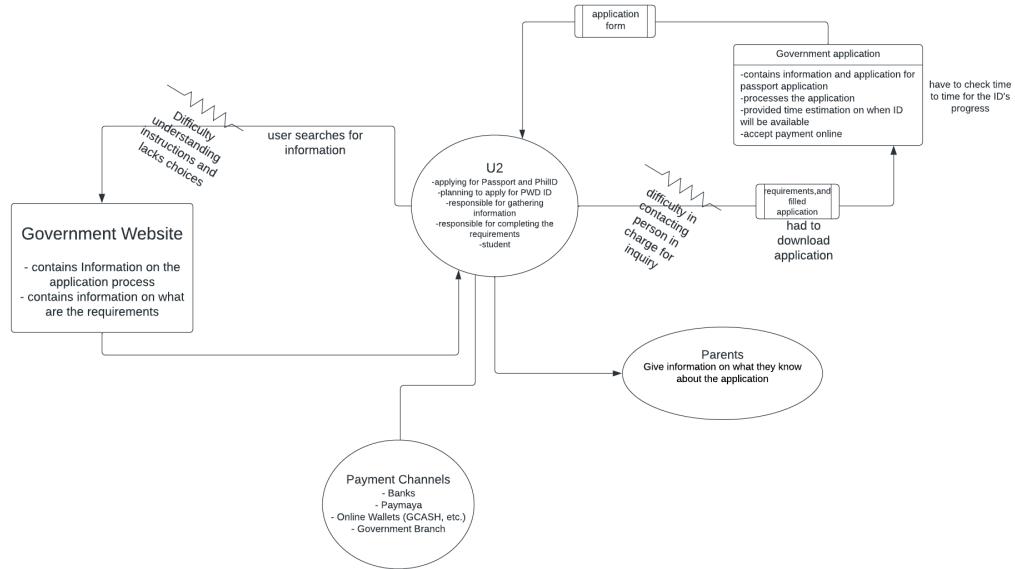


Figure 2. Flow Model (User 2)

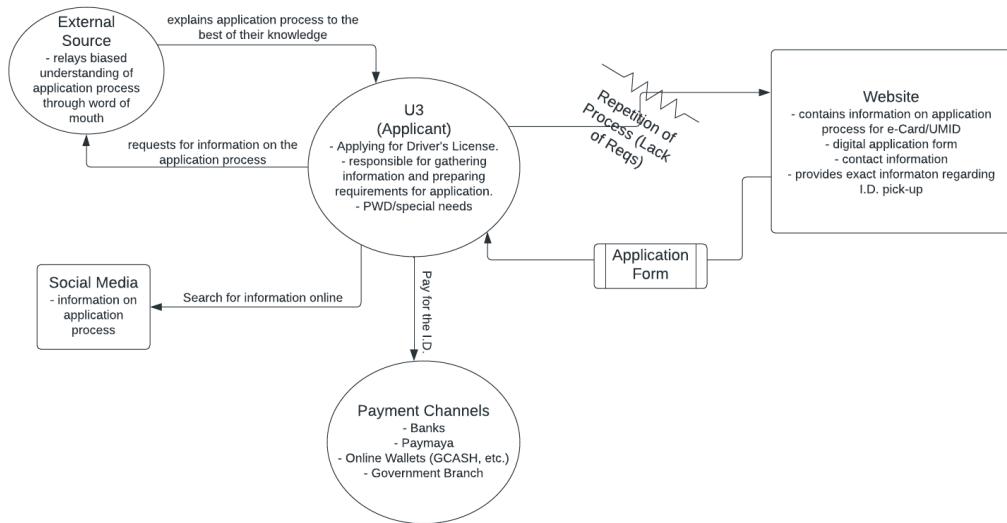


Figure 3. Flow Model (User 3)

As seen in the three models, respondents gather information about application requirements and processes in different ways. Some gathered info from external resources or word of mouth, some from random websites and others from government websites. They all obtained application forms from government websites but experienced different difficulties when applying.

Most of these difficulties are experienced when trying to interact with the website itself. And it is clear that respondents all prefer to pay for their application through online platforms and banks. Using these three flow models, a combined model was formed. This describes the process and interaction of users with different artifacts and mediums for applying for government issued IDs. It can also be seen in the model the different difficulties that they face along different processes.

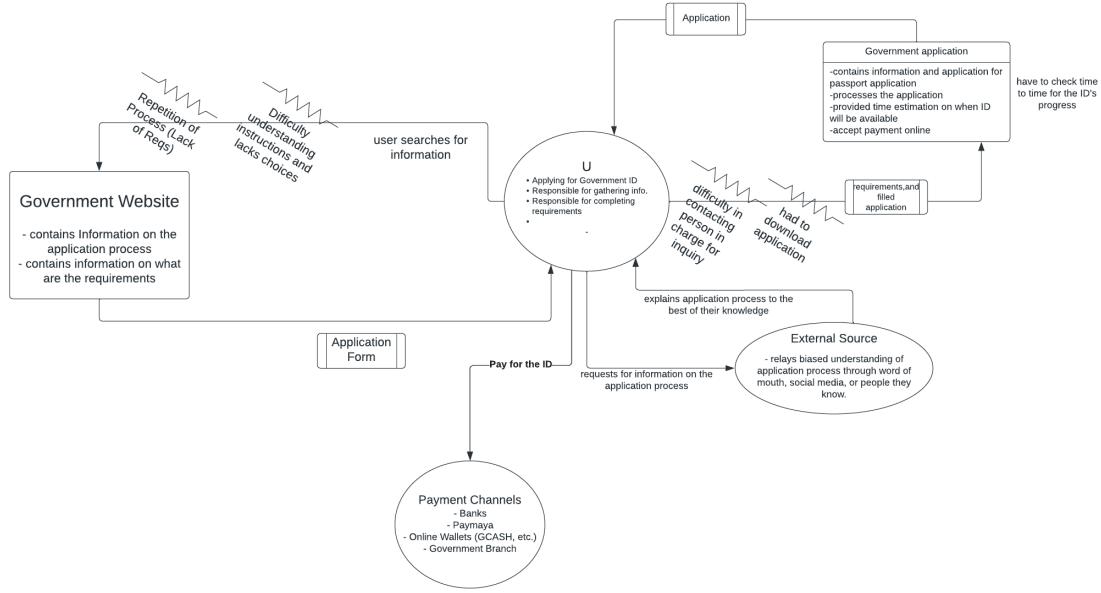


Figure 4. Combined Flow Model

A **cultural model** takes a look at external influences that affect how different users work. These influences can be other individuals, formal groups, or abstract principles. In this case, this model was used to primarily understand how one's culture, specifically their demographic and citizenship status (PWD, Foreigner, etc.) could affect the application process. The three cultural models are displayed below.

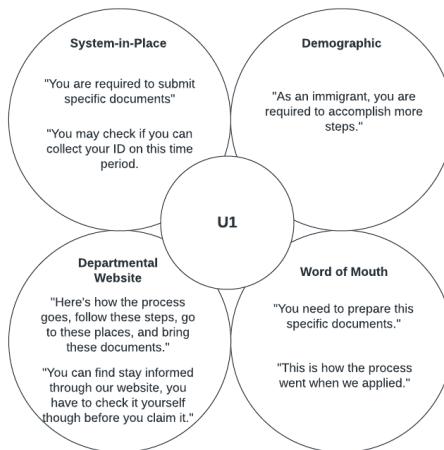


Figure 5. Cultural Model (User 1)

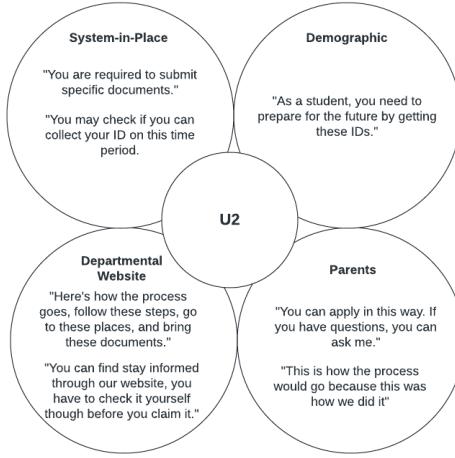


Figure 6. Cultural Model (User 2)

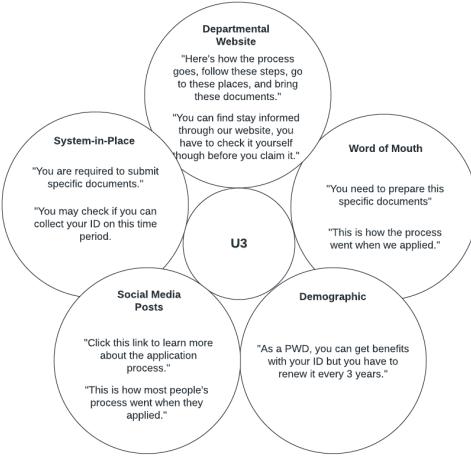


Figure 7. Cultural Model (User 3)

In the cultural models, we can see some commonalities between the three users we made the models for. All of them are affected by the system-in-place and the government departments website for each ID, since that would be the primary source of information for the ID application process. All three of them opted to gather supplemental information too through the use of word of mouth, except one person specified that she only asked her parents because it was more convenient. The third user also tried to utilize modern social media, and was influenced by some posts that explain how the ID application process went for other people. All the possible influences was compiled in the combined cultural model below:

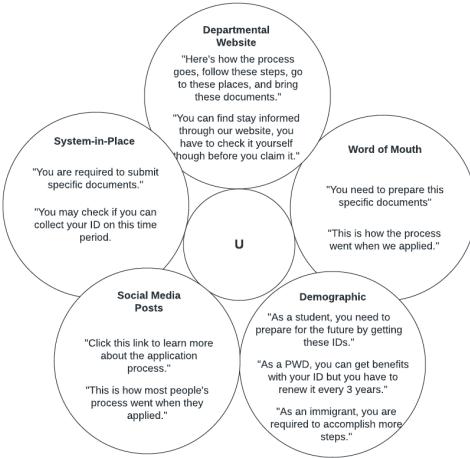


Figure 8. Combined Cultural Model

A **sequence model** is made to gather step-by-step information on how a user does their work. This displays a user's intentions behind an action, what triggered them to execute it, and what causes problems. The three sequence models are displayed below.

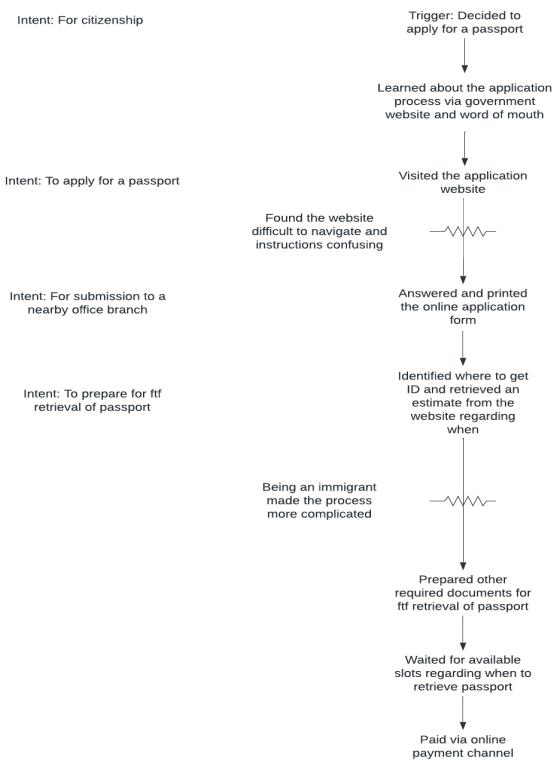


Figure 9. Sequence Model (User 1)

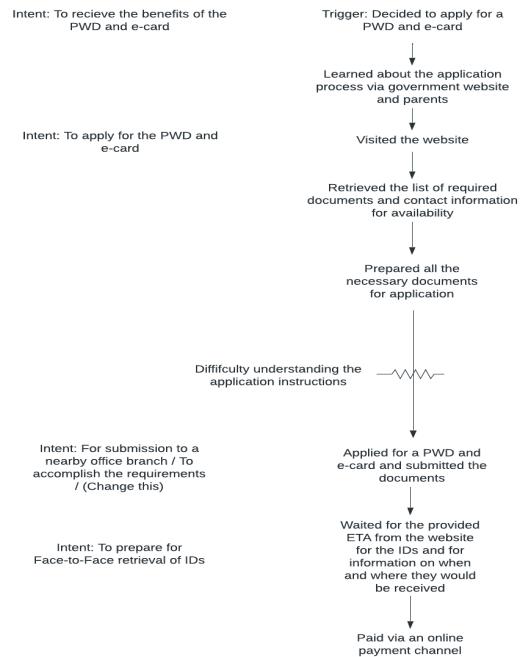


Figure 10. Sequence Model (User 2)

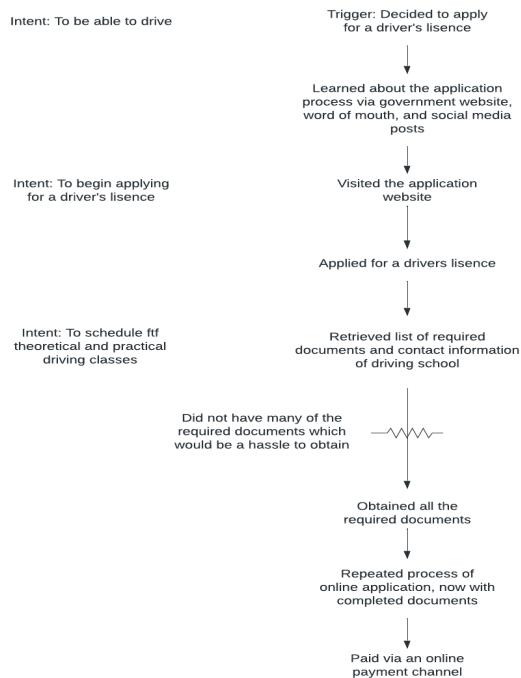


Figure 11. Sequence Model (User 3)

