



UNIVERSITY OF BELIZE FORMFLOW

LOW-FI PROTOTYPING &
PILOT USABILITY TEST



CMPS3141-P05-25S1
PHASE 5

PREPARED BY:
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Tysha D.
Jennessa S.

DATE:
18 OCTOBER, 2025

Declaration of Use for Generative AI in Assessments

I hereby declare that in the planning, drafting, and/or revision of the work attached, I have made use of Generative AI tools in the following ways:

Acknowledgement of Generative AI Tools Used

- | | |
|---|--|
| <input checked="" type="checkbox"/> For brainstorming, | <input type="checkbox"/> To generate translations of primary/secondary source content for consultation. |
| <input type="checkbox"/> To find sources. | <input type="checkbox"/> To generate translations included in the submitted work, whether or not manually revised. |
| <input type="checkbox"/> To plan the structure/outline of the work. | <input checked="" type="checkbox"/> To improve the language of my own phrases, sentences, and/or paragraphs. |
| <input type="checkbox"/> To generate programming code. | <input type="checkbox"/> To generate the text of (part of) the submitted work. |

Acknowledgement of Assessment Submission

I, [Andres Hung](#), [Jennessa Sierra](#), and [Tysha Daniels](#), hereby confirm that on **October 16, 2025**:

1. I am the author of this submitted document.
2. I am responsible for any AI-generated errors or fabrications.
3. I understand the limitations and risks of using AI.
4. I used AI tools ethically, protecting all sensitive information.
5. I ensure any AI-assisted work remains originally my own.
6. I have appropriately acknowledged all use of generative AI.
7. Undeclared AI use constitutes academic dishonesty, which I acknowledge.
8. I am accountable for any resulting academic misconduct.

Add more rows to the table as needed to include ALL tools used in the creation of your assessment submission.

| Generative AI Tool Used (Please List Each Separately) | Purpose of Use | Briefly Explain the Extent of Use |
|--|-----------------|--|
| ChatGPT (Free) | Idea generation | Used for getting ideas for the pros and cons of the top two designs and brainstorming design variations for a web application. |
| Grammarly (School) | Editing | Grammar and typo fixes. |

Student Name: Andres Hung, Jennessa Sierra, Tysha Daniels

Course Code: CMPS3141

Signature: 

Student Id: 2018118240, 2021153908, 2023158020

Department: MPIT

Date: October 16, 2025

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1) Introduction

Value Proposition

UB FormFlow - Your forms. On-time. Hassle-free.

Mission Statement

UB FormFlow aims to enhance the form experience for students at the University of Belize, whether new or familiar. Through augmenting the existing form process, greater efficiency is achieved not only for students but also for faculty and staff.

Problem & Solution Overview

Students often struggle to find the correct forms at the right times, and when they do submit a form, uncertainty presides in its status and progress. UB FormFlow consolidates relevant forms and provides students with a central hub for tracking their forms.

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2) Sketches

Design Ideas

Web Application: Dashboard

Figures 2.1 to 2.3 show a Web Application design using a dashboard. The primary parts of the design have a header and a sidebar.

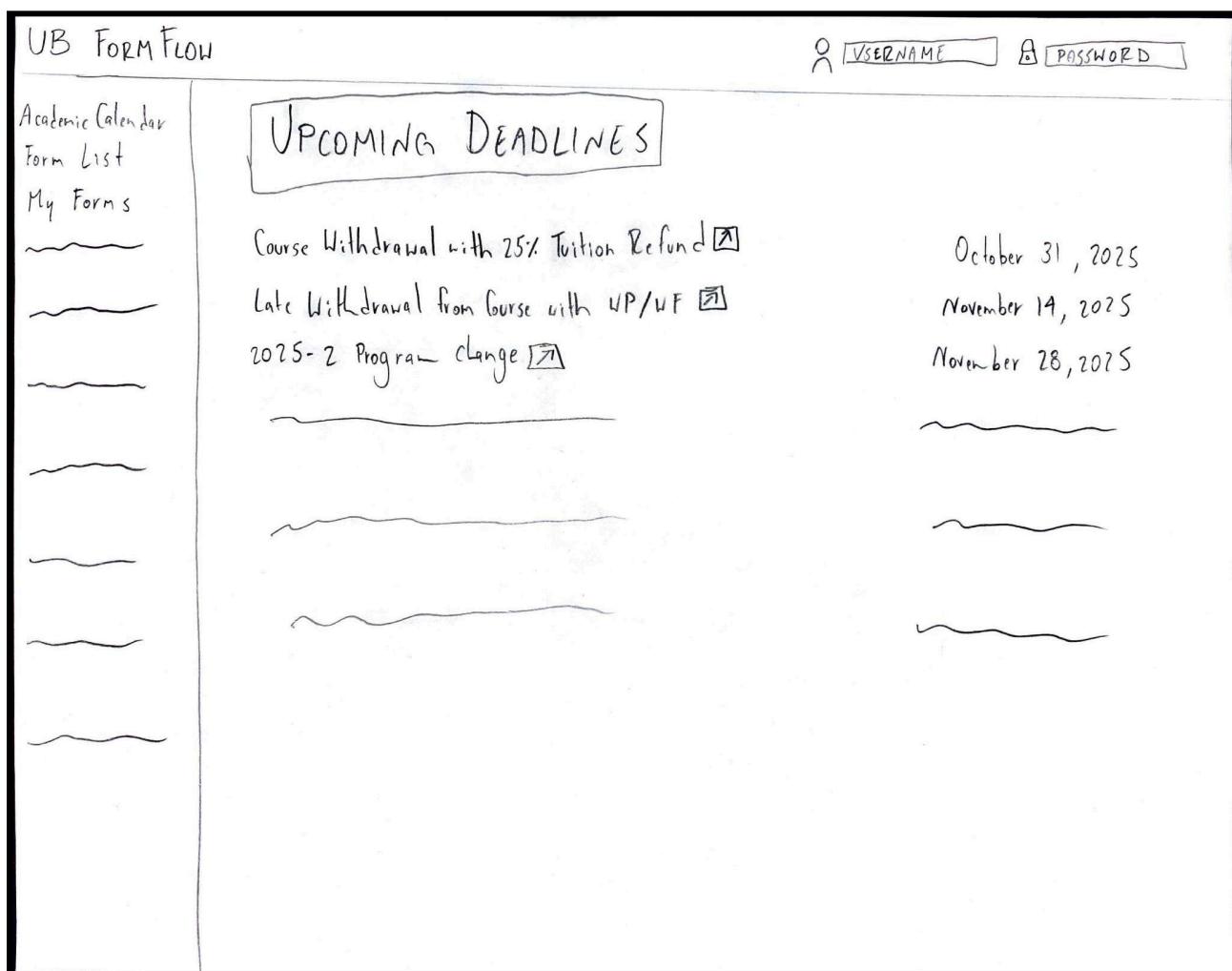


Figure 2.1 - Sketch showing upcoming deadlines.

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UB FORM FLOW

| FORM | DATE | STATUS | RECEIPT |
|--------------------|------------|-------------|-------------------------------------|
| Withdrawal | 19/10/2025 | In Progress | <input type="checkbox"/> |
| Program Completion | 7/09/2025 | Complete | <input checked="" type="checkbox"/> |
| | | | |
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Figure 2.2 - Sketch showing the history of submitted forms in a table format

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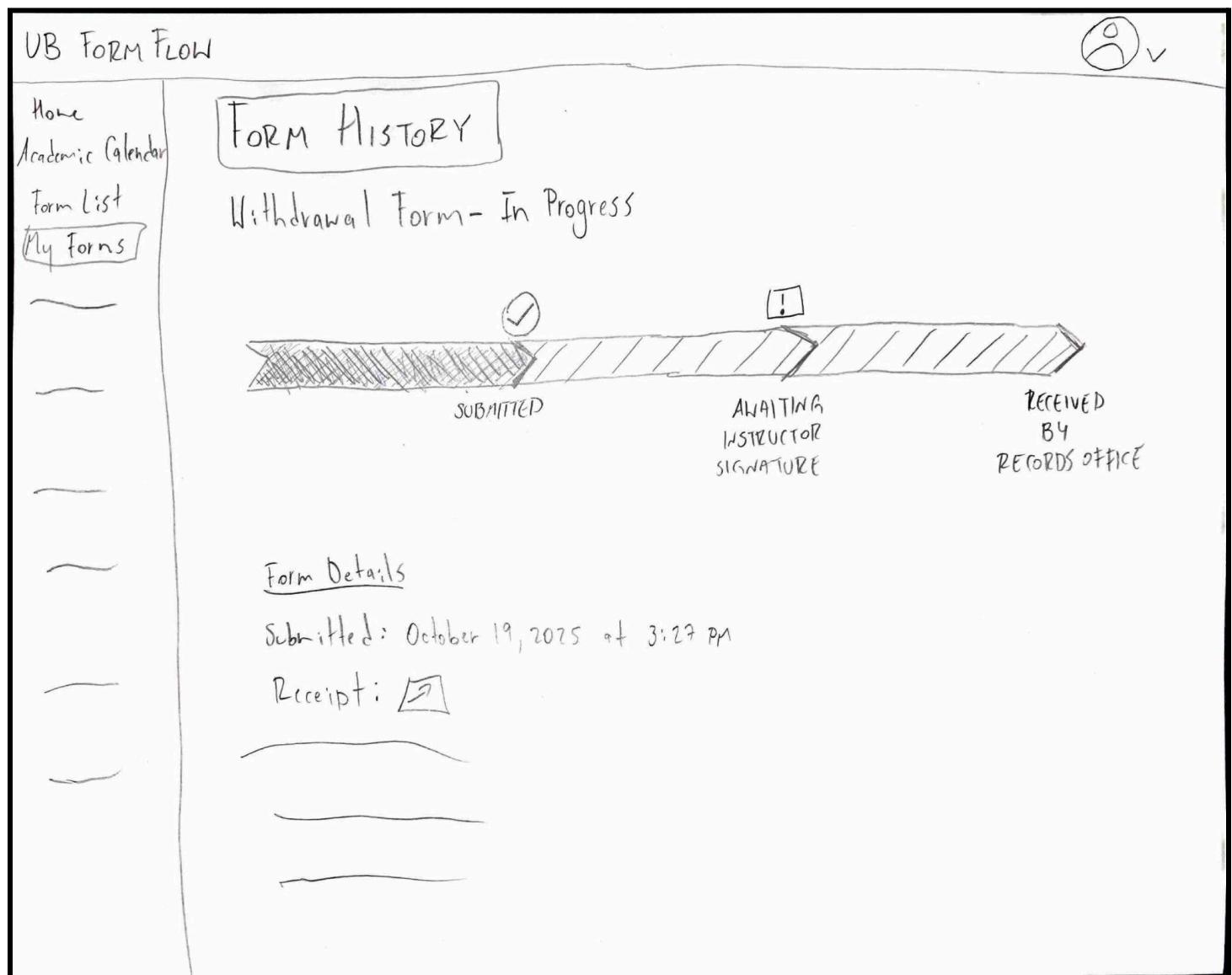


Figure 2.3 - Sketch showing the form history of a particular form, highlighting its progress status.

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Web Application: Tabbed

Figures 2.4 and 2.5 show a Web Application design again, but this time with a tabbed interface.