The sequence models are very similar to the flow models, since they both try to analyze the step-by-step process that each person went through. The main difference would be that the sequence model also explores the intent for the actions that the respondents made. The main intent for the three respondents were: citizenship, benefits of the IDs they were applying for, and the licensure to drive a car. They went through several obstacles such as having difficulty navigating the departmental websites and finding the instructions confusing, having to gather the multiple required documents again, and their demographic giving them additional requirements. The resulting combined sequence model is displayed below:

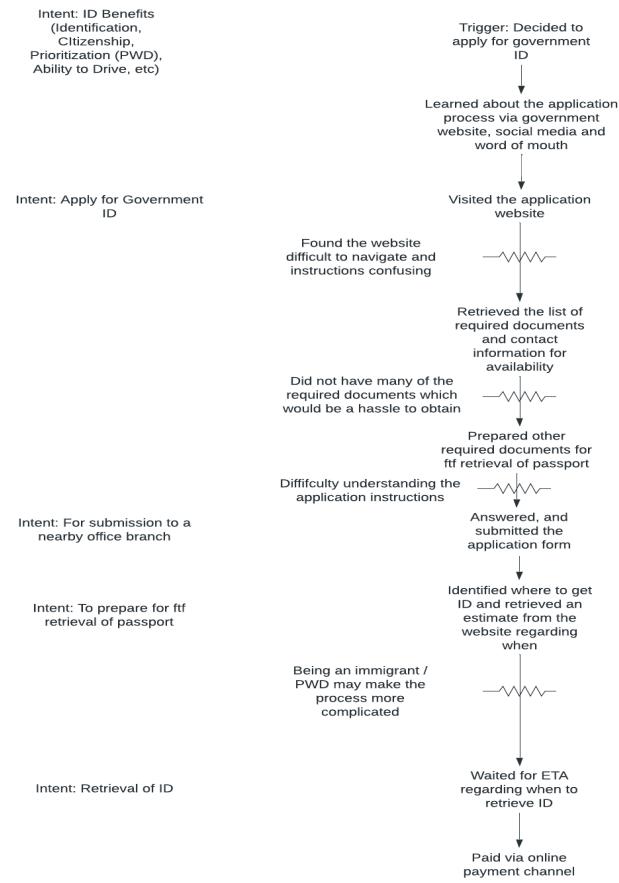


Figure 12. Combined Sequence Model

The three models allowed the group to formulate and create **Personas** that helped uncover essential information on the user's needs and expectations. The group formulated two main personas as described in the next page.

Content Carrie

This persona encompasses users who are somewhat content with the current government-ID application system. They are more likely to follow a full face-to-face approach. But as difficult times arise that physical facilities are no longer available or trending, it will be a challenge for them to switch to the new online setup. Thus what they need is uncomplicated and easy-to-follow technology, alongside a guarantee of security for their important documents.

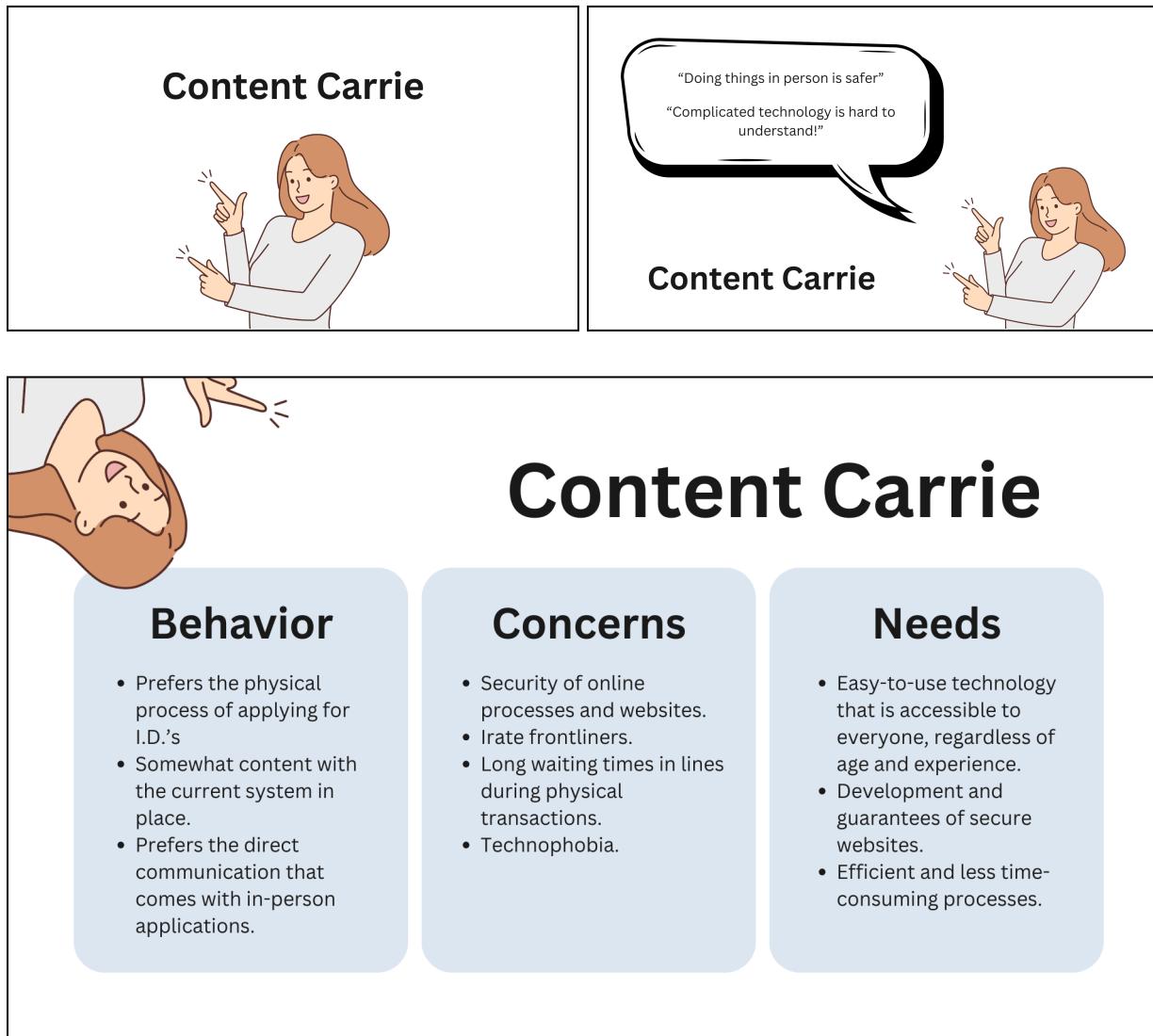


Figure 13. Content Carrie Persona

Frustrated Frank

This persona encompasses users who are dissatisfied with the current government-ID application system. They are more likely to follow a hybrid approach, and many advocate or note

their preference for full online methods. But the current application system online has different insufficiencies which are making users frustrated.

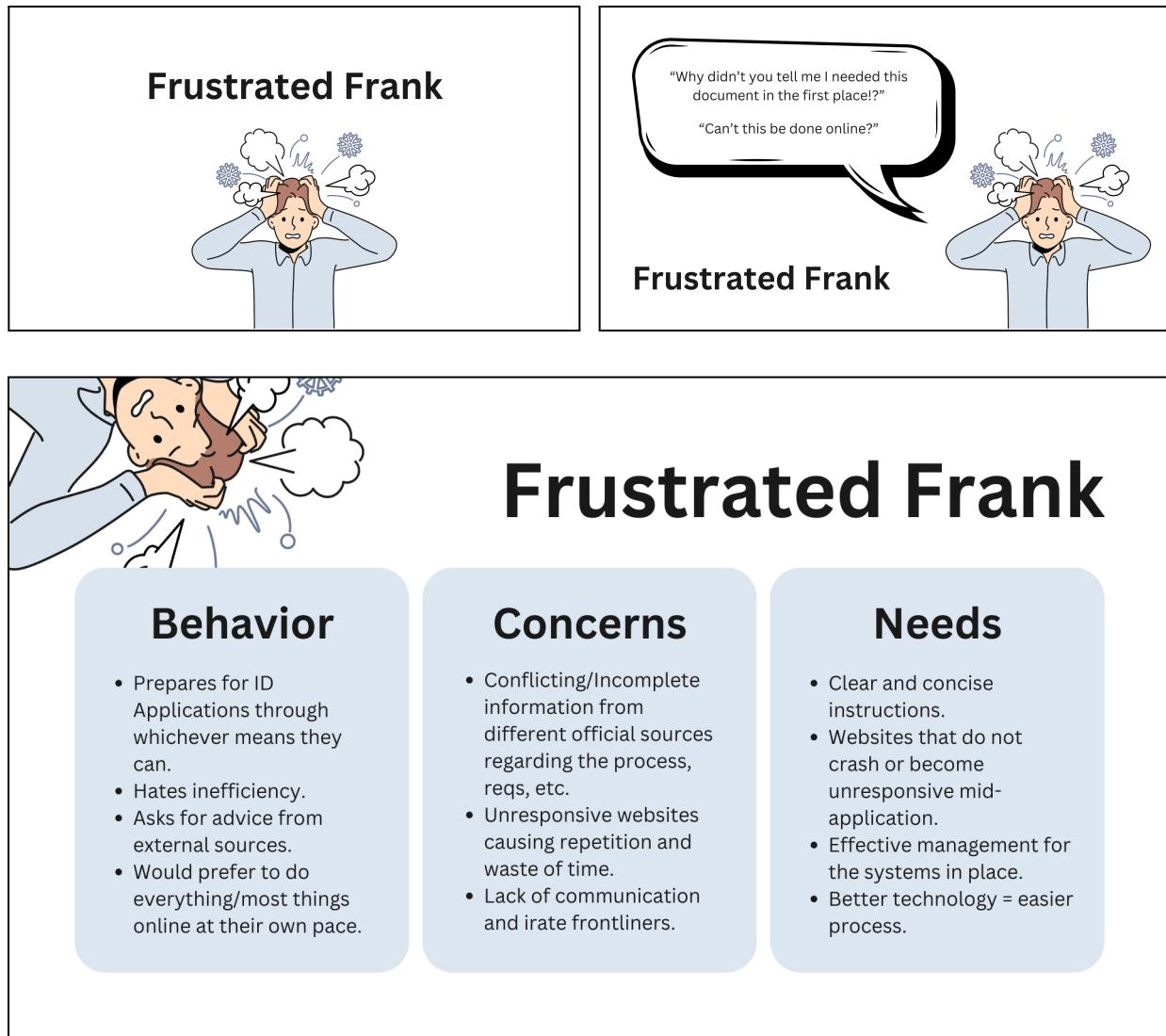


Figure 14. Frustrated Frank Persona

Brainstorming

The group makes use of the Affinity diagram in order to map out the ideation process. Members can post their ideas and improve on them. Below is a glimpse of the brainstorming process performed.

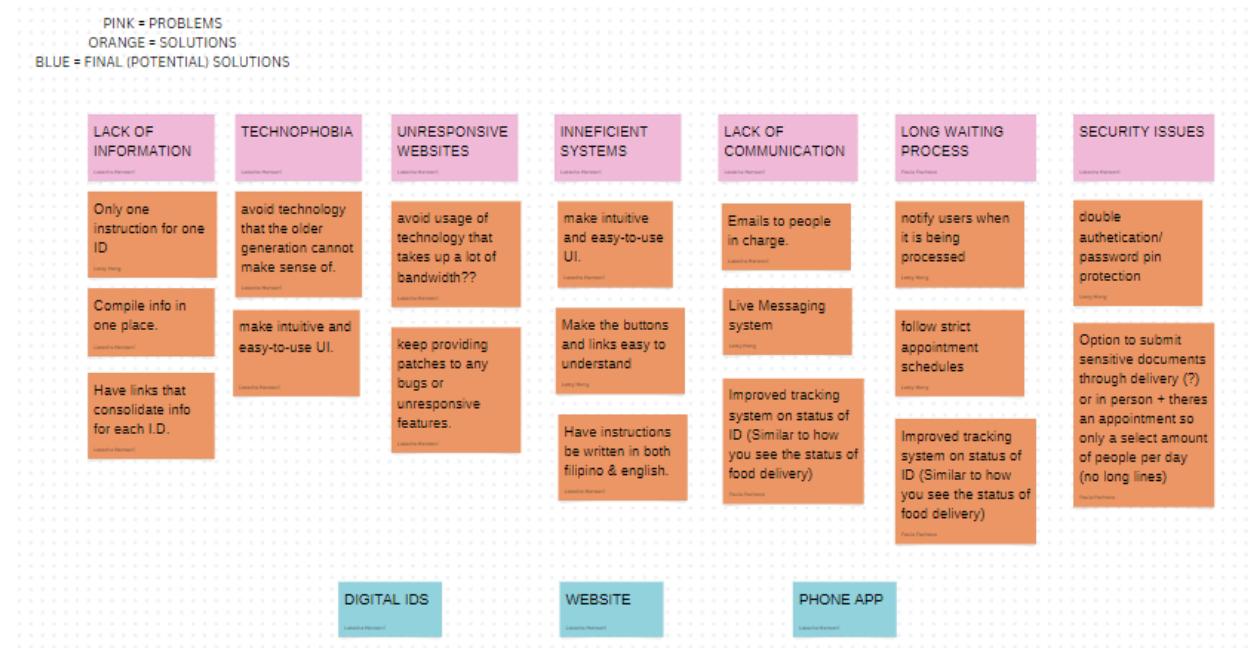


Figure 15. Brainstorming Process

Through this, the group generated multiple and specific ideas. These ideas were then consolidated based on themes and similarity to form possible solutions. The issues with the government-ID application system are quite broad, but the brainstorming process allows us to boil down these complex problems into structured information and ideas. However, the group encountered challenges such as overlapping, ambiguous, and large volumes of ideas. The number of ideas presented proved to be overwhelming, but prioritizing on relevant and impactful ideas allowed the group to handle these problems.

Candidate Solutions

Please access the [Canva](#) to see potential features that will be in the prototype, along with possible implementation of solutions.

Given the solutions discussed during the brainstorming process, the group voted on the strongest candidate solutions for the focused design problem. These were the Digital IDs, a Website, and a Phone App.

Phone App — This would be the most convenient solution, considering that the vast majority of people nowadays own smartphones. It will make it easier for people applying for IDs, specifically in:

- Contacting the support persons of the ID they are applying for by having a chat system.
- Keeping track of the status of their ID, with the implementation of a tracking system, similar to how you may see the progress of a food or online shopping delivery.

- Making the experience less of a hassle by having all of the instructions in one place, and including links to each IDs specific website so that users can check the authenticity of the information.
- A password and notification system, which promotes security and provides the user with updated information,
- and much more.

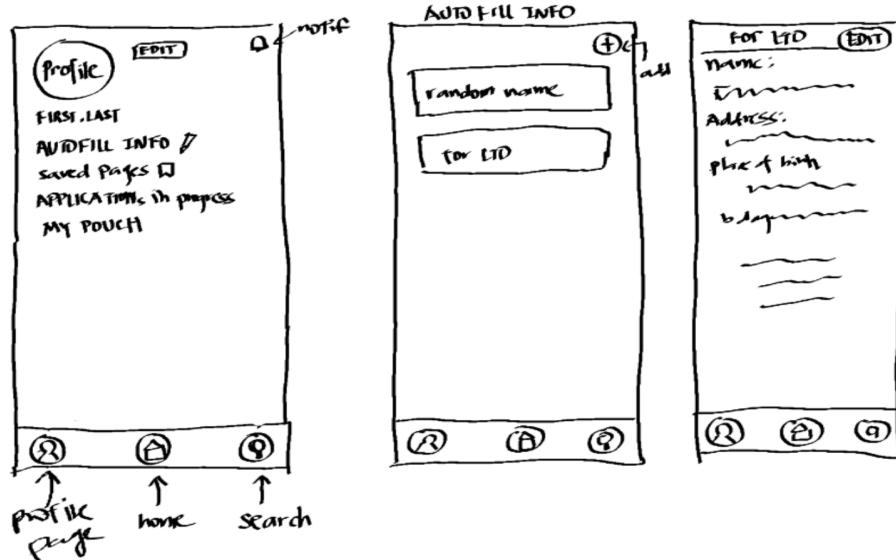
Digital IDs — This solution, as implied by the name, introduces a way to have a digital version of one's ID in order to improve accessibility and promote eco-friendliness. Alongside this, digital IDs would also introduce a notification system that informs the user if their I.D. is expiring soon or not, and will then redirect them to the appropriate information/application hub in order to renew the ID. A QR code is also provided to users for security purposes.

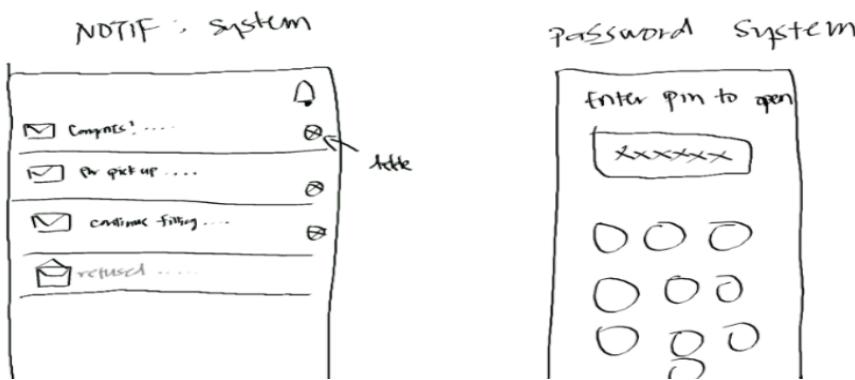
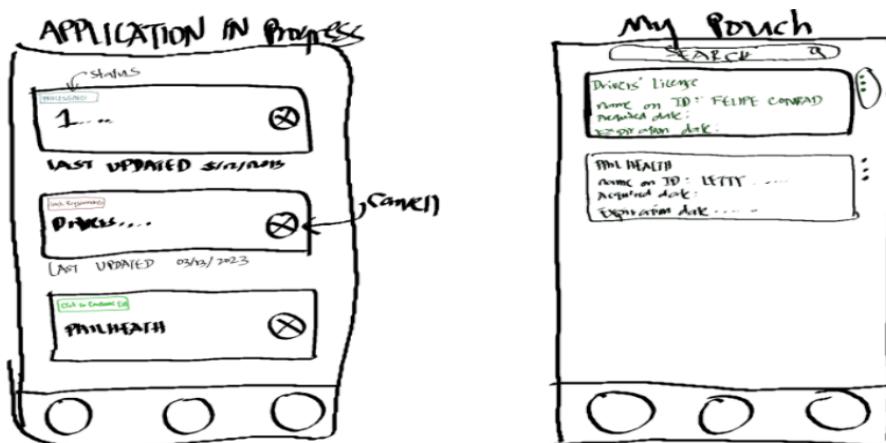
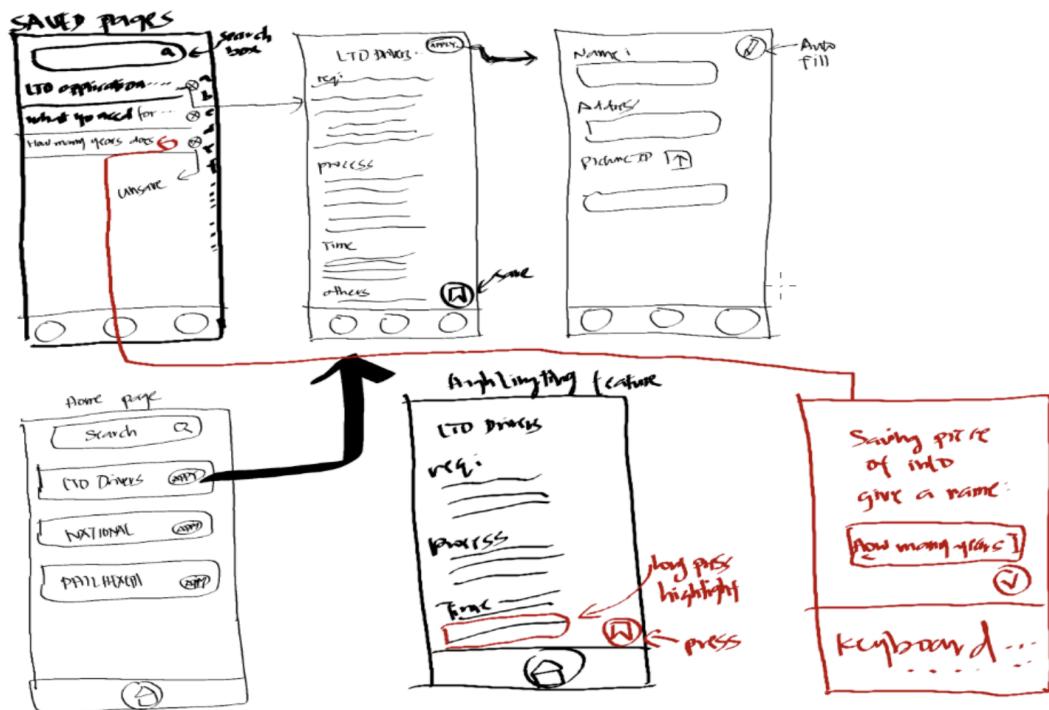
Website — The Website introduces multiple solutions to the issues identified, some of which include timely and complete information for each I.D., links/pdfs of their respective application forms, and appointment scheduling to avoid long wait times. It would also include I.D. tracking so that the user knows exactly where and when they will get their I.D.

Current Prototypes

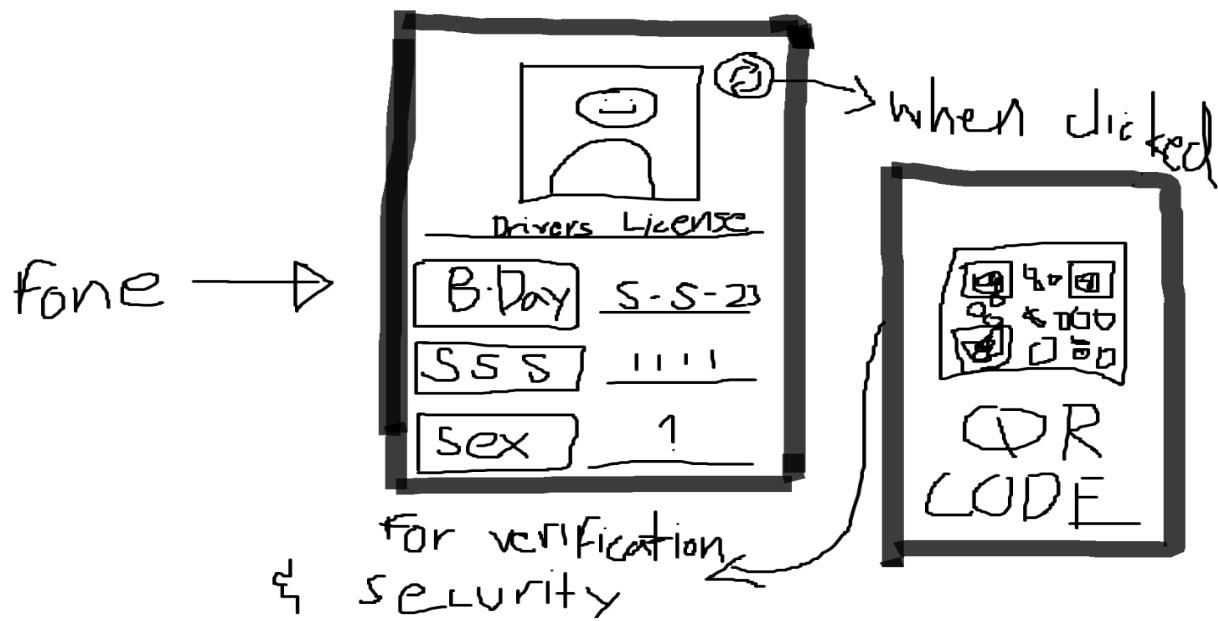
Given the solutions discussed above, the group then created the beginnings of low-fidelity prototypes through Canva drawings. These sketches are presented below.