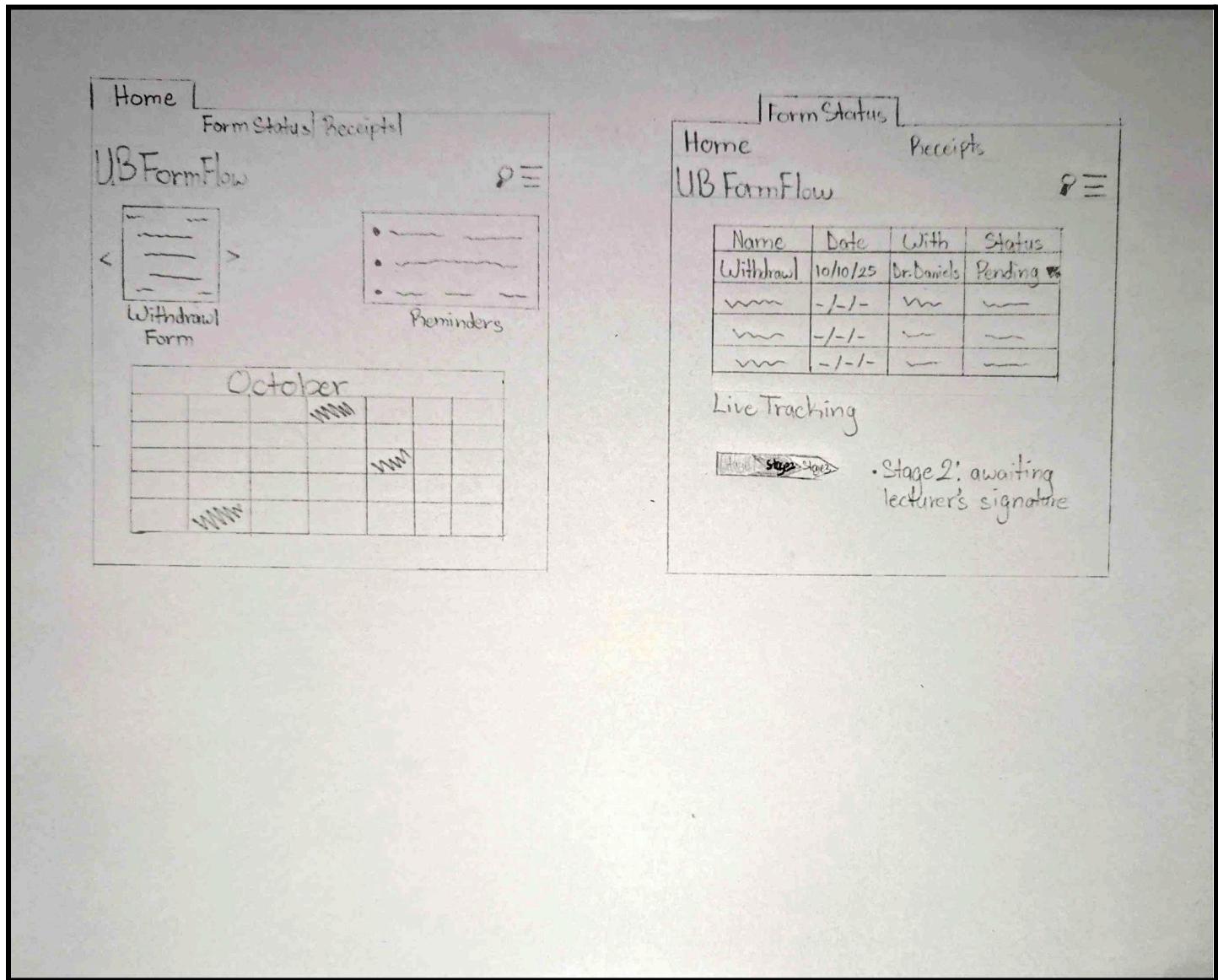


Figure 2.4 - Two sketches showcasing the home screen and form status.

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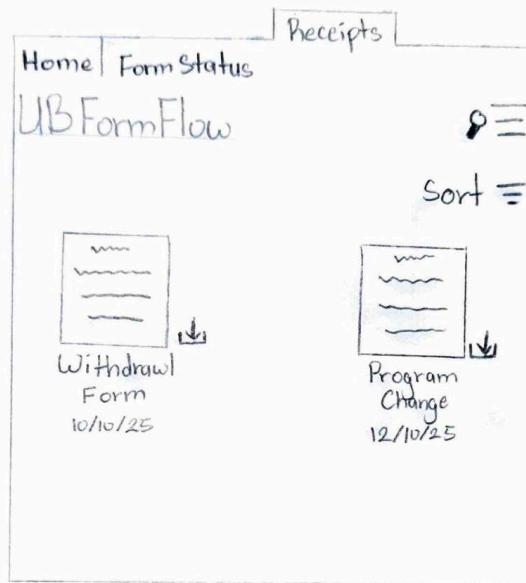


Figure 2.5 - Sketch showcasing the receipts tab.

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Smartwatch Application

Figures 2.6 to 2.8 showcase a design for a smartwatch device such as an Apple Watch. While these devices may be more convenient, not many students have access to them.



Figure 2.6 - Sketch showing a deadline notification.

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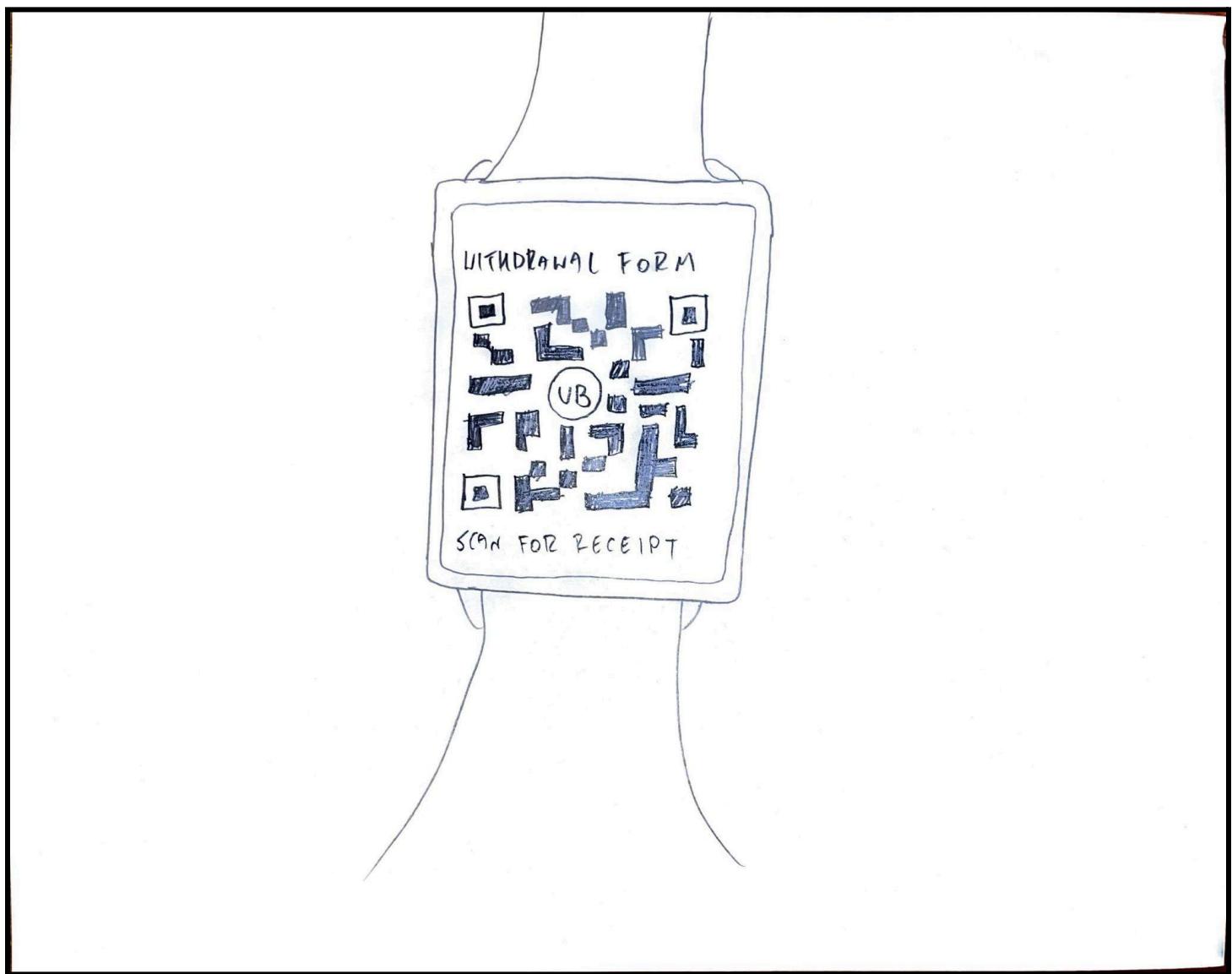


Figure 2.7 - A sketch of a scannable receipt for a submitted form.

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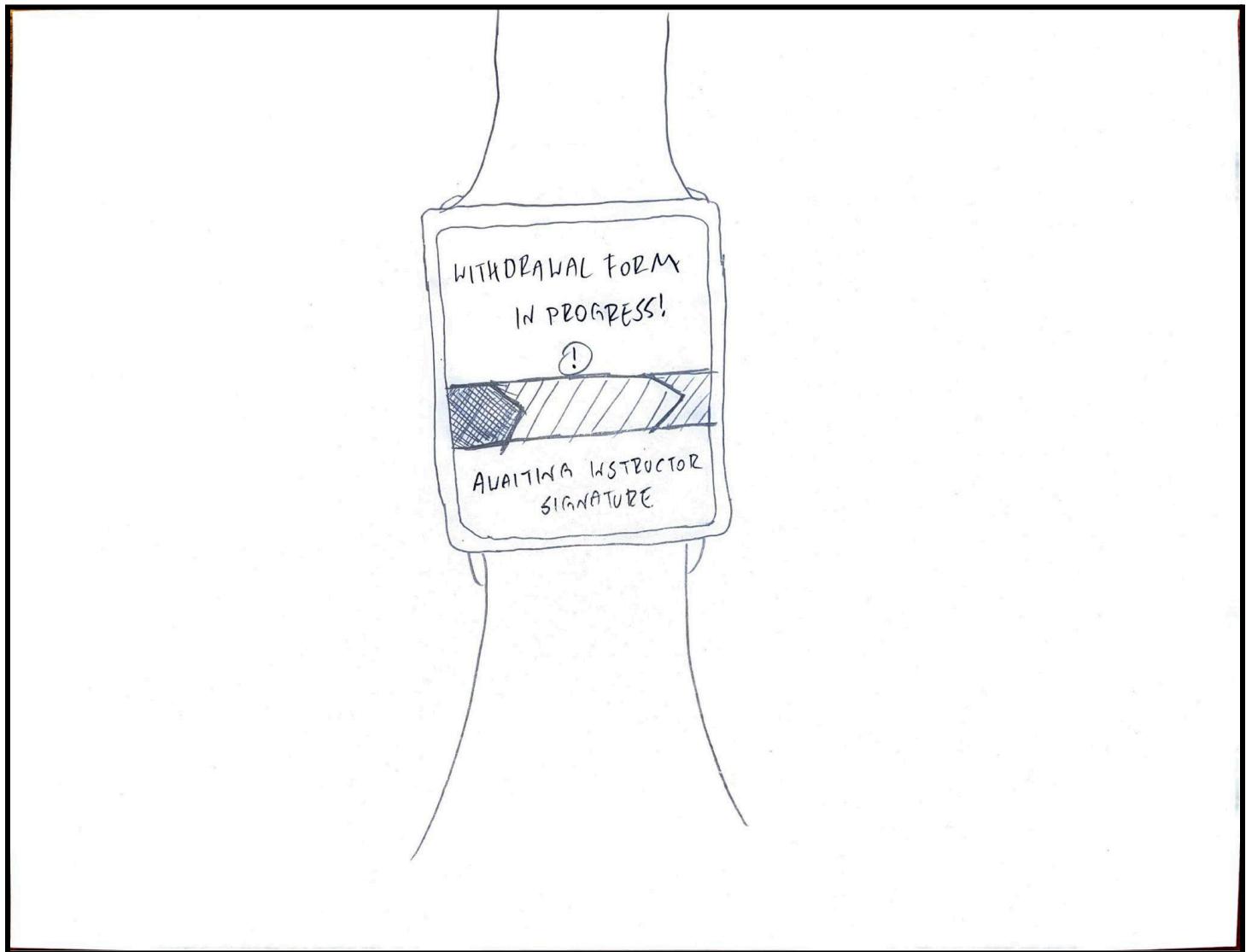


Figure 2.8 - Sketch showing the progress status of a form.

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VR Application

A VR Application design was considered, based on the Apple Vision Pro headset UI. Figures 2.9 to 2.11 showcase sketches that demonstrate the application in a virtual workspace.