Prototype 1: Phone App

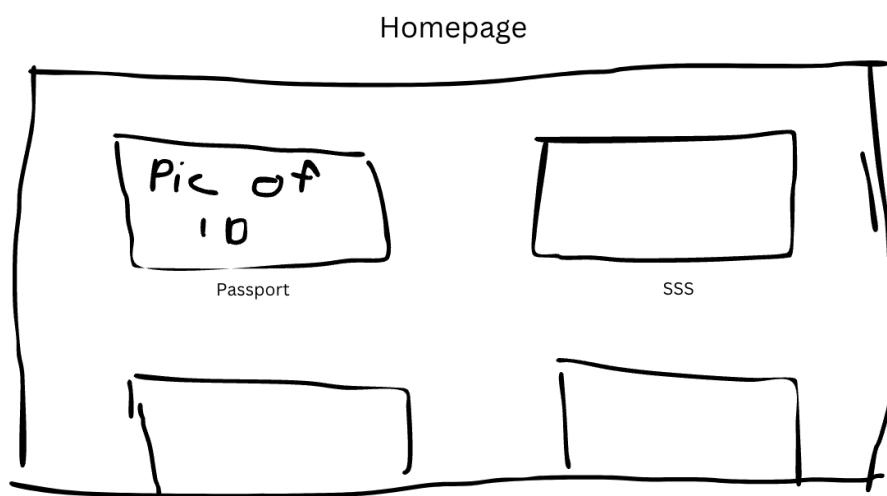




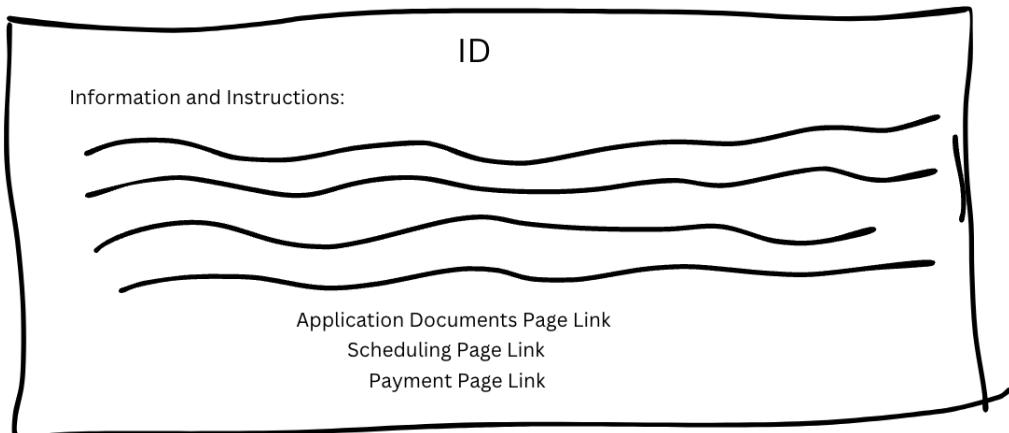
Prototype 2: Digital ID



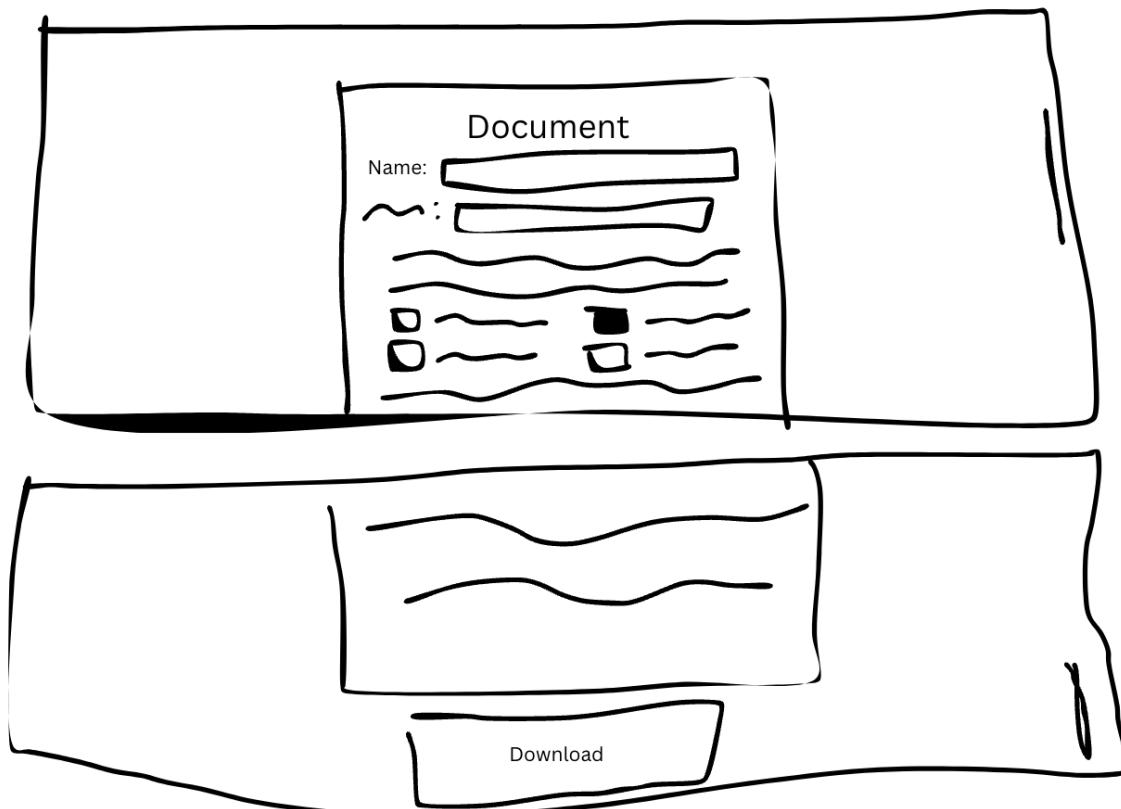
Prototype 3: Website



ID Main Page



Application Documents Page



Scheduling Page

January 2024							
S	M	T	W	T	F	S	
31	1	2	3	4	5	6	
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30	31	1	2	3	
4	5	6	7	8	9	10	

Time Slots:

7:30am - 8:00am

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~~~~~  
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Confirm

Updated Prototypes

Using the initial set of prototypes, the group sketched out a cleaner design that was evaluated through usability testing and design critiques from target users. The figures below display the current prototype.



Figure 1. Navigation of Pages

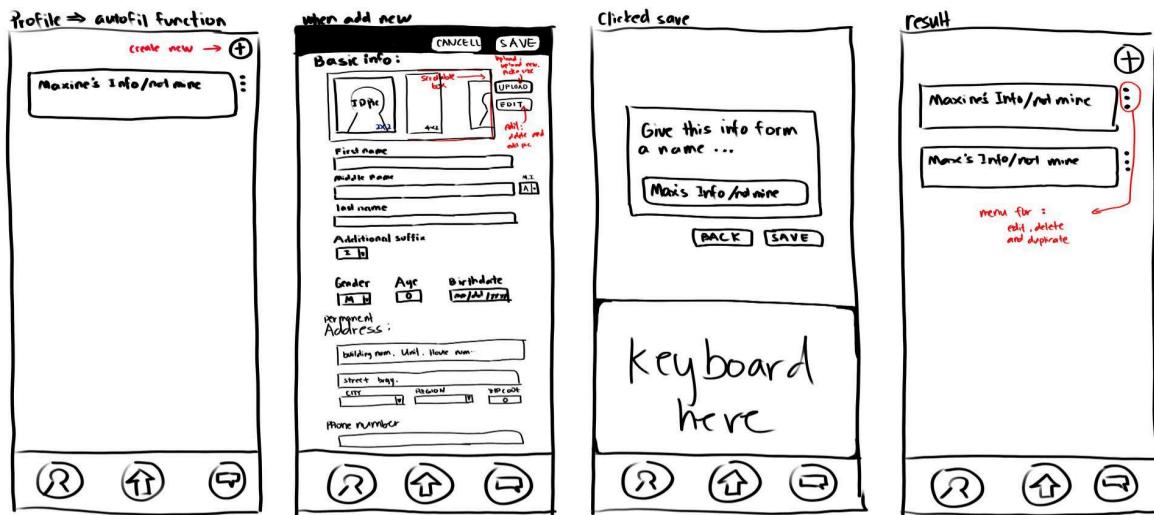


Figure 2. Auto-Fill Feature

Home: when clicked an ID to apply

After Clicking Next:

After review Info:

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

Submitted:

Figure 3. ID Application Feature

Application in Progress:

My Pouch:

When Clicked In On Pouch:

QR:

Figure 4. Digital ID Feature

The figures above were divided into four different themes to focus on: (1) Navigation of Pages, (2) Auto-Fill Feature, (3) ID Application Feature, and (4) Digital ID Feature.

Feedback

The data was collected through a usability test where respondents had to carry out a task and a design critique from target users. The feedback follows the four themes mentioned above alongside additional features, including any recommendations they may have.

Navigation of Pages

For the Navigation of Pages, the common critiques and/or recommendations received by the testees accumulate to these main points:

- The Notification Button: The current prototype used a chat icon for the notification page/button, which was misleading and confusing for many users.
- Sorting/Filtering: A few testee's recommended adding a sorting or filtering feature to the notification page such as "Read, Unread, All" and 'Oldest to Newest', and the Home Page such as 'DOH', 'DepEd', etc. in order to make navigation easier.

Auto-Fill Feature

For the Auto-Fill Feature, the common critiques and/or recommendations received by the testees accumulate to these main points:

- Confusing Design: Many of the testee's misunderstood the auto-fill feature's page. One thought that you could set multiple auto-fill inputs for different people. Another believed that there were multiple auto-fill options for different applications.
- Linking Info: One testee recommended linking accounts with Google in order to get pre-saved auto-fill information. Another recommended letting the user apply for an ID and before submitting, a pop-up may appear asking the user if they would like to save the info inputted to their auto-fill page. This way, there is no longer a need to navigate towards the auto-fill page on their own.

ID Application Feature

For the ID Application Feature, the common critiques and/or recommendations received by the testees accumulate to these main points:

- Eligibility Feature: A testee recommended an eligibility feature. Since the app is already given basic information (ex. Birthday, nationality, etc.), if a user attempts to apply for an ID and the requirements imply that they are not eligible to apply as of now (ex. Minimum age to apply is 18 but the user is 17), instead of wasting time filling up the form, the app itself can prevent the user from applying by telling them they are not eligible.
- Display of Available Slots: A testee critiqued the lack of detail in the 'Set an Appointment' section. They suggested adding information about available slots + how many people have already set an appointment for certain dates.
- Progress: One testee recommended the use of both words and colors to indicate if an application is in Progress, Completed, or Abandoned.
- Removal of Payment Option: Since many IDs do not offer online payments and this is not necessarily included in the focused design problem, it would be better to remove this feature for now and focus instead on the other features.

Digital ID Feature

For the Digital ID Feature, the common critiques and/or recommendations received by the testee's accumulate to these main points:

- Security: There were some concerns regarding security issues with having a digital ID. A user suggested having a stronger security feature, not only for the Digital ID portion but for the app as a whole. This includes having options in the settings page for choosing 2 possible security options. (ex. Pin, Biometrics (finger print), SMS OTP, 2 FA, etc.)

Additional Features

For the Additional Features, the common recommendations received by the testee's accumulate to these main points:

- FAQ Page: In order to address some common issues or confusions had by the users when using the app, it would be helpful to add a Customer Service or FAQ page.
- Simplicity: Multiple testee's recommended a simpler UI in order to accommodate the older generation of users.
- Dashboard: Users recommended the implementation of a dashboard on the home page instead of searching through IDs immediately in order to provide ease of navigation.
- Tutorial Feature: a few testee's recommended the implementation of a short tutorial feature upon downloading and using the app for the first time. They also recommended having that information function readily available to bring up again when needed.

Conclusion

Based on the rapid testing of the prototypes, the group has discovered that the proposed solution has demonstrated usability and shows promise with how the current testees appreciate features like the auto-fill, digital ID, and the more convenient ID application.

However, the tests have also brought areas for improvement into light, such as the navigation system needing refinement and clarification, especially with the notification button and sorting/filtering options, the auto-fill feature being confusing and easily misunderstood, and even possible security issues that should be addressed by incorporating more robust security features. The group should also consider the users' demographics since when the survey was conducted, it was evident that different demographics have different expectations and experiences when applying for IDs.

Some testees have also given us suggestions for additional features such as a FAQ page, simplified UI for elderly users, a dashboard to briefly see an overview of a user's information, and a tutorial.

From this experience, the following steps to be taken are summarized into three main points:

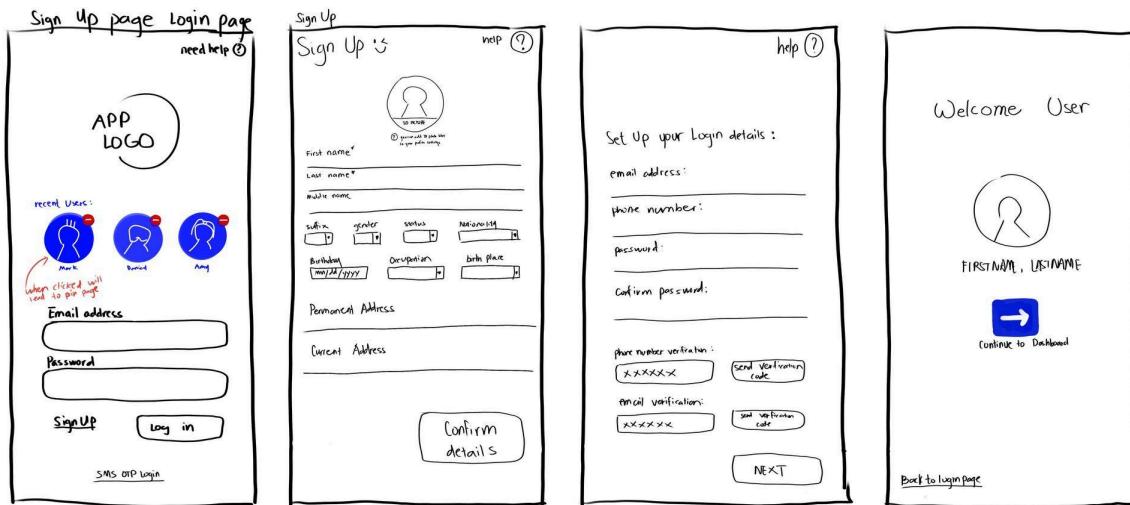
1. Refinement of the prototype based on testee feedback;
2. Brainstorming possible security measures and safety enhancements;
3. Consider adding and removing some features that will help streamline the final product and make it more effective, efficient, and focused on our design problem.