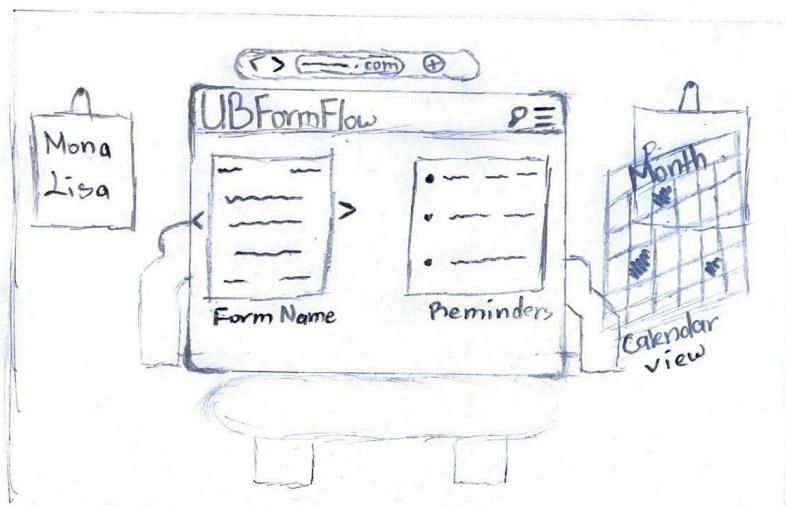


Figure 2.9 - Sketch showing a form reminder alongside a virtual calendar and sticky notes.

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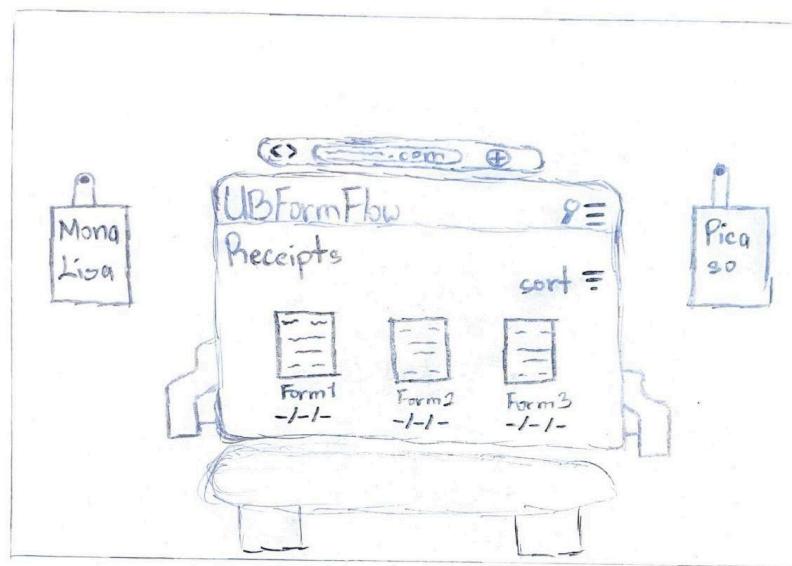


Figure 2.10 - Sketch showing a list of forms in the VR environment.

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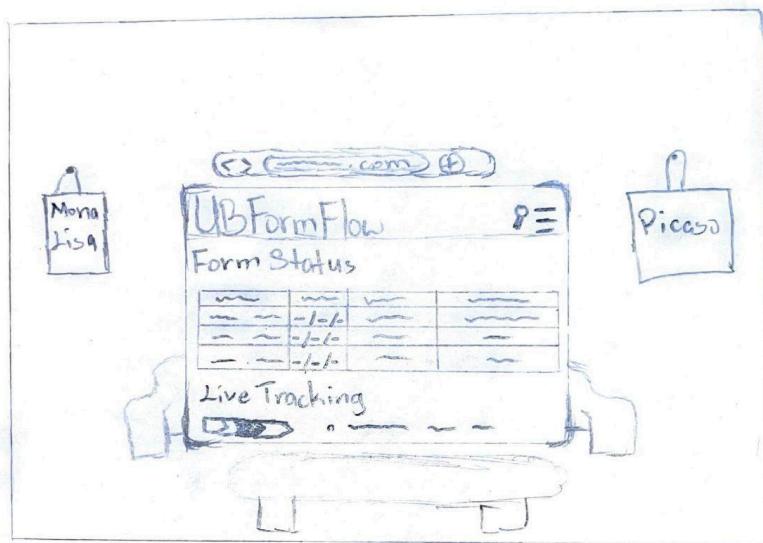


Figure 2.11 - Sketch showing the form status of one particular form in the VR environment.

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Kiosk Application

While kiosks aren't widely available on the UB campus, it is a possible design using a touchscreen interface. Figures 2.12 to 2.14 illustrate the design sketches.

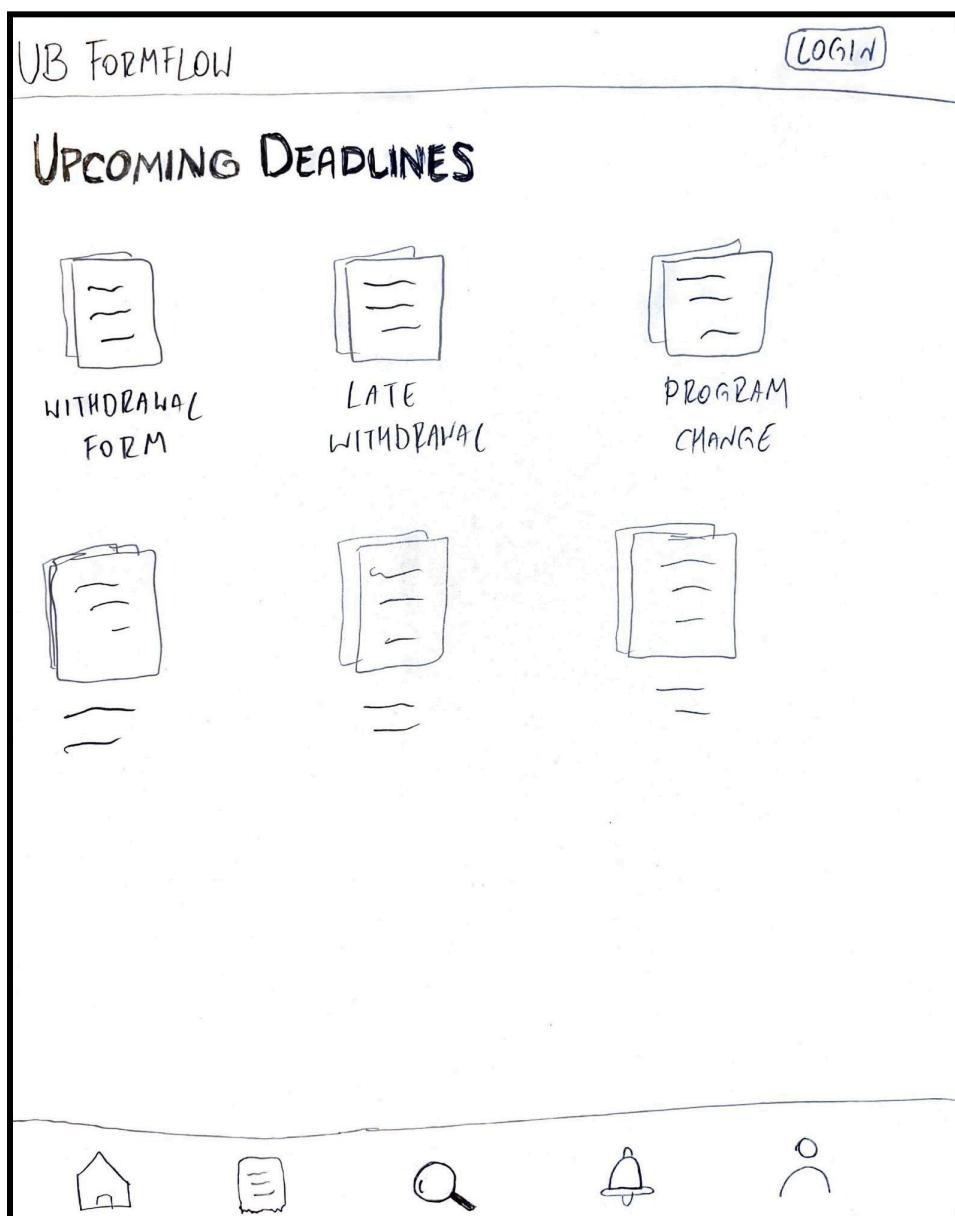


Figure 2.12 - Sketch showing upcoming deadlines alongside navigation icons.

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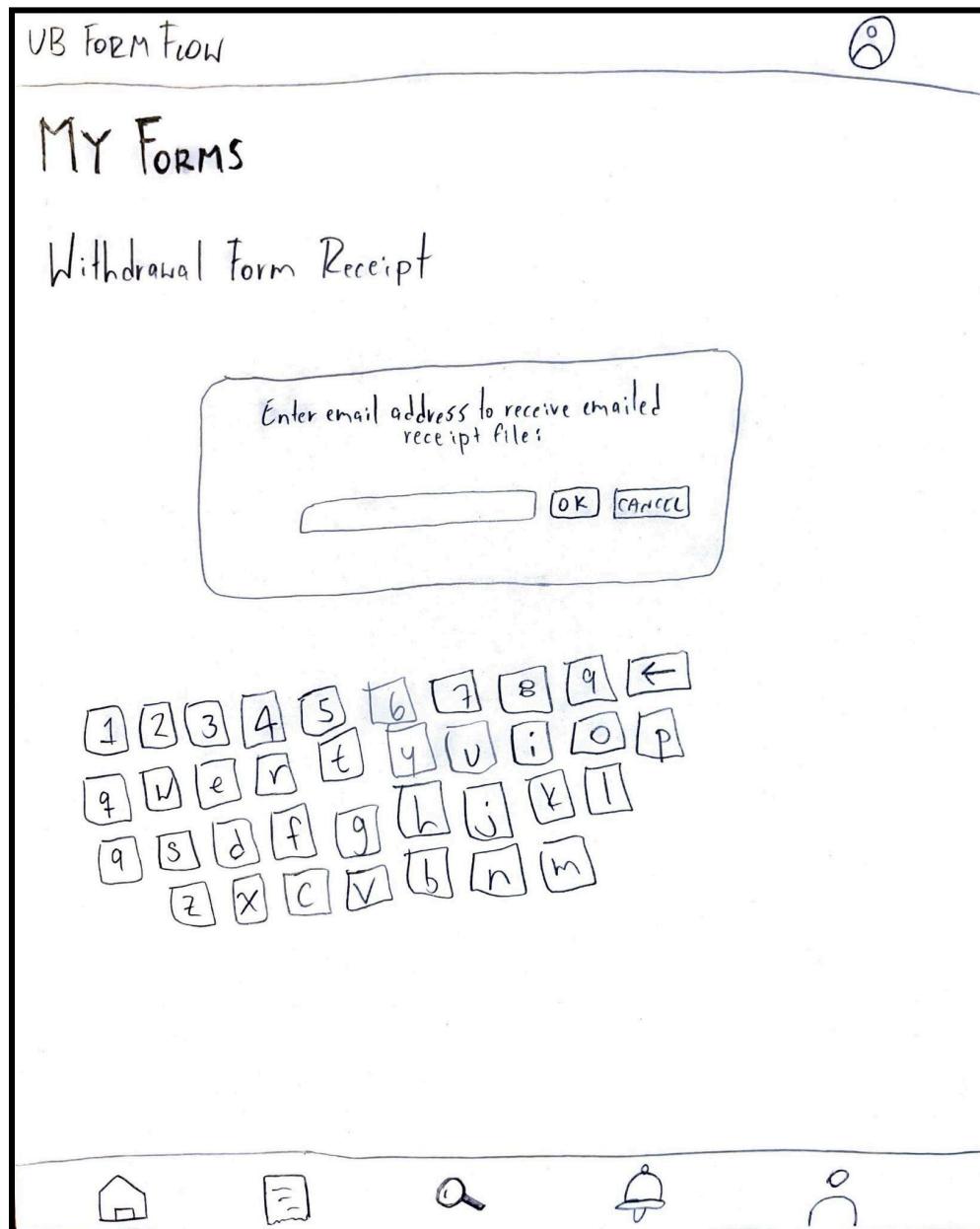


Figure 2.13 - Sketch showing how a form receipt would be sent via email.

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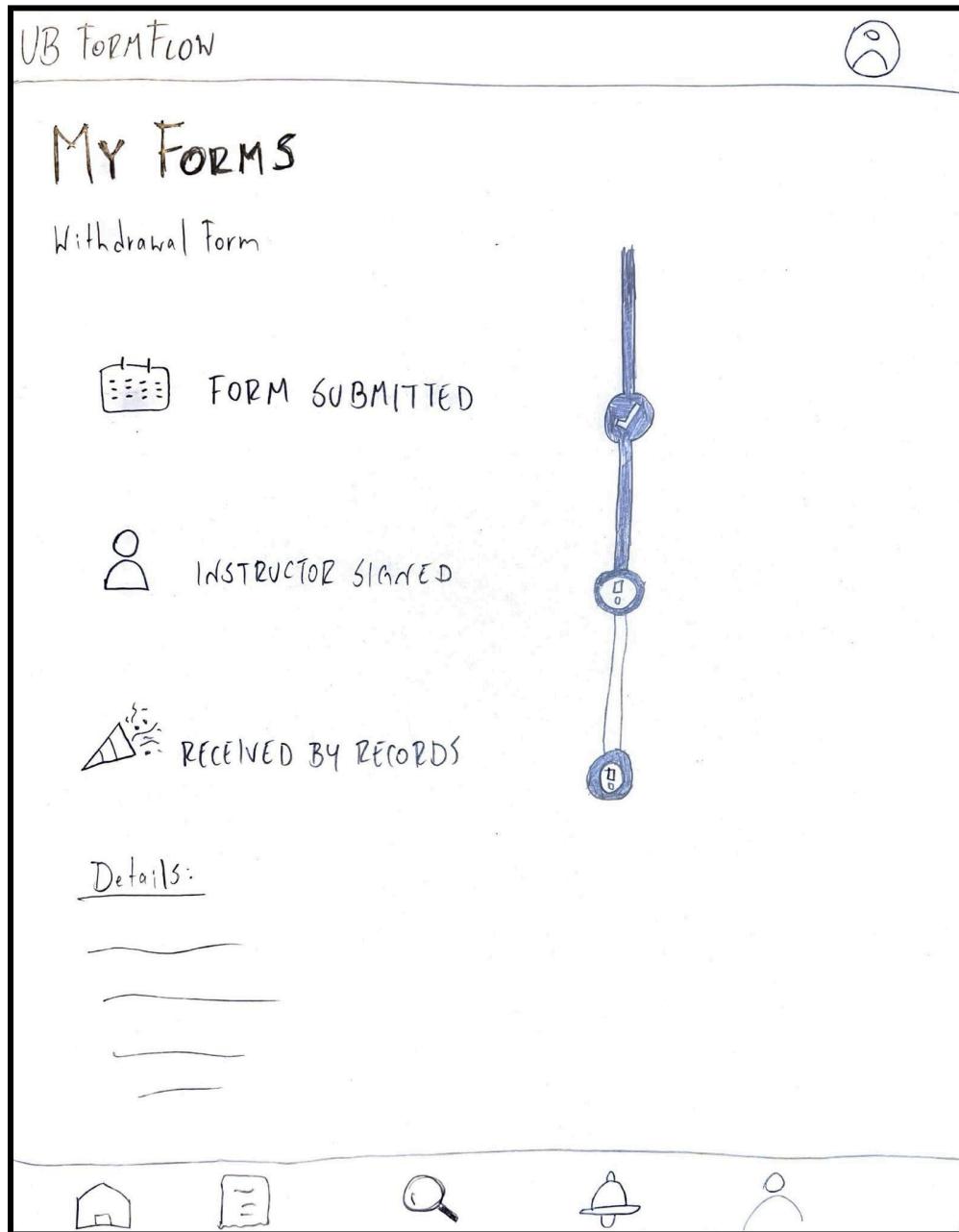


Figure 2.14 - Sketch showing how a form's status would be displayed to the user.

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Mobile Application

A native Mobile Application design would be convenient for students who have an accessible smartphone. Figures 2.15 to 2.17 illustrate the design.

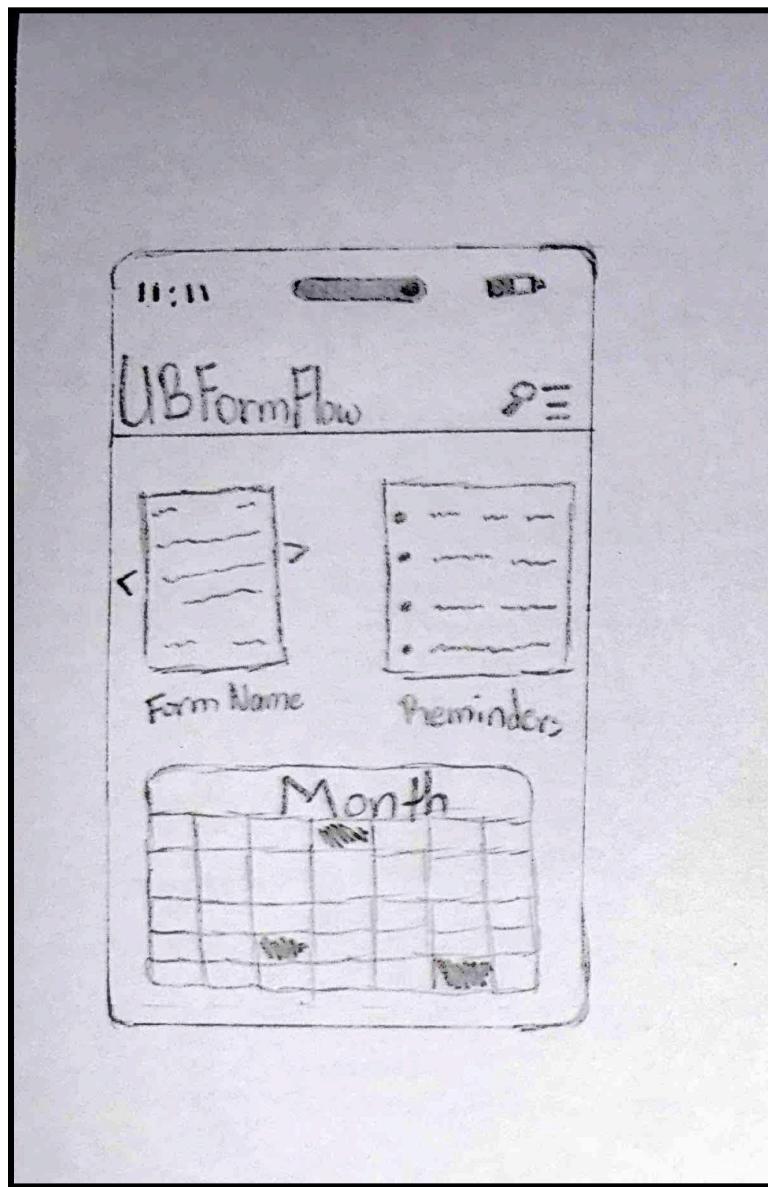


Figure 2.15 - Sketch showing the home page.

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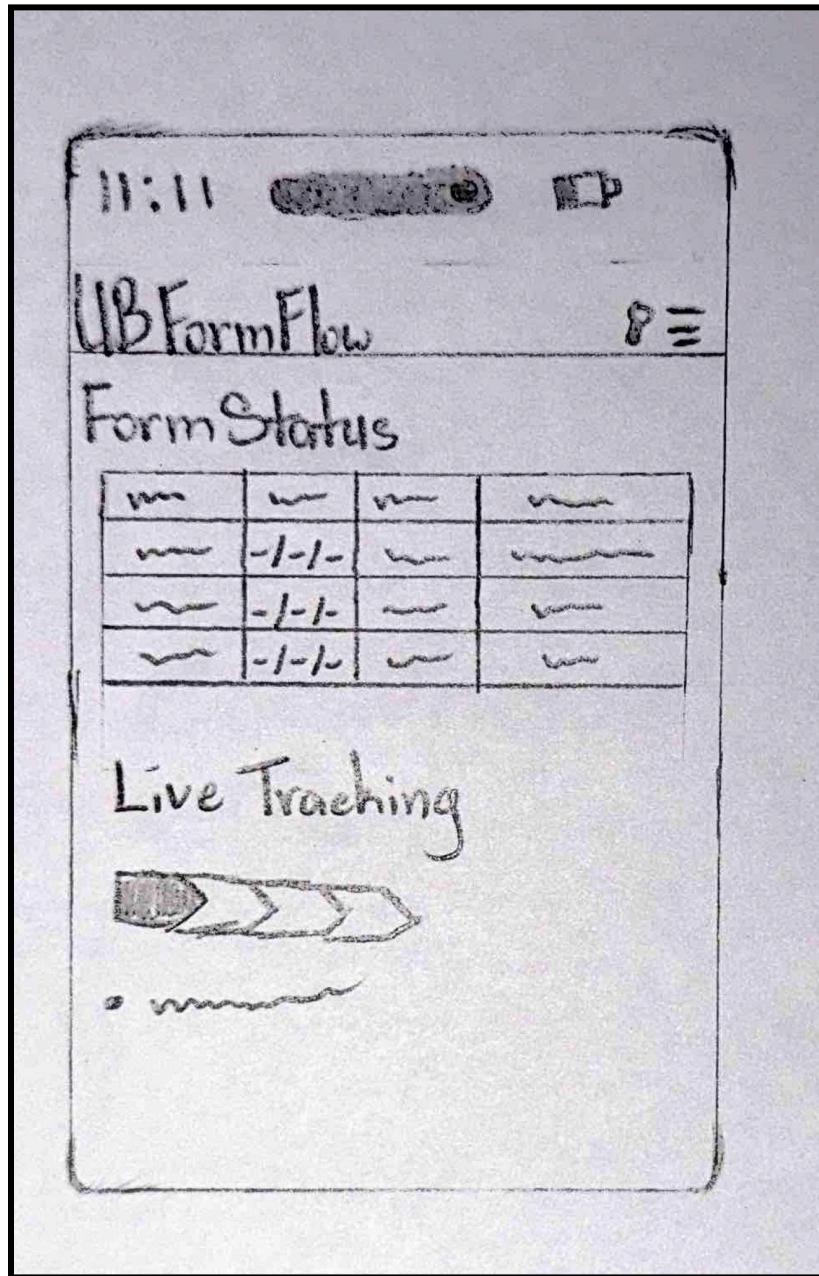


Figure 2.16 - Sketch showing live tracking of a form.