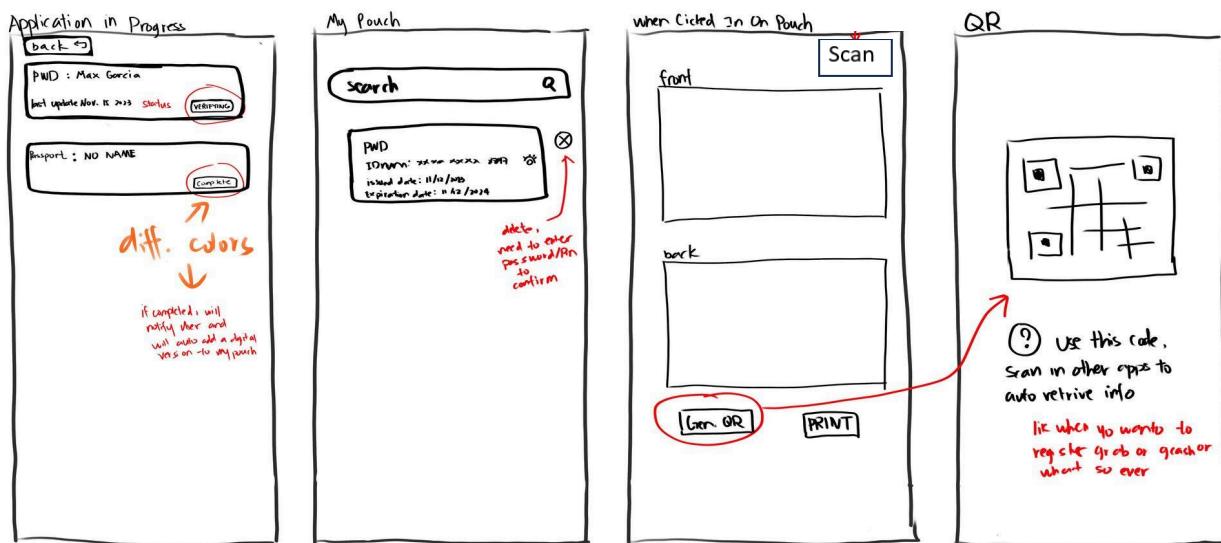
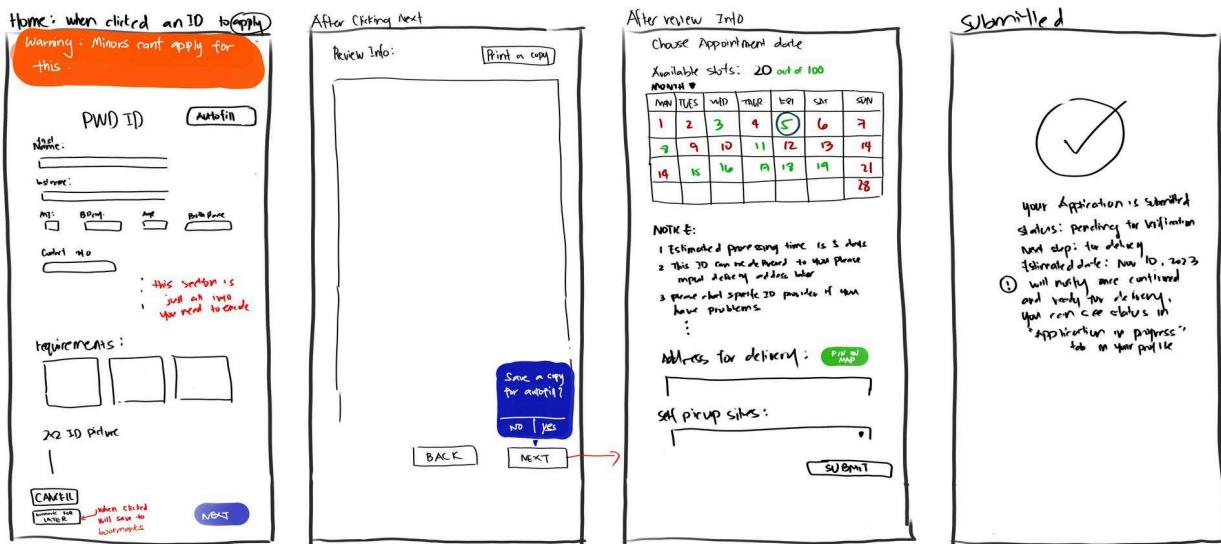
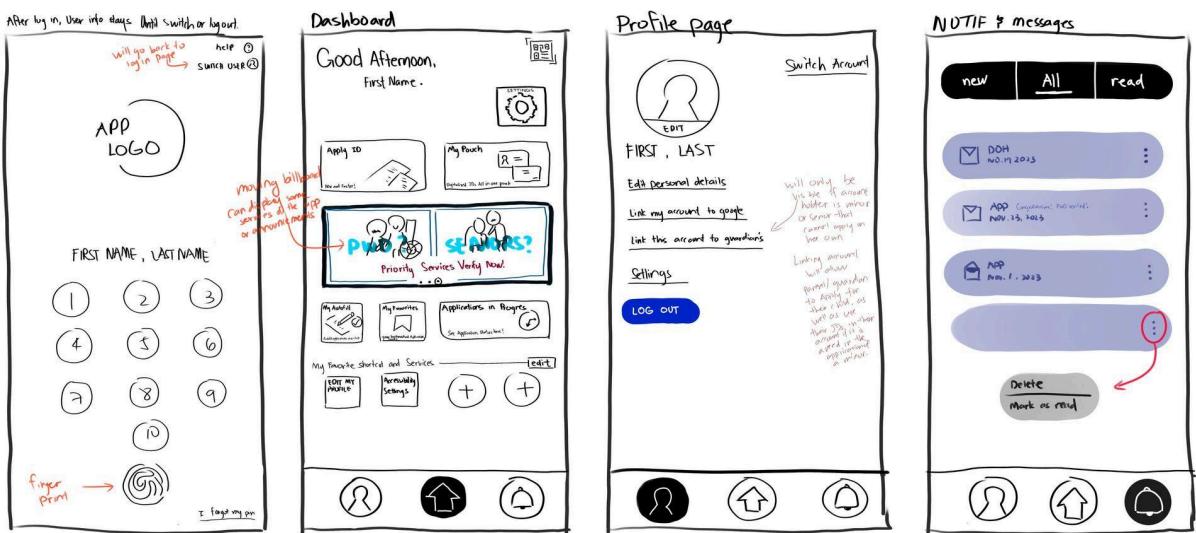
The results of these tests showed that while the prototype's design is intuitive and straightforward, there is still much room for improvement. The following design must display a more straightforward navigation system, particularly when accessing the notifications page. Some recommendations highlight the need to make the design easily understandable to different demographics, whether to adjust the size and spacing of text and include a FAQ page or tutorial feature to guide users through the process.

These successes and failures are helping us incrementally move forward with solving our focused design problems since we are combating a lack of information by consolidating and compiling pertinent information in this application, and we are replacing unresponsive websites with this convenient and user-friendly alternative. We have gathered some thoughts on security issues and will start brainstorming possible solutions soon.

In summary, while the proposed solution has demonstrated notable strengths, the iterative process is essential for refining features and addressing user feedback. The identified improvements, including adding and removing some features, will contribute to developing a more effective, user-friendly, and secure application that will tackle our focused design problems.

Revised Prototypes Based on Feedback





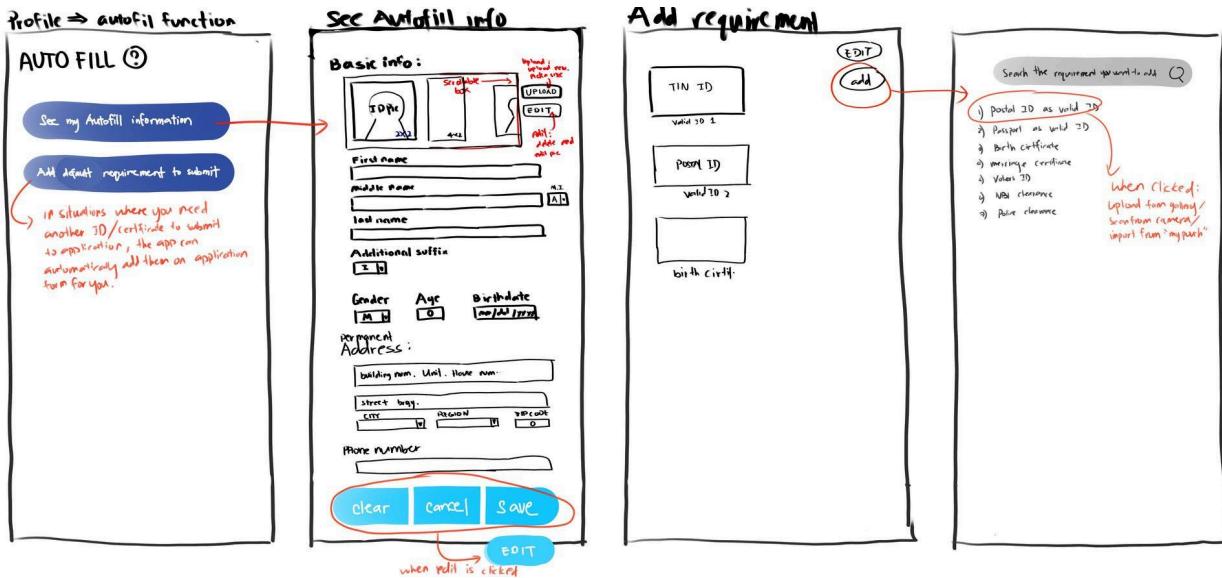


Figure 5. Revised Prototype

Feedback

Given the feedback from the initial test, the prototype was refined to include recommended features, and confusing designs like the notification button, were redone. In addition to that, lacking features such as a filtering system, dashboard, and improved security were added onto the prototype. Data was then collected through a design critique from respondents and target users.

The received feedback follows several themes: (1) Accessibility Challenges, (2) Lacking Key Features, and (3) Streamline Operations. Any design recommendations were also included.

Accessibility Challenges

For Accessibility Challenges, the common critiques and/or recommendations received by the testee's accumulate to these main points:

- Small Text and Information Overload: Notably, three of the respondents felt intimidated by the design due to the small text. This may result from there being too much information on one screen, especially when registering as a user for the first time.
- Accessibility Settings: A respondent recommended implementing accessibility settings that will make icons and text bigger for those with trouble reading or seeing such as the elderly and PWDs with vision impairments.

Lacking Key Features

For Lacking Key Features, the common critiques and/or recommendations received by the testee's accumulate to these main points:

- Search for an ID: A respondent noted the lack of an Apply ID page. They referenced a page from an earlier prototype (Figure 1, second image) and suggested bringing it back.
- Settings: Another respondent noted that there was no way to set up the PIN. Upon further inspection, there seemed to be no settings page in the current prototype.

Streamline Operations

For Streamline Operations, the common critiques and/or recommendations received by the testee's accumulate to these main points:

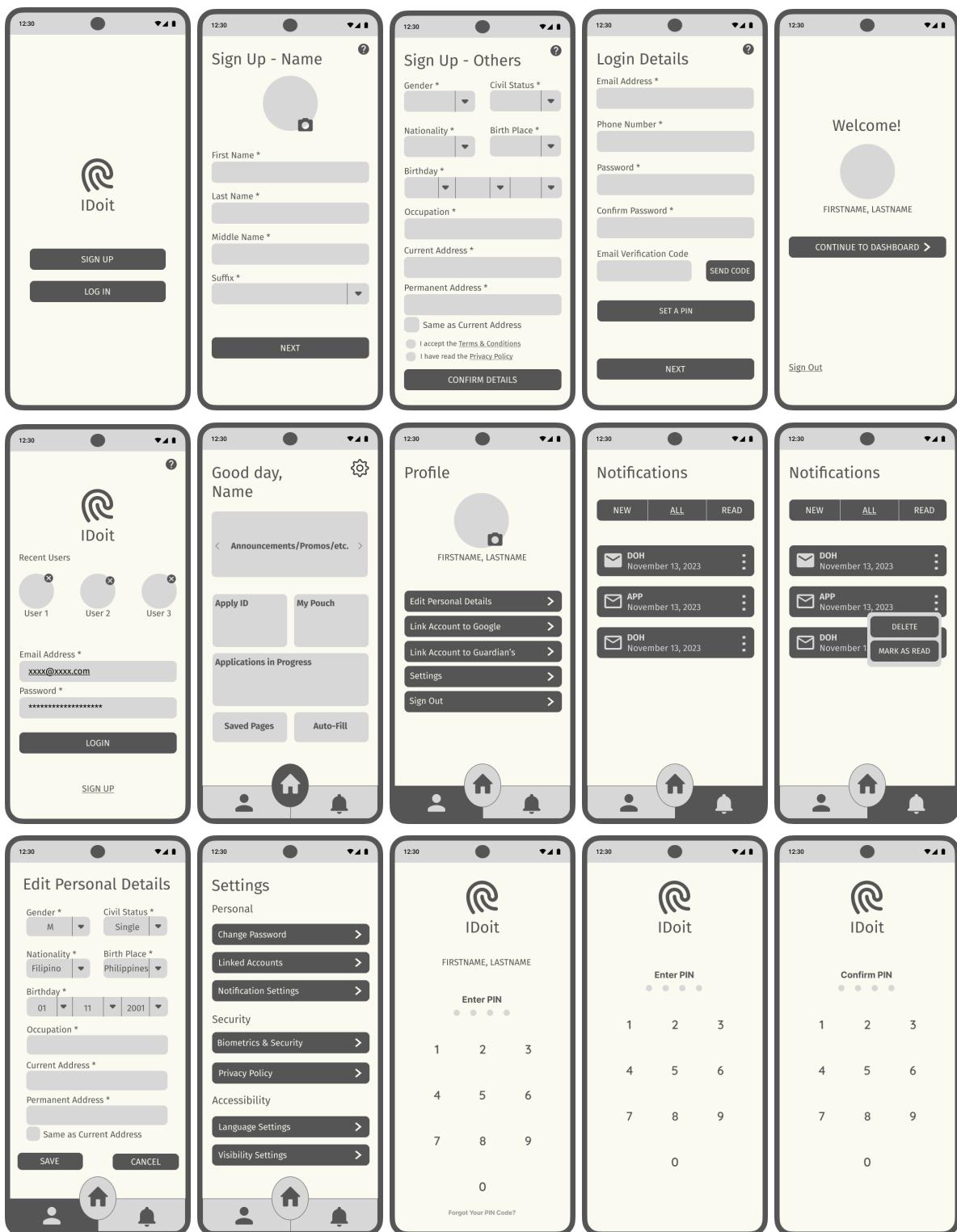
- Efficient Auto-Fill Feature: A respondent suggested that it would be more efficient to import personal information during the user's registration process to the Auto-Fill Feature.
- Generation and Scanning QR Code: Another respondent seemed to be confused with the QR code generation as there were two options for it. This was a design mistake, as the button to the top right was meant to be for scanning. In this way, a QR code can be generated for institutions and organizations to scan and accept as a valid ID. Meanwhile, a user can scan another person's QR code to retrieve information from it.