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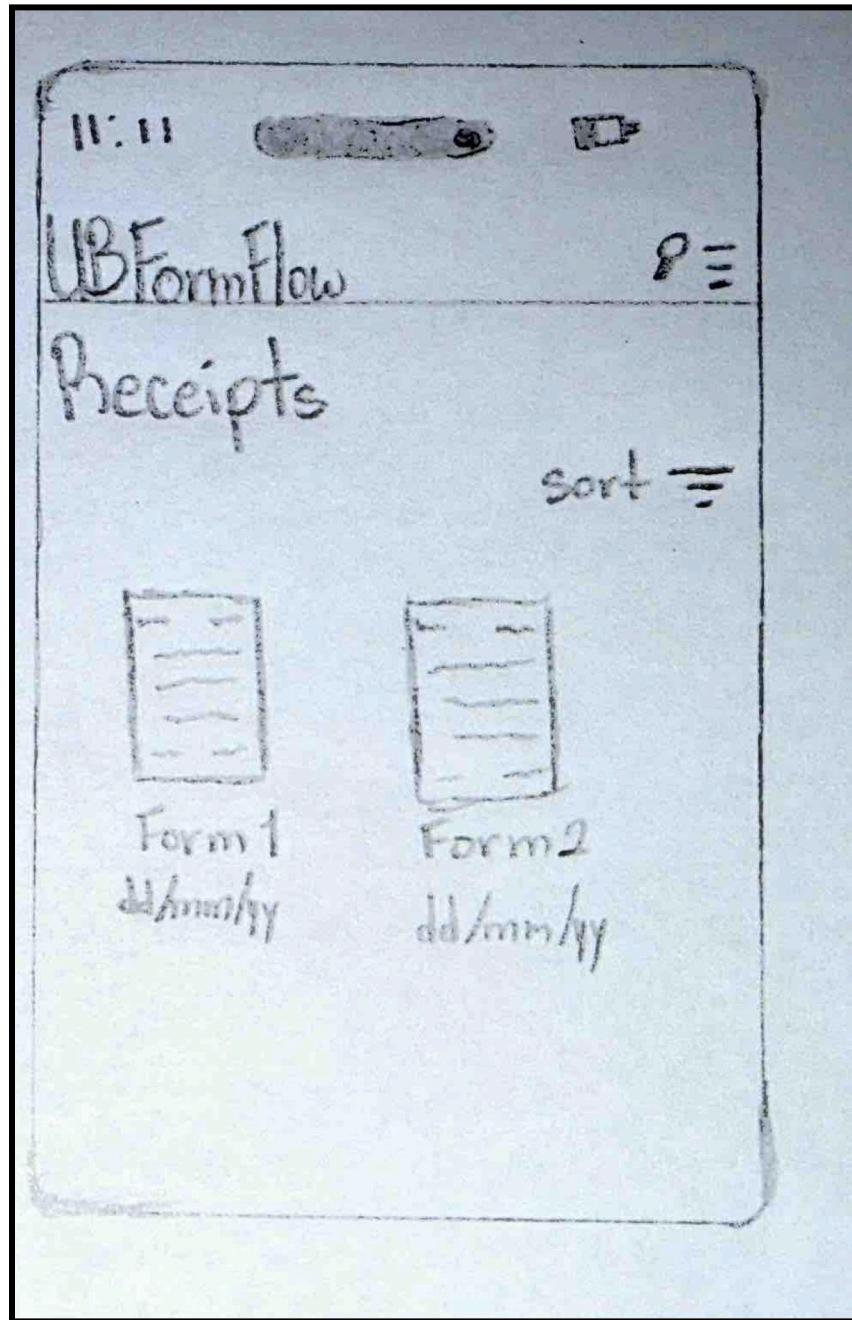


Figure 2.17 - Sketch showing receipts of forms.

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Top Two Designs & Storyboards

Given the practicality and accessibility of web application design, the Dashboard and Tabbed variations were chosen as our top two designs. These designs are detailed further in the following general storyboard sketches.

Web Application: Dashboard

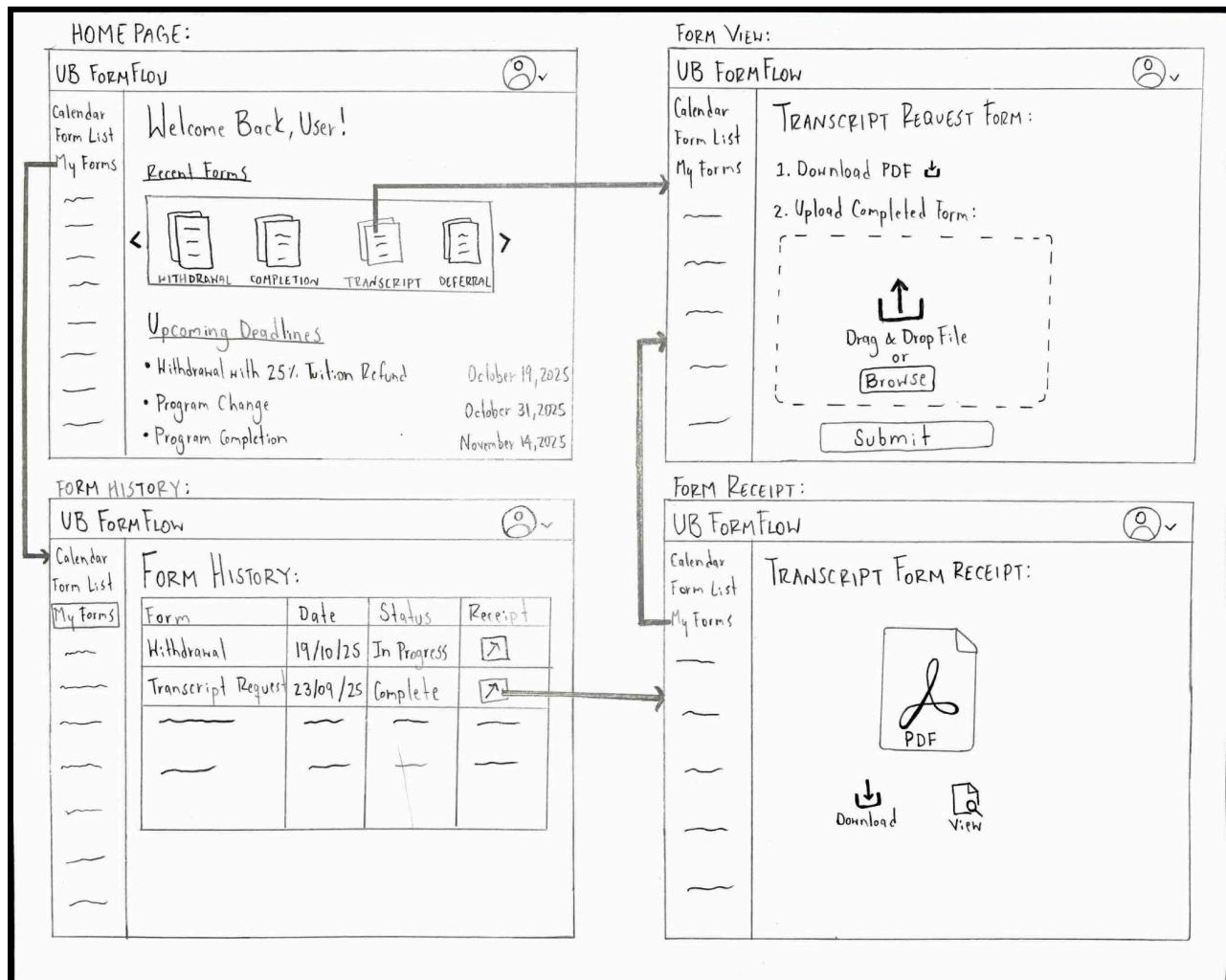


Figure 2.18 - Storyboard sketch showcasing navigation in the Dashboard design. Navigation typically uses the sidebar to help users know what they can access.

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Web Application: Tabbed

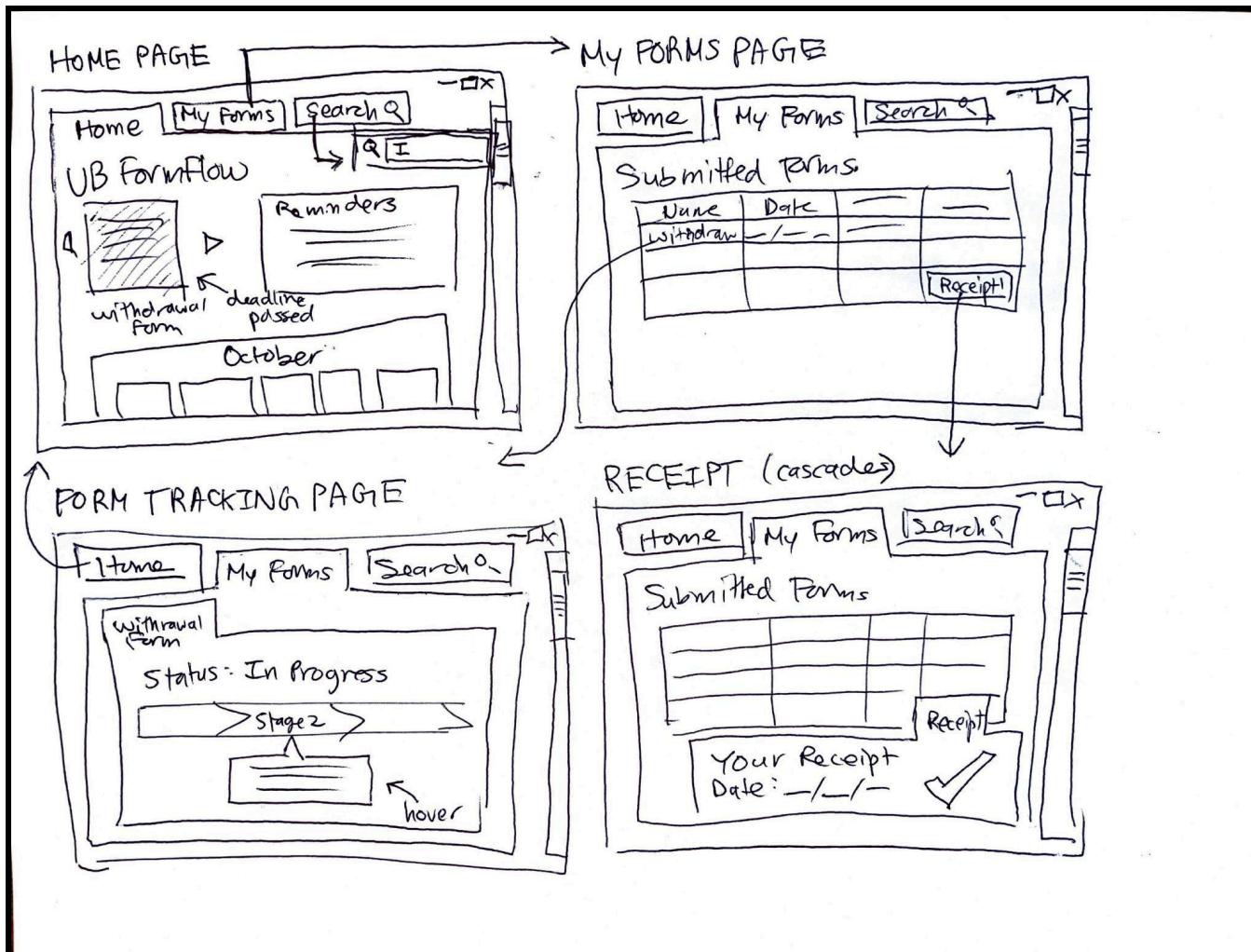


Figure 2.19 - Storyboard sketch showcasing navigation in the Tabbed design.

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3) Selected Interface Design

From the Top Two Designs (Web Application: Dashboard and Web Application: Tabbed), we selected the **Web Application: Dashboard** interface design to use for our low-fidelity prototype. After consideration of the pros and cons of each design, we concluded that a dashboard design should have a more familiar interface that students will likely have already encountered.

Selection Reasoning

Tables 3.1 and 3.2 outline the pros and cons of the Web Application: Dashboard and Web Application: Tabbed designs, respectively.

| Pros (Dashboard Design) | Cons (Dashboard Design) |
|---|---|
| <ul style="list-style-type: none"> The vertical sidebar can fit more entries. (scalability) A profile icon signifies login functionality. Extra space allows for multiple recent form entries. The current page can be highlighted in the sidebar. Dashboard design is a familiar design. Easier navigation Actions can be more distinctly separated in the sidebar. Vertical space is used more effectively. | <ul style="list-style-type: none"> It may look outdated to students. Space can be wasted on large screens if there aren't many entries in the navigation bar or sidebar. Too many sidebar entries may require excessive scrolling. Sidebar draws attention. |

Table 3.1 - Pros and cons for the Web Application: Dashboard design (selected interface design).

| Pros (Tabbed Design) | Cons (Tabbed Design) |
|---|---|
| <ul style="list-style-type: none"> Metaphorically represents pages as folder tabs. Design may look more fun to students. Quick navigation between sections. If tabs are color-coded, it will aid in visibility distinction. Horizontal space is used more effectively. | <ul style="list-style-type: none"> A tabbed design can cascade multiple times, which can be confusing. Less space to put entry tabs. Tabbed design may be a novel interface. Design may look busy. Cascading tabs may limit content space. Harder to scale tabbed entries. Mobile responsiveness would be tricky to implement. Similar UI to the browser. |

Table 3.2 - Pros and cons for the Web Application: Tabbed design (not selected)

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The Web Application: Dashboard design features a navigation bar for the login functionality and a sidebar for quick access to features such as a calendar, the general form list, and submitted forms. The storyboards detail how a table of submitted forms is shown, how forms are submitted online, and how receipts are displayed.

Table 3.3 below summarizes the functionalities and descriptions that encompass the Web Application: Dashboard design.

| Functionality | Description |
|------------------------------------|--|
| Login | Allows a student to enter their student ID to submit and access forms through the interface. |
| Display Recent Forms | Shows relevant forms based on the time during a semester. |
| Display Upcoming Deadlines | Textually displays pertinent deadlines relating to forms. |
| Upload Form | The student can upload a scanned copy of the form to the online interface. |
| View Receipt of Submitted Form | A confirmation of form submission can be accessed. |
| Download Receipt of Submitted Form | Allows download of a receipt for offline access. |

Table 3.3 - Summary of the functionalities and corresponding descriptions of the Web Application: Dashboard design.

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Storyboards

1) Simple Task - Find out which forms I need to fill out soon

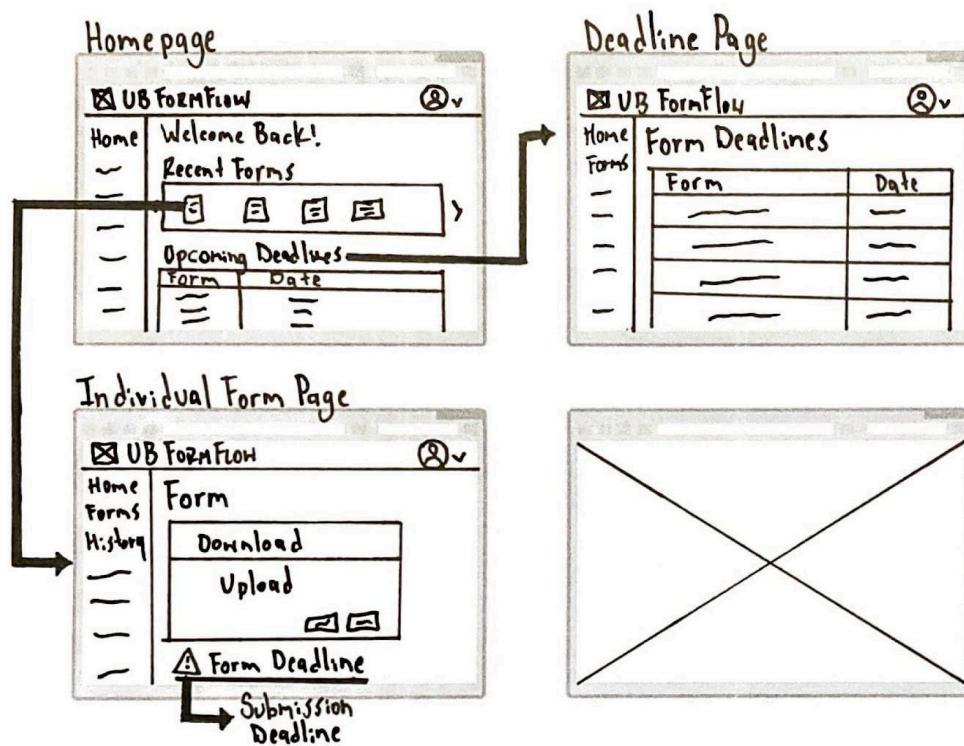


Figure 3.1 - Storyboard showing how the user can navigate through UB FormFlow to view upcoming form deadlines.

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2) Moderate Task - Get confirmation and proof that I submitted my form

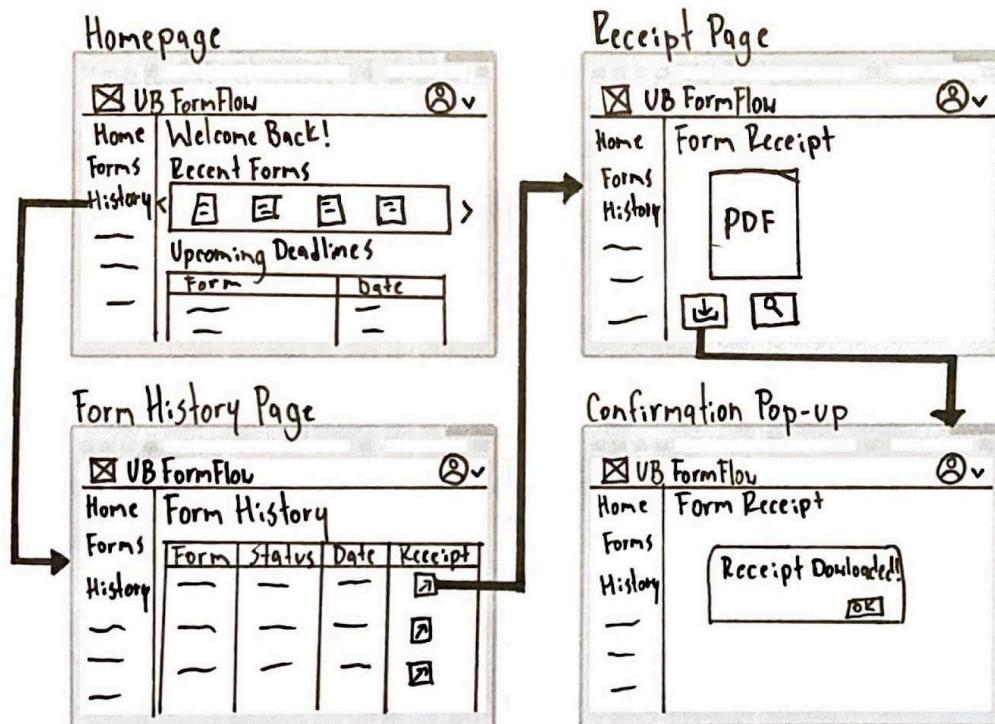


Figure 3.2 - Storyboard showing how the user can navigate through UB FormFlow to download a receipt for any submitted forms.

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3) Complex Task - See the progress of my ongoing forms

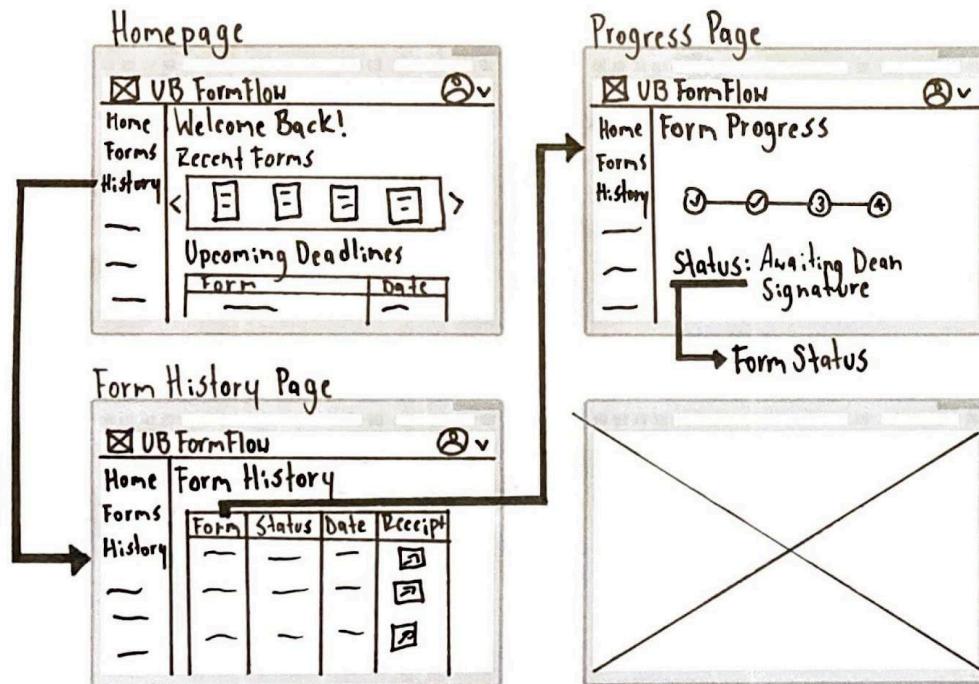


Figure 3.3 - Storyboard showing how a user can navigate through UB FormFlow to view the progress of any ongoing forms.

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4) Prototype Description

Our low-fidelity prototype for UB FormFlow is a hand-drawn paper prototype that demonstrates the main user interactions and navigation flow of the system. It includes several key screens: the Homepage, All Forms Page, Form History Page, Individual Form Page, Form Progress Page, and Receipt Page, along with additional interface elements such as login dialogs, upload windows, and confirmation pop-ups.

The prototype demonstrates the core functionality of the web application, enabling students to view, download, submit, and track university forms. The Home Page provides a dashboard view showing recent forms and upcoming deadlines. The All Forms Page lists all available forms, such as the Withdrawal Form and the Program Completion Form, along with brief descriptions and “more” links for additional details. The Form History Page records submissions, displaying the form name, date, status, and an option to download receipts.

The Form Page demonstrates how a student can download a blank form PDF, upload a completed one, and submit it by a specified deadline. Once submitted, progress can be viewed on the Form Progress Page, where a horizontal progress tracker shows each stage of approval (e.g., Department Chair, Faculty Dean, Records Office). When forms are processed, a downloadable Receipt Page confirms submission completion. Supplementary sketches also show the login interface, file upload dialog, and confirmation pop-ups that provide user feedback (e.g., “Form successfully submitted!”).

The key interaction method is point-and-click through a visual interface, using mouse or touch input to navigate between screens, select forms, and perform upload/download actions. The design relies on simple visual navigation rather than speech or gesture input, focusing on clarity, feedback, and minimal cognitive effort. Users operate the prototype by simulating clicks on buttons, menu items, and tabs to move between screens and complete core form submission tasks.

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Task Flows

Simple Task Flow

This task flow illustrates how the user logs in, navigates from the Homepage to the All Forms page, selects the Withdrawal Form, downloads the blank form, uploads the completed form, and finally submits it before the upcoming deadline. The process ends with a confirmation pop-up indicating successful submission.