Design Recommendations

For the Design Recommendations, the common recommendations received by the testee's accumulate to these main points:

- Enhance User Experience: To optimize the experience of users, the respondents recommended:
 - Redesign of Pages: They noted that numbered lists for the Add Requirements interface may not be as appealing. Additionally, they suggested changing recent users from the Login Page to IDs that a user can apply for. For ergonomic purposes, the respondent also suggested swapping the notification and profile button, as the profile button may be used more. They also noted that the favorites feature may be redundant.
 - Sorting Filter: A respondent suggested that notifications could be sorted by sender, date, and level of importance.
 - Labeling and Descriptions: It was suggested to rename "My Pouch" as this was not intuitive for Filipinos. Adding titles over IDs, more details for setting an appointment, and a short overview of required documents was also recommended to guide and enhance user experience.
- Validation Processes: It was recommended to place a confirmation of details at the end of registration or ID application. They also noted that further validation should be made to check if a user is minor or not.
- Nitpicks: A respondent noted some design nitpicks, such as adjusting the placement of buttons, and the use of 2x2 rows in viewing saved documents and requirements.

Mid-Fidelity Prototype



Apply for an ID

12:30

WARNING: Minors can't apply for this.

Application PWD ID

AUTOFILL

15% completed

First Name *

Last Name *

Middle Name *

Suffix *

NATIONALITY *

BIRTH PLACE *

BIRTHDAY *

NEXT

SAVE PROGRESS

CANCEL

CONFIRM

SAVE A COPY

CANCEL

Review Info

12:30

SAVE COPY

Lorum ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

NEXT

BACK

Review Info

12:30

SAVE COPY

Lorum ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Save a copy for autofill?

YES

NO

BACK

Choose Appointment Date

12:30

NOTICE:

1. Lorum ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
2. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
3. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Delivery Adress *

SUBMIT

GO BACK TO DASHBOARD

Application Submitted

12:30

✓

My Pouch

12:30

SEARCH SOMETHING

PWD

ID Number: 12345-678-900

Issued date: 11/12/2023

Expiration date: 11/12/2024

PWD

12:30

SCAN

Front View

Back View

GEN QR

PRINT

QR Code

12:30

Scan this QR code to automatically retrieve your information.

Autofill

12:30

See my Autofill Information

Add default requirement

Autofill Basic Info

12:30

First Name *

Last Name *

Middle Name *

Suffix *

Gender *

Civil Status *

Nationality *

Birth Place *

Birthday *

EDIT

DELETE

Autofill Default Requirements

12:30

Valid ID 1

BIRTH CERTIFICATE

ADD



Figure 6. Mid-Fi Prototype

Feedback

As the feedback from the revised prototype highlighted difficulties in navigating a lo-fi design, a mid-fi prototype on Figma was made. This implements comments from the revised prototype, such as the addition of a settings page and a clearer design for the add requirements page. Feedback for this mid-fi prototype was collected through a design critique and usability test from respondents and target users. The feedback from this test focused on details and slight navigation issues.

Lacking Details

For Lacking Details, the common critiques and/or recommendations received by the testee's accumulate to these main points:

- **Specify Input:** The registration process seemed to lack details that made input clearer. For example, a respondent noted that it should be stated that there is an option if there is no suffix in the name, or specify the format of birth. Additionally, they noted to specify how a picture for the ID must be taken, such as having a plain background.
- **Efficient Process:** Other than automatically sending input from registration to the auto-fill information, it was suggested by a respondent that during the application process, the fields should already be filled up. There should also be an option to remove completed IDs from the application in progress page.
- **Missing Details:** Several respondents noted that there were lacking details in the application for an ID. For instance, there should have been a page to pay for the ID at its completion. One noted that there was a missing field to check if an applicant has a disability. Another respondent also suggested that there should be an extra description to note if an ID requires an interview.

- Providing Disclaimers: A respondent suggested placing a disclaimer to explain the purpose of the pin number.

Navigation Issues

For Navigation Issues, the common critiques and/or recommendations received by the testee's accumulate to these main points:

- Navigating ID Application: A respondent commented that they were unsure what page they are taken to after applying for an ID. This is not clearly seen in the current prototype.

Label and Aesthetics Prototype





Row 1:

- QR Code**: Scan this QR code to automatically retrieve your information.
- Autofill**: Set up my Autofill Information > Add default requirement >
- Autofill Default Requirements**: Valid ID 1, Birth Certificate, ADD
- Autofill Basic Info**: First Name *, Last Name *, Middle Name *, Suffix *, Gender *, Civil Status *, Nationality *, Birth Place *, Birthday *

Row 2:

- Enter PIN**: Enter PIN
- Confirm PIN**: Confirm PIN
- IDoit**: Recent Users: User 1, User 2, User 3
- Applications In Progress**: PWD ID: JUAN DELA CRUZ (VERIFYING), PASSPORT: NO NAME (COMPLETE)
- Apply for an ID**: Search something, PWD ID (APPLY), Postal ID (APPLY), PhilHealth ID (APPLY)

Row 3:

- PWD ID**: requirements:, Additional Info:, APPLY, SAVE
- Saved Pages**: Search something, PWD ID (PAGE)
- PWD ID**: requirements:, Additional Info: (This id expires every 2 years), APPLY, SAVE
- Save this Information**: Save it a name..., QWERTYUIOP, ASDFGHJKL, ZXCVBNM
- Saved Pages**: Search something, PWD ID (PAGE), How many years before renewal of PWD (TEXT)

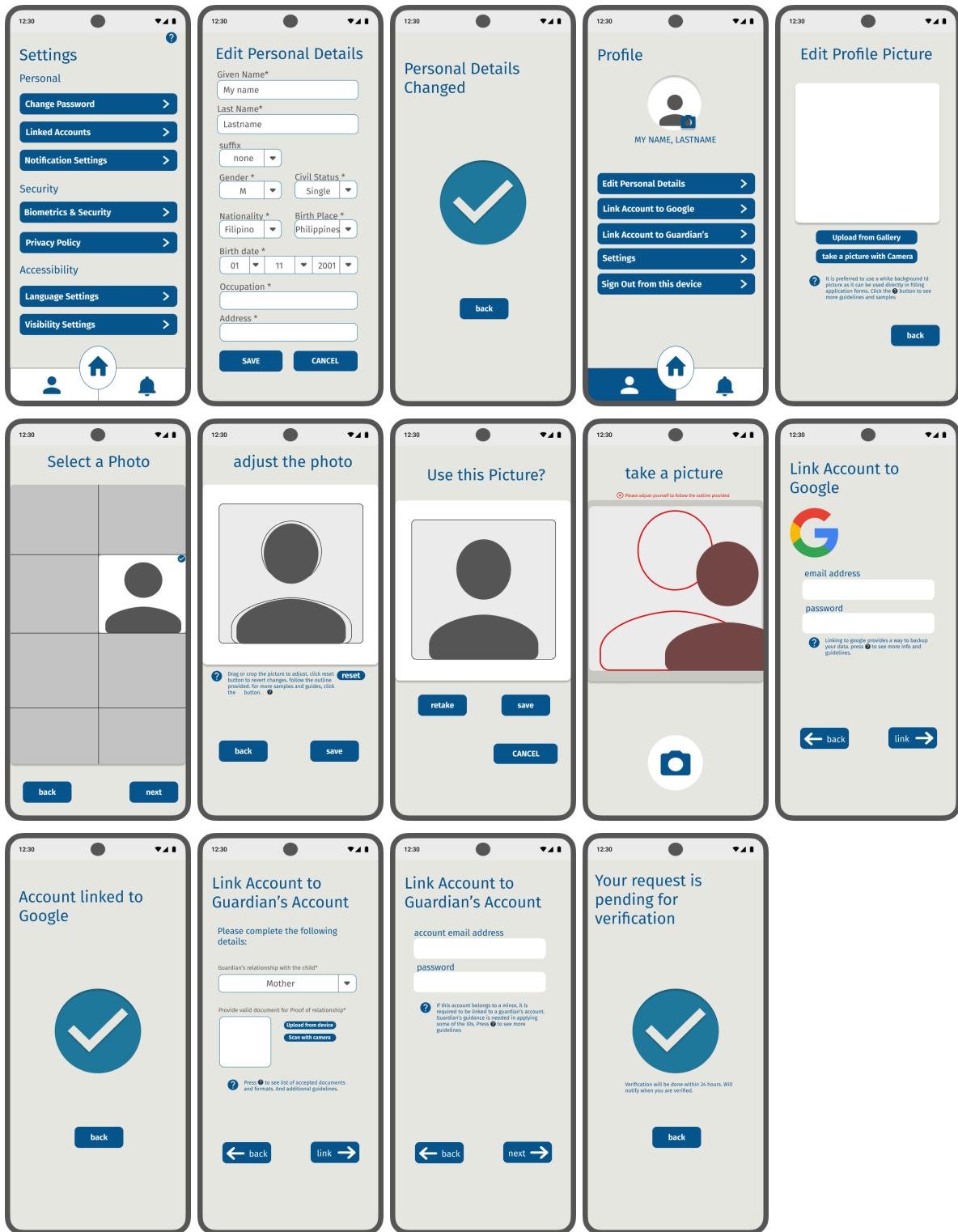


Figure 7. Labels and Aesthetic Prototype

Feedback

For this iteration, some common critiques concerned confusing labels and recommended titles. The testees noted the following icons and labels.

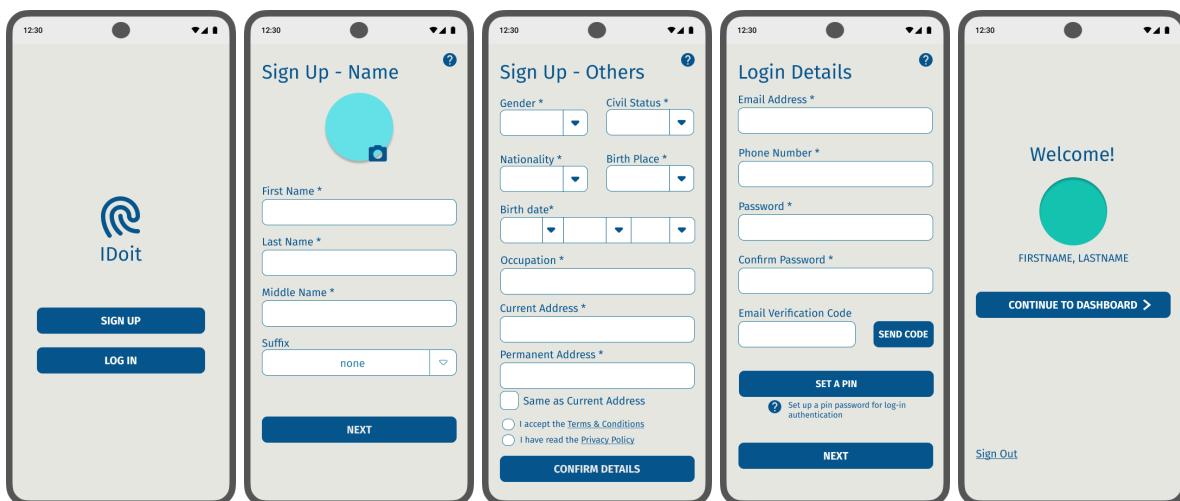
- Eye Icon: A respondent commented that they did not understand the use of the eye icon in "My Pouch" when viewing the ID number.
- My Pouch Label: Many respondents stated that they could not navigate to the page displaying currently owned IDs as this is labeled "My Pouch." One respondent noted that it was not intuitive and somewhat confusing.
- Birth Date Label: For formality purposes, using birth date instead of birthday during registration was recommended.
- Crowded UI: Testees noted that one to two views were crowded and hard to read due to how much was going on inside one screen.
- Big UI / Font Size: Multiple people commented that the font / UI was a bit big. However, one noted that it might be beneficial, especially for elderly users.

Some testees also commented on a few functionalities and improvements that may be done for the app, such as:

- Phone Verification: A testee noted that we should open options for other possible 2FA choices when signing in.

With that being said, there were multiple commendations in regard to the color choices, aesthetics, and overall labeling of the app. Though some areas need improvement and a few nitpicks from the testees were undoubtedly present, the general consensus was that the UI is intuitive, understandable, easy on the eyes, and responsive.

Final Prototype

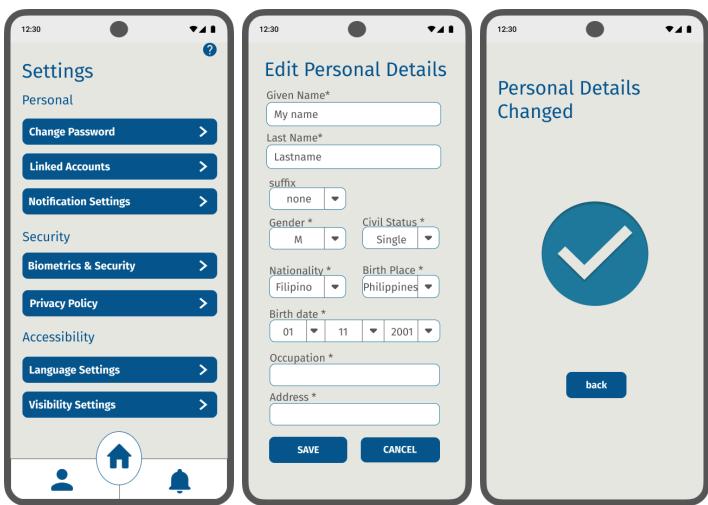
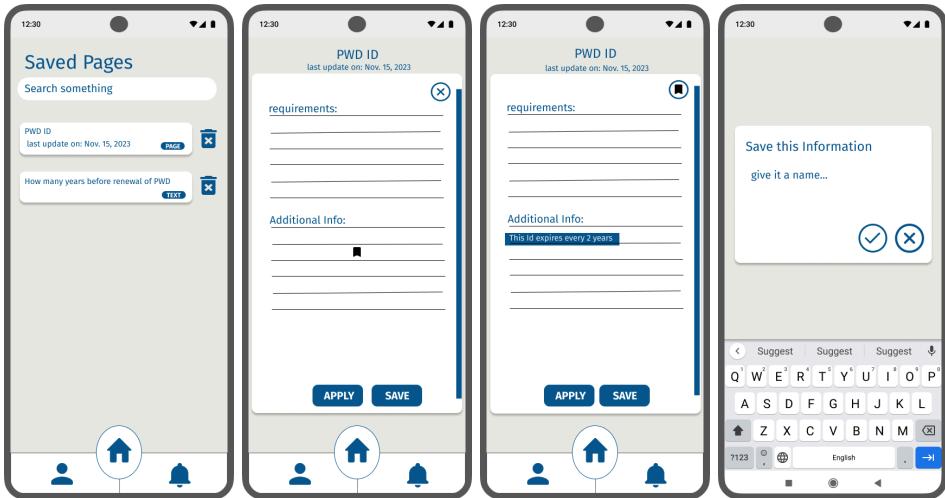


The image displays a 4x5 grid of 20 mobile phone screens, each showing a different page of a digital ID application. The screens are arranged in four rows and five columns.