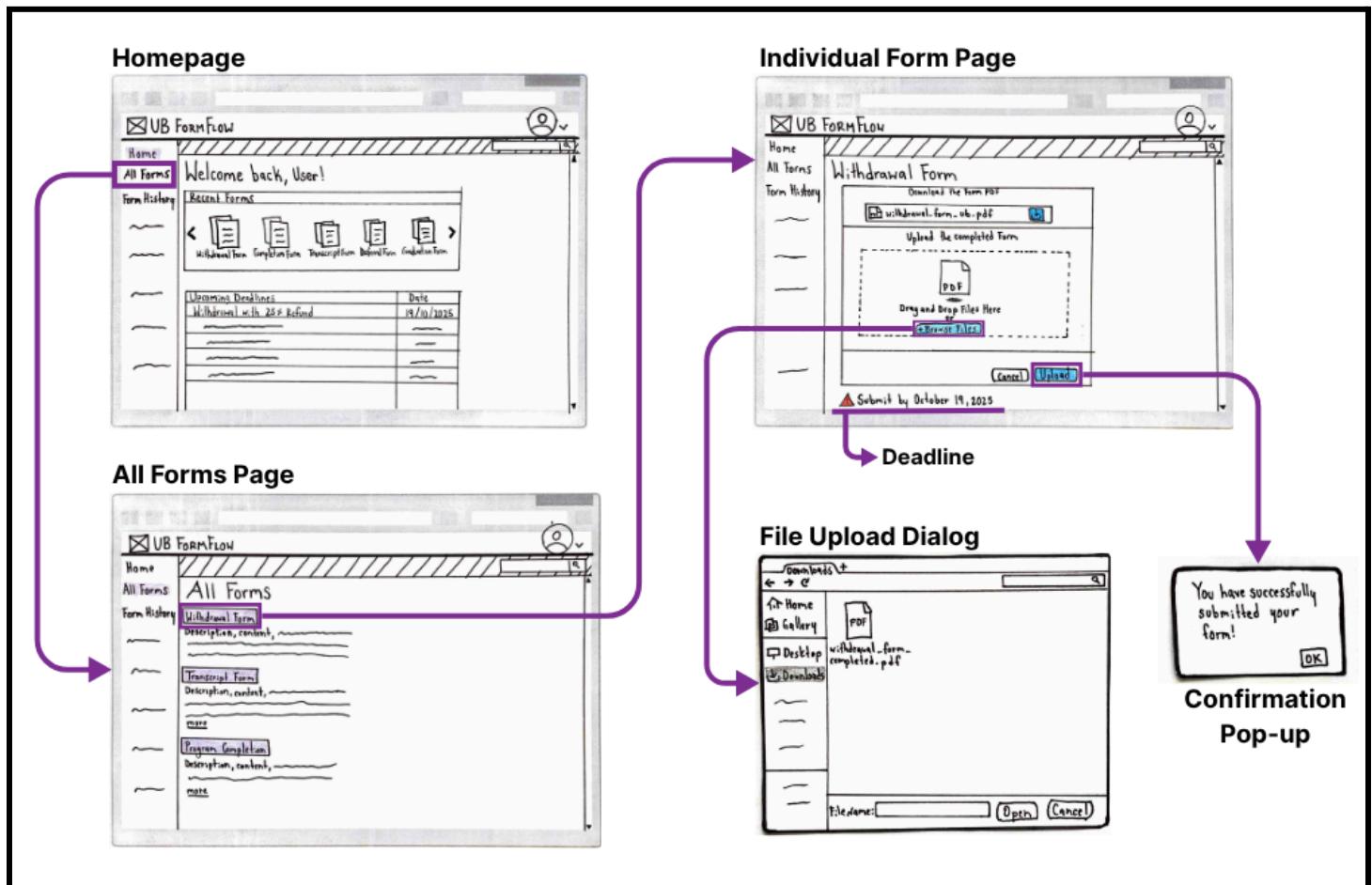


Figure 4.1.1 - Simple Task Flow demonstrating how a user finds and submits a Withdrawal Form using the low-fi prototype.

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Moderate Task Flow

This task flow illustrates how the user navigates from the Homepage to the Form History page, selects a completed transcript form entry, and downloads its receipt from the Form Receipt page. A confirmation pop-up notifies the user that the receipt was successfully downloaded.

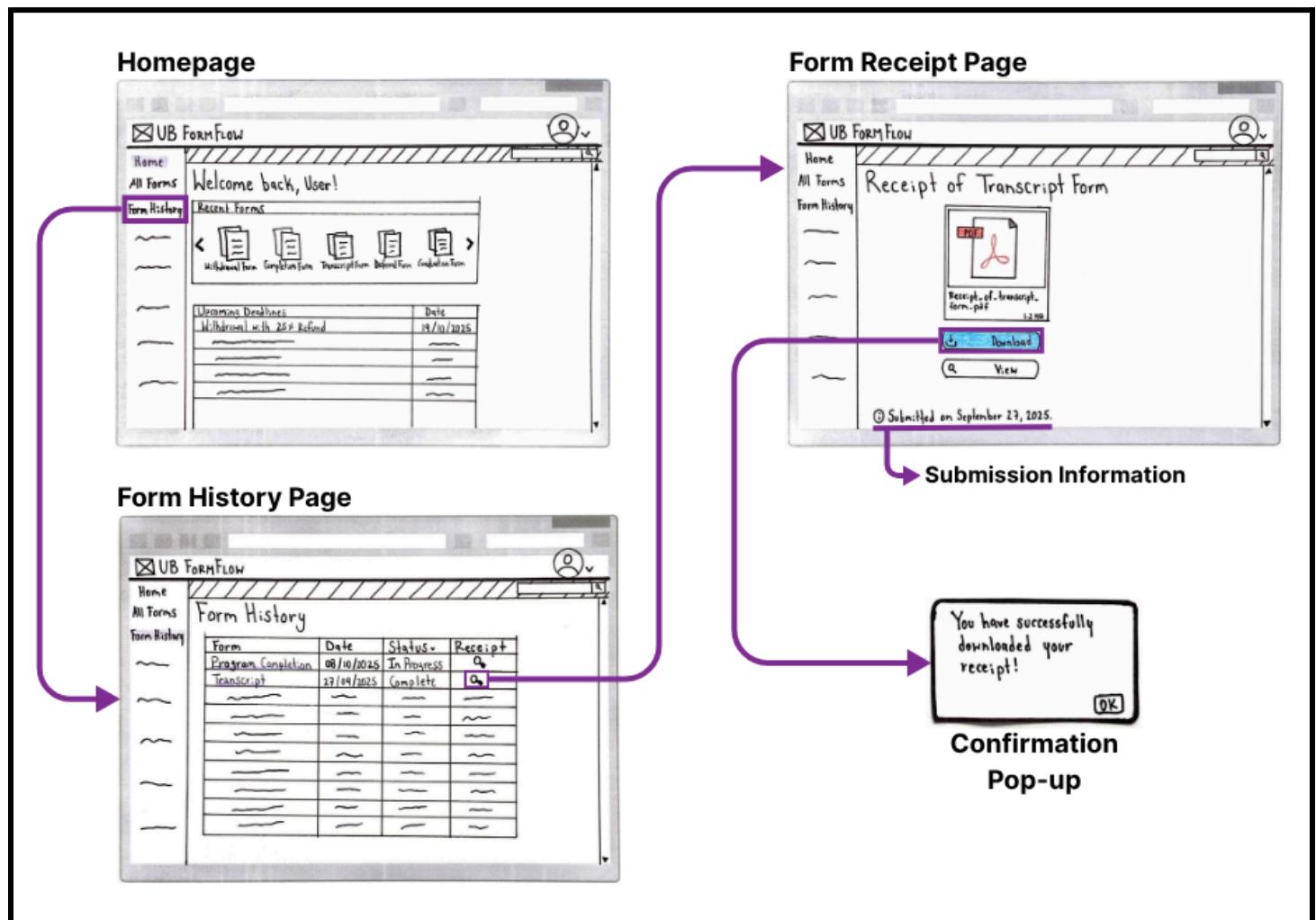


Figure 4.1.2 - Moderate Task Flow demonstrating how a user finds and downloads a Transcript Form receipt using the low-fi prototype.

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Complex Task Flow

This task flow demonstrates how the user moves from the Homepage to the Form History page, opens the Program Completion Form, and views its progress timeline. The interface shows each approval stage and indicates that the form is currently awaiting the Faculty Dean's signature.

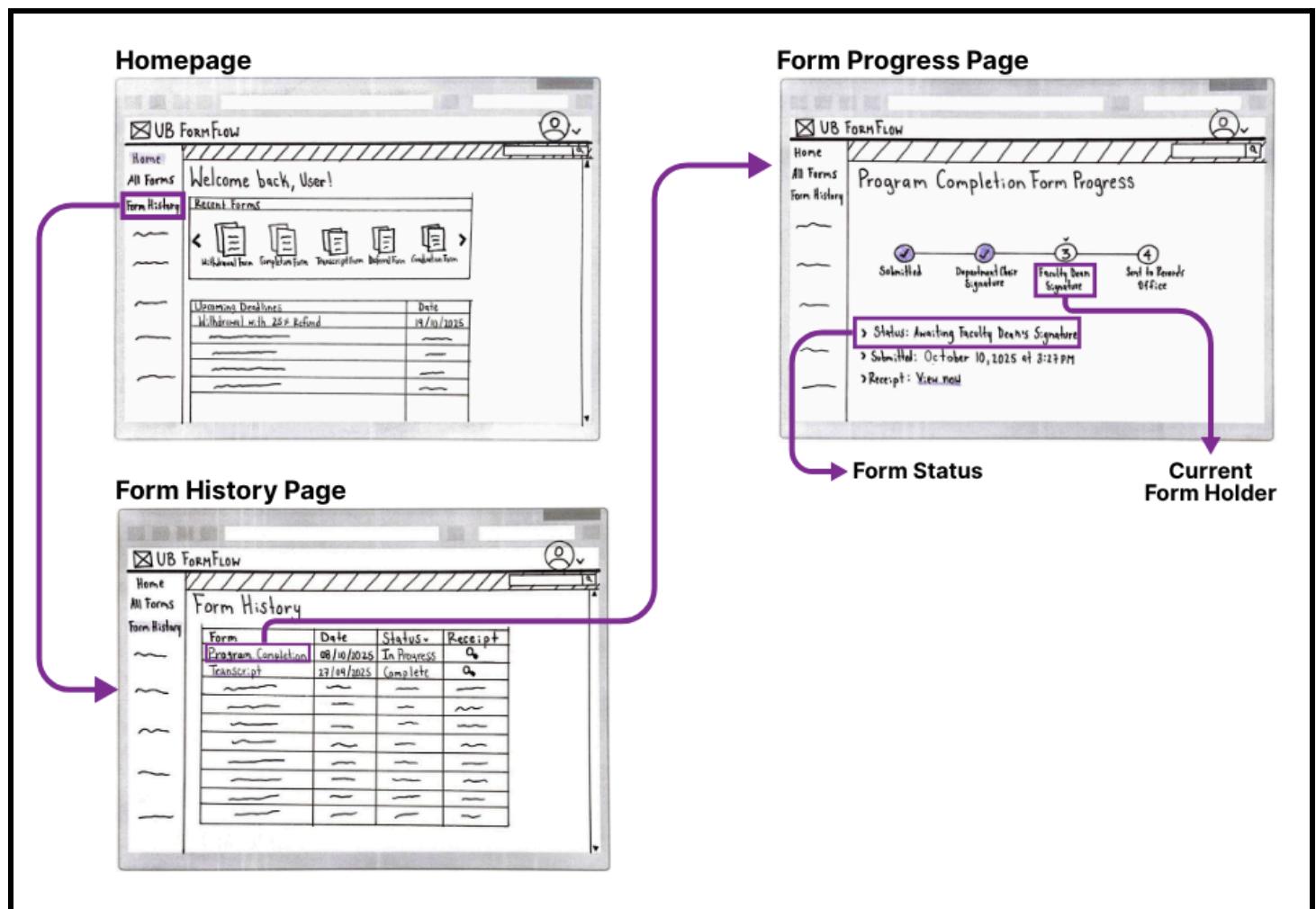


Figure 4.1.3 - Complex Task Flow demonstrating how a user investigates their Program Completion Form status using the low-fi prototype.

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Entire Low-Fidelity Prototype

The entire paper-based low-fidelity system prototype is pictured in Figure 4.2 below.