- Row 1:**
 - Dashboard: Shows 'Good day, Name' at the top, followed by sections for Announcements/Promos/etc., Apply ID (with icons for smartphone and QR code), Applications in Progress (loading icon), Saved Pages (with info icon), and Auto-Fill (with gear icon). Bottom navigation includes Home, Profile, and Notifications.
 - Profile: Displays 'FIRSTNAME, LASTNAME' with a camera icon. Below are options: Edit Personal Details, Link Account to Google, Link Account to Guardian's, Settings, and Sign Out. Bottom navigation includes Home, Profile, and Notifications.
 - Notifications: Shows three notifications: DOH November 13, 2023, APP November 13, 2023, and DOH November 13, 2023. Actions: NEW, ALL, READ, DELETE, and MARK AS READ. Bottom navigation includes Home, Profile, and Notifications.
 - Notifications: Similar to the previous screen, showing notifications and actions. Bottom navigation includes Home, Profile, and Notifications.
 - Application PWD ID: A form with 'WARNING: Minors can't apply for this.' at the top. Fields include First Name, Last Name, Middle Name, Suffix, Gender, Civil Status, Nationality, Birth Place, and Birthday. Buttons: AUTOFILL, NEXT, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
- Row 2:**
 - Application PWD ID: Similar to the first Application PWD ID screen, but with '0% completed'. Buttons: NEXT, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
 - Application PWD ID: Similar to the first Application PWD ID screen, but with '0% completed'. Buttons: NEXT, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
 - Application PWD ID: Shows a progress bar at 100% completed. Below is a decorative graphic of a party hat with confetti. Buttons: CONFIRM, SAVE A COPY, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
 - Review Info: Shows a large block of placeholder text: 'Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.' Buttons: SAVE COPY, NEXT, BACK, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
 - Review Info: Similar to the previous Review Info screen, but with a smaller block of text. Buttons: SAVE COPY, YES, NO, and BACK. Bottom navigation includes Home, Profile, and Notifications.
- Row 3:**
 - Choose Appointment Date: Shows a calendar for December 2023 with a blue circle around the 19th. Below is a 'NOTICE' section with three numbered points. Buttons: SUBMIT and GO BACK TO DASHBOARD. Bottom navigation includes Home, Profile, and Notifications.
 - Application Submitted: Shows a large blue checkmark icon. Buttons: GO BACK TO DASHBOARD, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
 - Application PWD ID: Shows a progress bar at 15% completed. Fields: First Name, Last Name, Middle Name, Suffix, Gender, Civil Status, Nationality, Birth Place, and Birthday. Buttons: AUTOFILL, NEXT, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
 - Application PWD ID: Shows a progress bar at 50% completed. Fields: First Name, Last Name, Middle Name, Suffix, Gender, Civil Status, Nationality, Birth Place, and Birthday. Buttons: AUTOFILL, NEXT, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
 - Application PWD ID: Shows a progress bar at 100% completed. Shows a placeholder '2x2 ID Picture' with a person's face. Buttons: AUTOFILL, NEXT, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.
- Row 4:**
 - Application PWD ID: Similar to the last Application PWD ID screen, but with a smaller progress bar. Buttons: AUTOFILL, NEXT, SAVE PROGRESS, and CANCEL. Bottom navigation includes Home, Profile, and Notifications.

The image displays a 3x5 grid of 15 screenshots from the IDoit mobile application, illustrating its user interface and functionality across different sections.

- Row 1:**
 - My IDs**: Shows a search bar and two card entries: "PWD" (ID Number: 12345-678-900, Issued date: 11/12/2023, Expiration date: 11/12/2024) and "NATIONAL ID" (ID Number: 900-123-678-456, Issued date: 01/30/2020, Expiration date: 01/30/2025). Includes a delete icon and a blue "ADD" button.
 - NATIONAL ID**: Displays the front and back sides of a physical ID card. The front side shows a placeholder profile picture. The back side is blank. Includes "CANCEL" and "ADD" buttons.
 - Scan QR Code**: Shows a QR code with instructions: "Scan QR code to add a digital copy of your physical ID to Pouch". Includes a "Scan" button.
 - QR Code**: Shows a QR code with instructions: "Scan this QR code to automatically retrieve your information." Includes a "Scan" button.
 - IDoit**: Shows the logo and "FIRSTNAME, LASTNAME" placeholder. Includes a numeric PIN entry field (1-9, 0, and a "Forgot Your PIN Code?" link).
- Row 2:**
 - Autofill**: Shows "Set up my Autofill Information" and "Add default requirement" buttons.
 - Autofill Default Requirements**: Shows "Valid ID 1" and "BIRTH CERTIFICATE" items with "EDIT" and "DELETE" buttons, and a "ADD" button.
 - Autofill Basic Info**: Shows fields for First Name, Last Name, Middle Name, Suffix, Gender, Civil Status, Nationality, Birth Place, and Birthday, each with an asterisk indicating required input.
 - IDoit**: Shows the logo and "Enter PIN" placeholder. Includes a numeric PIN entry field (1-9, 0, and a "Forgot Your PIN Code?" link).
 - IDoit**: Shows the logo and "Confirm PIN" placeholder. Includes a numeric PIN entry field (1-9, 0, and a "Forgot Your PIN Code?" link).
- Row 3:**
 - IDoit**: Shows the logo and "Recent Users" section with "User 1", "User 2", and "User 3". Includes fields for "Email Address *" and "Password *", and "LOGIN" and "SIGN UP" buttons.
 - Applications In Progress**: Shows "PWD ID: JUAN DELA CRUZ" (Last Updated: 11-25-2023, status: VERIFYING), "PASSPORT: NO NAME" (status: COMPLETE), and a "GO BACK TO DASHBOARD" button.
 - Apply for an ID**: Shows a search bar and three application buttons: "PWD ID" (status: APPLY), "Postal ID" (status: APPLY), and "PhilHealth ID" (status: APPLY). Includes a "GO BACK TO DASHBOARD" button.



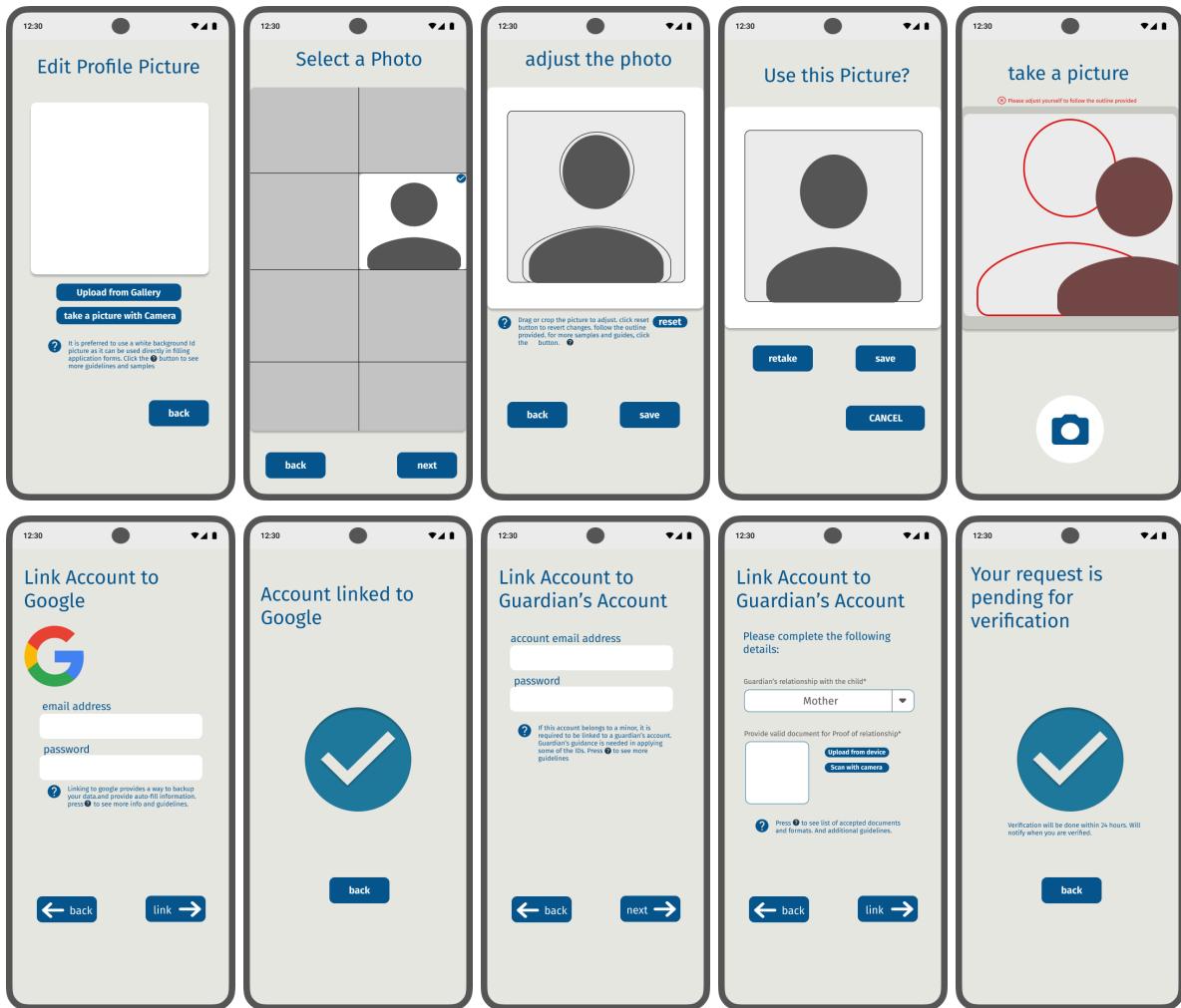


Figure 8. Final Prototype

Evaluation

For the evaluation of the final prototype, the group decided to conduct a Usability Test with six tasks prepared for the testee to experience. The testers took down notes, accepted feedback, and noted any errors throughout the evaluation (appendix e).

In the final evaluation, the testee stated that navigating the application was easy. There was a clear understanding of the different features and buttons. They efficiently accessed the said features and finished the tasks without confusion, aside from one or two understandable errors.

To summarize, when it comes to gauging our solution against the focused design problem, our group is firmly on the "yes, it's a good solution" side. Despite the final prototype's flaws and incompleteness in certain areas, as a group, we are pleased with how our testees reacted to our web app design and idea. While there's definitely some food for thought on how to improve the solution further, it's equally uplifting to note that our proposed solution received its fair share of praise and acknowledgment.

Appendix

a. First Transcript/Summary of Test Runs

i. Harvey Hernandez

1. It did not confuse them at first but when asked about how to get to the notifications page, he was puzzled.
2. The icon for notifications (which is a message) is confusing considering that it brings you to a notifications page.
3. If messages were to be implemented, he suggests using a link to email instead.
4. He also recommends including search filters such as DOH, DEPED, DOST.

ii. Gary Muralla

1. Was confused with the notification button since it is a chat icon.
2. Found the auto-fill functions page unclear as they thought they could set multiple auto-fill inputs for different people.
3. Recommends 2FA for account security.
4. Add a customer service or FAQ section for confused or concerned users.
5. Recommends changing the sorting in the notification page from "New, All, Old" to "All, Unread, Read" and then let them sort by new or old notifications.

iii. Gab Danque

1. Intuitive and straightforward. However, he thought that some pages seemed a bit cluttered and was concerned that it would be difficult for older users to navigate through.
2. Recommends adding more space and making bigger text. Note that he also said this might just be because it was a drawing.

iv. Eugene Guillermo

1. Other than confusion with the home button (thought it was an arrow), he found the prototype to be good.
2. Recommends a starred option and the ability to delete in the mail view.

v. Joseph Dalmacio

1. **Task:** Find the screen/s or page/s that contains the details of the government IDs you currently own.
2. **Results:** The task was completed successfully with little to no difficulty.
3. **Feedback:**
 - a. "Kasi nga wala naman siyang fixed app design so I don't get it yet pero feeling ko pag inayos niyo yung itsura madali na lang rin eh."

- b. "Navigatable naman, so it's easy"
- vi. J.D. Decipeda:
1. **Task:** Find the screen/s or page/s that contains the details of the application process of the government IDs you're currently applying for.
 2. **Results:** The task was completed successfully with little to no difficulty.
 3. **Feedback:**
 - a. "I give the app a 7/10" kasi I mean yeah sure I could navigate it pretty easily pero I'd like it to be even more simpler because there are more people who aren't tech savvy"
 - b. "There should be a dashboard where everything would be there wherein for ID's, you just hover through them and you're gonna see na registering or you're just gonna look at the details which makes it much easier for people to navigate since it's going to be used by everyone."
 - c. "Text bubbles would help per activity or like a repetition of the tutorial but hidden in a sense, like they click a button that reveals how to do a specific thing again."
- vii. Kathleen Tesalona
1. Navigation of Pages
 - a. The notification icon is a bit confusing. For me, it's more appropriate if it's a picture of an envelope or something (like gmail) because the underlying theme or ideas associated with a speech bubble is unprofessional and it implies casual interactions with your friends/relatives, which doesn't really fit the theme of the government ID process, which is a very formal procedure.
 - b. This is if the notification part serves a medium to reply to the government agencies in charge of the process. But if it just serves as merely notifications then just use an image of the classic bell.
 2. Auto-Fill Feature
 - a. What's the purpose of adding multiple autofill profiles, especially if the only common information that changes is your address, marital status, citizenship, age, etc? You could just directly edit this information in one existing autofill profile.
 - b. But overall, I like the concept of the auto-fill feature because it avoids redundant activities like inputting information over and over again.
 3. ID Application Feature
 - a. I think there should be a separate page/part after you click the "apply" button in the home page. The separate page should

constitute which individuals are eligible to apply for the ID and the total requirements needed for the process.

- b. This is especially important in government IDs, such as passports, that need other government IDs in order to continue the application process
- c. If you prioritize or put first the autofill part of the ID process, and the person is not eligible for that ID, then you just wasted the customer's time, which might lead to negative feedback and low satisfaction rates.
- d. I think it's important to include how many slots are available on a specific date for the appointment. Or if this was already included in the plan, maybe include that part in the illustration to avoid misunderstandings.
- e. What if: don't use "not complete" and just use "continue application" because it encompasses the thought na yes you haven't completed the process
 - i. What if you also add colors like: green for completed etc.

4. Online ID Feature

- a. I really like the "my pouch" section because it eliminates the constant need to scan government IDs
- b. I also like the QR code section, since it promotes efficient application for other processes not limited to just ID registration.

viii. Anonymous Testee

1. **Task given:** Use autofill feature in applying for any Government ID
2. **Results:** SUCCESS
3. **Execution process:**
 - a. User went to home, searched for the government ID he wants to apply, went to profile and "create new and fill in necessary detail and then print" [**error**], user had difficulty understanding the features so he asked for help and asked about the function of each [**help**], user then retry the process by going to home again, searched for the ID he wants to apply, save the application page, back to profile then clicked autofill. Created new info then saved, clicked "saved pages" in profile and then clicked the ID he saved a while ago. Click the autofill, choose the correct person info. Then uploaded requirements, clicked next to check final info, clicked next to input appointment and finished payment, then submitted. Went to notifications to see if the agency has received the application. Went to "application in progress" to see the status of the application.

4. Feedback:

- a. implement the save info for autofill when the user is already in the application page. When the user finishes encoding for all information, a pop up can show to ask if the user wants the app to remember the information to be used next time. It's like "do you want google to remember the password?" so that you can reduce the hassle of going back and forth.
- b. change the name of the saved pages feature because it is misleading. Lets people think that it's saving the progress of the application form.
- c. can you put the "my pouch" on top-left? Because your app is only filling in the center.
- d. Maybe put a "new user tutorial" or "help" to guide new users on the feature and functions.
- e. For security purposes, if your app allows multiple information and ID cards of different users, it is not quite secured and it is messy in the "my pouch". If there is one user in one account, and you can have a function to link your account with your relative's so that you can apply for them. Or like netflix, ask who is using it. Then allow switching of users.

b. Second Transcript/Summary of Test Runs

i. Kathleen Tesalona

- 1. I like the added security given by the pin and the sign up/ log in process
 - a. Nice application of the fb-esque sign up/log in page
- 2. The dashboard is easier on the eyes and appears to be easy to navigate
 - a. However, I think it's still important to include the "Apply ID" page since that's the focus of your app (See: Figure 1. Navigation of Pages, 2nd picture from the 1st prototype)
- 3. Maybe include an option to import personal information from the sign up details to the autofill function to increase efficiency
- 4. Good implementation of the warning notification when applying for an ID
 - a. Overall, the online ID application feature had a significant improvement
- 5. In my pouch feature, the presence of 2 "Gen. QR" buttons are confusing, especially the existence of the one in the top right corner.
 - a. If that feature is meant to serve as like an automatic import of a previously made QR code of the ID, then I think it's better to make it like: "Import already scanned ID from QR" or just an "import" button and users can either choose the type of file they are to upload (e.g. QR, PDF, PNG, etc.)

- i. Maybe this way, users can add their previously acquired IDs that did not undergo the ID application process in the app.
 - 1. If this is not the function of the bottom I still think that it's a nice feature to implement in the "my pouch" feature
 - 6. Good addition of the add requirement feature
 - a. However, the interface of the "search the requirement you want to add" could be better as a numbered list isn't appealing for the users
 - 7. Overall, nice improvement on attention to detail in reference to the old interface 
- ii. Tita #1, Tita #2 and Tito #3
 - 1. Did not like the low fid prototype mainly because the text is too small
 - 2. It was so hard for them to understand and was just overall intimidated by it
 - 3. Their response might be better once the high fid design is finished
- iii. Anonymous Testee
 - 1. Instead of recent users on the login page, maybe a suggestion of IDs to apply for or a reminder of IDs they lack based on their profile?
 - 2. Maybe add buttons for login / register before showing the text boxes (nitpick / recommendation)
 - 3. In the end of registration, add something like "I confirm that the details submitted are correct, and I will take responsibility for any misinput"
 - 4. There is no PIN setup for the PIN
 - 5. Maybe add accessibility settings, such as making icons and text bigger for those with trouble reading / seeing, such as elderly or PWDs
 - a. Maybe add a preset that deduces it based on the profile of the user idk
 - 6. UI Suggestions
 - a. Swap notifications and profile buttons (depending on which is more used, place to the right since people are right handed and it might be more ergonomic)
 - b. Move announcement/adverts a bit up
 - c. Settings button to top right w/ QR to the left of it
 - d. Redundant-ish yung favorites stuff
 - e. Sorting option for notifs?
 - i. Sort by sender, date, importance
 - f. Profile page better if centered maybe?

- g. Make some way of double checking if user is minor or not for when it is required
 - i. Require parents or guardian if needed
- h. Instead of print agad, use save a copy first
- i. Add more details for appointment stuff to avoid miscommunication
- j. Maybe change the “My Pouch” name because its not intuitive for Filipinos, the UI is good
- k. Add titles over the IDs so they know what document is featured
- l. Use 2x2 rows on saved docs/reqs
- m. Add a hover or short overview for reqd docs

c. Mid-Fidelity – Usability Tests

There were four tasks that we assigned to the users:

- i. Register for an Account:
- ii. Apply for an ID (PWD ID)
- iii. Find Currently Owned IDs
- iv. Check Pending Applications

These were their responses:

Task 1:

Testee	Notes	Feedback
Kathleen Tesalona	<p>I'm not sure but make sure that it's clear that the suffix part has an option of “no suffix”</p> <p>Make it clear rin if (MM/DD/Y) or whatever format yung birth date</p> <ul style="list-style-type: none"> - It's more formal to use birth date instead of birthday <p>Make a disclaimer what the pin is and ano purpose</p>	
Anonymous Tita		The process is pretty much the same with filling up forms.
Anonymous College Student		It's simple and

		straightforward
Anonymous College Student		Its self explanatory so its basic
Rachel Tejano		Seems easy to do

Task 2:

Testee	Notes	Feedback
Kathleen Tesalona	<p>Put details about ano background dapat ng picture as some IDs are strict about it (i.e. white bg)</p> <p>Note that some IDs require F2F interview or presence so maybe don't go straight to the delivery address</p> <p>Where's the section for paying for the ID</p> <p>How do i leave the autofill basic info?</p> <ul style="list-style-type: none"> • See my autofill info should be changed to "set my autofill information" bcs it's confusing if have not set an autofill option 	
Anonymous Tita	<p>She wants to experience the actual thing and not scroll around because it's a bit confusing</p>	<p>It's actually hard to put a comment here because i haven't really done the real filling up of forms. I wish to go through the real form.</p>
Anonymous College Student		<p>It's easy and simple as well. Nothing too much to handle</p>
Anonymous College Student		<p>Some fields are missing like what disability you have</p>
Rachel Tejano		<p>It would be better if the input</p>

		fields were automatically filled up given the information you had when you registered.
--	--	--

Task 3:

Testee	Notes	Feedback
Kathleen Tesalona	What's the point of the eye icon? What does it do or what does it mean for the user? What do I click in order to view the ID in the pouch?	
Anonymous Tita	She got confused with the labeling because she expected the label to be called "Currently Owned ID's"	I was expecting to find a list of ID's to choose from. Since I saw none, I got lost in the process.
Anonymous College Student		It was a struggle at first because it was labeled my pouch, it's not as straightforward
Anonymous College Student		Easy to find and straightforward
Rachel Tejano		Did not find it, did not understand that it was called the pouch.
Gary Muralla		Thought that the name "My Pouch" was confusing and not intuitive.

Task 4:

Testee	Notes	Feedback
Kathleen Tesalona	<p>Where will the app take me after I click the PWD ID in the application in progress part? Does it take me to the page where I left off so to apply or is it even clickable?</p> <p>There should be an option to remove the completed IDs because the completed IDs flood the page once you applied to a lot of IDs</p>	
Anonymous Tita	Didn't want to do testing anymore because she got frustrated	
Anonymous College Student		It's easy and simple as well.
Anonymous College Student		It's also easy, it's there when its there, i don't know what to say
Rachel Tejano		It is easy to do.

d. Labels and Aesthetics Test Run

i. Anonymous Father

1. Prefers phone verification over email verification. OTP rather than email code. Keep options open.
2. Is there option to recover pin if someone forgets?
3. Doesn't understand meaning of My Pouch.
4. Briefly got confused by bell icon but conceded that bell icon is common with notifications.
5. Found that the aesthetics was good. Not too much going on. Very clear cut. Liked the blue colors.

ii. Anonymous Tita

1. The labels are clear and there's adequate space. The design is not irritating to the eyes as well as the color. It's not like those designs where just by looking at it you will feel lazy to do the process.

- iii. Anonymous College Student
 - 1. Right off the bat the first row third screen to the right UI is super crowded
 - 2. I like the aesthetic, the simplicity of the design is easy to the eyes
 - 3. I think it's pretty straightforward in most parts, Some parts just need context clues
 - 4. The warning sign should be a bit more loud. It doesn't fit the function of a warning sign.
- iv. Anonymous College Student 2
 - 1. Pad autofill text a bit on the left side
 - 2. One title had pink outlines
 - 3. Also got confused on the function of my pouch, thought it was for coins or payment or something, maybe rename to My IDs
 - 4. Thinks that the bg should be light blue like gcash
 - 5. Hello y/n should maybe use a different font, preferably something bold.
 - 6. Font color could be a bit lighter because it kind of feels dull.
 - 7. Home button is a bit misshapen.
 - 8. Navbar feels a bit thick.
- v. Anonymous College Student 3
 - 1. Font and UI size is a bit big but that might be good for older users.
 - 2. Good choice on the colors, reminiscent of the SSS color palette, might be useful for users to associate this w ID applications.

e. Final Prototype – Usability Test

There were six tasks assigned to the users:

- i. Register for an Account
- ii. Apply for an ID (PWD ID)
- iii. Find Currently Owned IDs
- iv. Check Pending Applications
- v. Set a new Profile Picture
- vi. Link to a Google Account

Task 1: Sign up for an account.

Imagine you are a first time user of the app, and you want to register for an account. Can you try doing that now?

Task: Register for an account. Proceed until you get to the Welcome! page.

- Follow Up - Ask them to press sign out, then have them try logging in.

Testee	Notes	Feedback
Anonymous Mother	Error: initially didn't think to set a pin	Straightforward, easy

Task 2: Apply for an ID (PWD CARD)

Now that you are successfully a user of IDolt, can you try to apply for an ID.

Task: Apply for a PWD card successfully.

- Follow Up - Have them try it again but this time they should use the Autocomplete Feature.

Testee	Notes	Feedback
Anonymous Mother	Straightforward, no issues	No errors, asked what autocomplete was

Task 3: Find Currently Owned IDs

After successfully getting IDs or adding IDs you currently own, you would be able to view them in the app. Try finding out where your currently owned IDs are.

Task:

Testee	Notes	Feedback
Anonymous Mother	Easily done, no errors	

Task 4: Check Pending Applications

While waiting for your applications to be accepted, the app should have a way of letting you know of the current status of your applications. How do you think we implemented this?

Task:

Testee	Notes	Feedback
Anonymous Mother	No issues, no errors	Was confused abt juan dela cruz name briefly

Task 5: Set a new profile picture.

To make your account more personalized, you would normally try to set a profile picture, which in this case would also help identify you as the true owner of the IDs stored within the app.

Task:

Testee	Notes	Feedback
Anonymous Mother	Error: initially went to edit personal details. Went back and then clicked the camera button on the profile pic	I had no idea at first haha

Task 6: Link to Google Account

Nowadays, it is common for apps to link accounts to the users Google Accounts for convenience and added security. How would you go about doing this in the current prototype?

Task:

Testee	Notes	Feedback
Anonymous Mother	Since already on profile page, straightforward process	Button is right there, easy to understand.