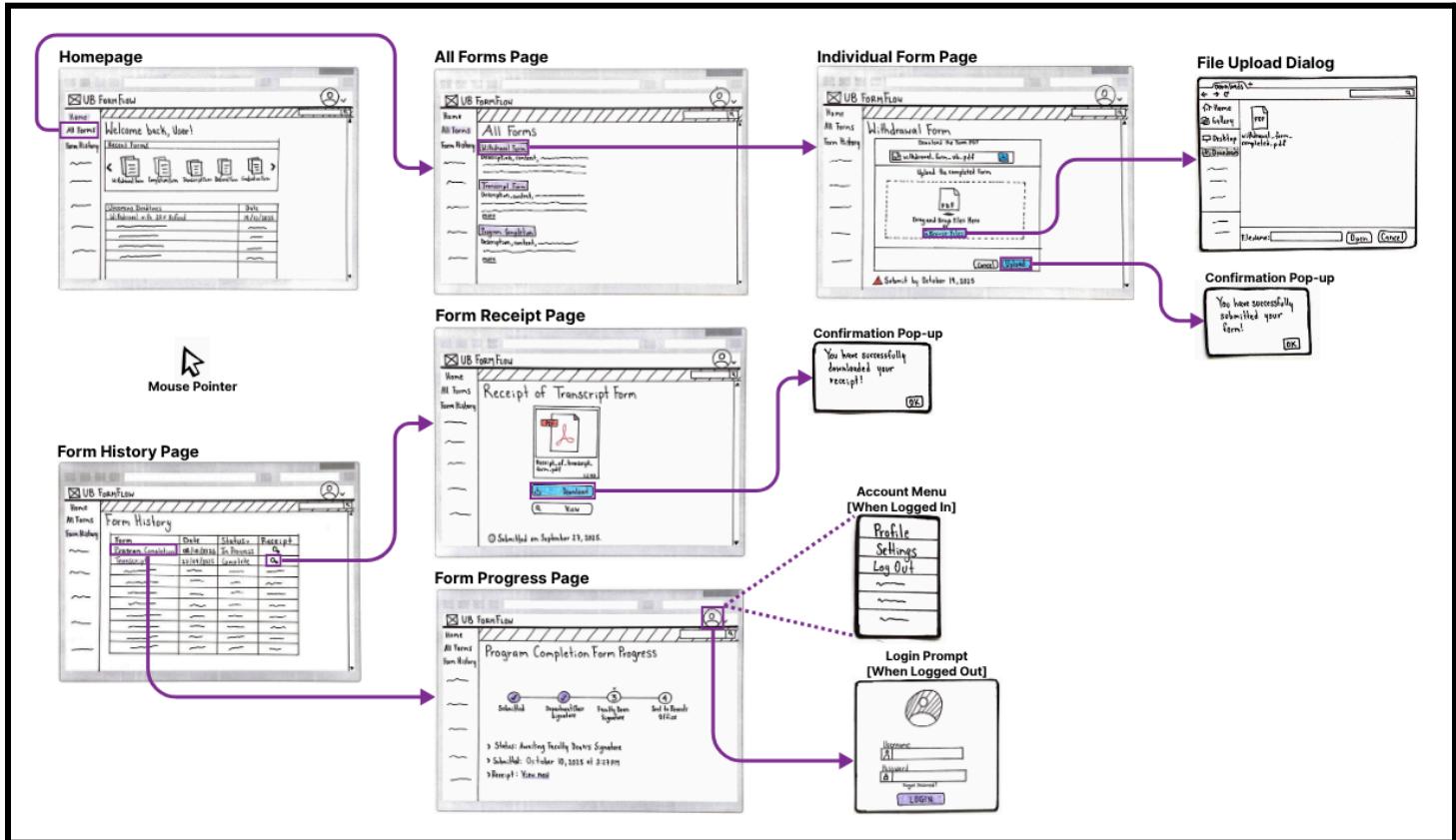


Figure 4.2 - Entire Low-Fi Prototype showing all main screens of UB FormFlow, including navigation, form submission, progress tracking, and receipt download.

| | | |
|----------------------------|-----------------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
| | Course | CMPS3141 - Human-Computer Interface |
| | Semester | 2025-1 |
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5) Method

Participants

Given that UB FormFlow's primary users will be students, three (3) students were selected to be users for the testing of the prototype. They were randomly selected from the Fultec computer lab in the Jaguar Building at the University of Belize, Belmopan campus. Consent was obtained from each participant, and no compensation was provided. Table 5.1 below lists the student participants, along with their majors and years of study.

| Participant Number | Major | Year |
|--------------------|-----------------------------|------|
| Participant 1 | Natural Resource Management | 3 |
| Participant 2 | Premed | 2 |
| Participant 3 | Pharmacy | 2 |

Table 5.1 - Student participants for the pilot usability test of the low-fi prototype.

Environment

The pilot usability test was primarily conducted in the JAG-U2 classroom, located on the second floor of the Jaguar Building on the University of Belize's campus in Belmopan. A workstation desk was used to present and evaluate the prototype with the user. Only one user was allowed in the room at a time during the testing. Other users waited outside the room. One user test was conducted in the Jaguar Building foyer, on a bench. In both locations, the environment had no significant distractions.

| | | |
|----------------------------|-----------------------------|-------------------------------------|
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Tasks

Table 5.2 below lists the specific tasks and subtasks that the user aimed to complete when testing the prototype. These tasks represent the user goals that the prototype seeks to achieve.

| Task Level | Task Description | Subtasks |
|----------------------|---|--|
| Simple Task | Submit a withdrawal form that has an upcoming deadline. | Log in to the interface. |
| | | Find the withdrawal form. |
| | | Determine the deadline for submitting the form. |
| | | Submit a completed form. |
| Moderate Task | Download a submitted transcript form's receipt. | Navigate to form history. |
| | | Interact with the form history interface. |
| | | Download the receipt. |
| Complex Task | Investigate the status of a program completion form. | Navigate to the program completion form's status page. |
| | | Find out about the form's current status. |
| | | Find out which party currently holds the form. |

Table 5.2 - Task descriptions that will be tested by the prototype and the subtasks they entail.

Procedure

The following steps were taken for each participant during the testing of the prototype.

1. Invite the participant into the testing room.
2. Introduce the project context, team members, and the value proposition, mission statement, and problem that UB FormFlow is trying to solve.
3. Verify voluntary participation by having the participant read and decide to sign the consent form.
4. Present the prototype to the participant and demonstrate how interaction with it is done.
5. Tell the participant that they will complete three (3) tasks and resolve any queries before beginning testing.
6. The facilitator, observer, and computer will assume their respective roles for each task until all tasks are completed or the participant gives up.

| | | |
|---------------------|----------------------|-------------------------------------|
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7. Resolve any questions the participant may have after testing, and ask participants for any final suggestions and comments on the prototype.
8. Thank the participant for their time and assistance in the testing process.

Test Measures

Measures were done individually for every participant. For every subtask of a task, the scalar values of **time spent** and the **number of errors** were recorded. An error was defined as a misclick, transition to the wrong screen, or other similar issues. A Boolean value was also recorded to represent whether the subtask/task was ultimately completed.

Additionally, critical incidents for both positive and negative events were qualitatively recorded. For negative events, a severity rating was also assigned. Their meanings are described in Table 5.3.

| Severity Rating | Meaning |
|-----------------|-------------------------|
| 0 | No problem |
| 1 | Cosmetic problem |
| 2 | Minor usability problem |
| 3 | Major usability problem |
| 4 | Usability catastrophe |

Table 5.3 - Severity ratings for critical incidents and their meanings

Team Member Roles

| Team Member | Role | Responsibilities |
|-----------------|-------------|--|
| Tysha Daniels | Facilitator | <ul style="list-style-type: none"> • Coordinate the testing procedure for each user • Encourage the user to think aloud |
| Andres Hung | Observer | <ul style="list-style-type: none"> • Observe the demeanor of the users during testing • Took notes on the process data |
| Jennessa Sierra | Computer | <ul style="list-style-type: none"> • Enable transitions of the prototype while users were testing • Simulate computer feedback |

Table 5.4 - Team member roles during testing.

| | | |
|---------------------|----------------------|-------------------------------------|
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6) Results

Tables 6.1 to 6.3 consolidate the observation notes results grouped by task. Critical incidents for each task are also listed, along with a severity rating.

| SIMPLE TASK | | | |
|---|---|------------------|-----------|
| Submit a withdrawal form that has an upcoming deadline. | | | |
| Subtask | Log in to the interface. | | |
| | Time Spent (sec) | Number of Errors | Completed |
| Participant 1 | 60 | 1 | Yes |
| Participant 2 | 15 | 1 | Yes |
| Participant 3 | 35 | 0 | Yes |
| Average | 36.667 | 0.667 | 3/3 |
| Subtask | Find the withdrawal form. | | |
| | Time Spent (sec) | Number of Errors | Completed |
| Participant 1 | 67 | 0 | Yes |
| Participant 2 | 20 | 0 | Yes |
| Participant 3 | 15 | 0 | Yes |
| Average | 34.000 | 0.000 | 3/3 |
| Subtask | Determine the deadline for submitting the form. | | |
| | Time Spent (sec) | Number of Errors | Completed |
| Participant 1 | 1 | 0 | Yes |
| Participant 2 | 30 | 1 | Yes |
| Participant 3 | 35 | 2 | Yes |
| Average | 22.000 | 1.000 | 3/3 |
| Subtask | Submit a completed form. | | |
| | Time Spent (sec) | Number of Errors | Completed |
| Participant 1 | 10 | 0 | Yes |
| Participant 2 | 10 | 1 | Yes |
| Participant 3 | 30 | 0 | Yes |
| Average | 16.667 | 0.333 | 3/3 |

Table 6.1.1 - Observation results for the Simple Task.

| | | |
|---------------------|----------------------|-------------------------------------|
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| SIMPLE TASK - CRITICAL INCIDENTS | |
|---|-----------------|
| Incident | Severity Rating |
| "Login is hard to see." | 3 |
| "I like that the form is highlighted." | 0 |
| "Good location there." | 0 |
| "I thought the login page would be separate." | 1 |
| "All forms isn't my recent forms?" | 2 |
| "Do I physically submit my form?" | 2 |

Table 6.1.2 - Critical incidents for the Simple Task.

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
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| MODERATE TASK | | | |
|---|---|------------------|-----------|
| Download a submitted transcript form's receipt. | | | |
| Subtask | Navigate to form history. | | |
| | Time Spent (sec) | Number of Errors | Completed |
| Participant 1 | 20 | 0 | Yes |
| Participant 2 | 20 | 1 | Yes |
| Participant 3 | 16 | 0 | Yes |
| Average | 18.667 | 0.333 | 3/3 |
| Subtask | Interact with the form history interface. | | |
| | Time Spent (sec) | Number of Errors | Completed |
| Participant 1 | 50 | 0 | Yes |
| Participant 2 | 90 | 0 | Yes |
| Participant 3 | 60 | 0 | Yes |
| Average | 66.667 | 0.000 | 3/3 |
| Subtask | Download the receipt. | | |
| | Time Spent (sec) | Number of Errors | Completed |
| Participant 1 | 30 | 0 | Yes |
| Participant 2 | 10 | 0 | Yes |
| Participant 3 | 5 | 1 | Yes |
| Average | 15.000 | 0.333 | 3/3 |

Table 6.2.1 - Observation results for the Moderate Task.

| MODERATE TASK - CRITICAL INCIDENTS | |
|------------------------------------|-----------------|
| Incident | Severity Rating |
| "What does the date mean?" | 2 |
| "The color coding helps!" | 0 |
| "Helpful." | 0 |
| "What does the receipt button do?" | 1 |

Table 6.2.2 - Critical incidents for the Moderate Task.

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
| | Course | CMPS3141 - Human-Computer Interface |
| | Semester | 2025-1 |
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| COMPLEX TASK | | | | |
|--|--|------------------|-----------|--|
| Investigate the status of a program completion form. | | | | |
| Subtask | Navigate to the program completion form's status page. | | | |
| | Time Spent (sec) | Number of Errors | Completed | |
| Participant 1 | 60 | 1 | Yes | |
| Participant 2 | 30 | 1 | Yes | |
| Participant 3 | 60 | 0 | Yes | |
| Average | 50.000 | 0.667 | 3/3 | |
| Subtask | Find out about the form's current status. | | | |
| | Time Spent (sec) | Number of Errors | Completed | |
| Participant 1 | 5 | 0 | Yes | |
| Participant 2 | 10 | 0 | Yes | |
| Participant 3 | 30 | 1 | Yes | |
| Average | 15.000 | 0.000 | 3/3 | |
| Subtask | Find out which party currently holds the form. | | | |
| | Time Spent (sec) | Number of Errors | Completed | |
| Participant 1 | 10 | 0 | Yes | |
| Participant 2 | 5 | 0 | Yes | |
| Participant 3 | 30 | 0 | Yes | |
| Average | 15.000 | 0.000 | 3/3 | |

Table 6.3.1 - Observation results for the Complex Task.

| COMPLEX TASK - CRITICAL INCIDENTS | |
|---|------------------------|
| Incident | Severity Rating |
| "Status header on table not clickable." | 2 |
| "Actually very helpful." | 0 |
| "Very good." | 0 |
| "Recent forms are not my forms?" | 1 |

Table 6.3.2 - Critical incidents for the Complex Task.

| | | |
|----------------------------|-----------------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
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7) Discussion

When testing the low-fidelity prototype with three users, all participants noted how the interface was easy to learn and use. This is evident in the results, as no tasks or subtasks were marked as incomplete for any of the participants. Where errors occurred, they were typically simple misclicks, and participants quickly recovered from them.

The time spent on each subtask ranged from a few seconds to a maximum of a minute and a half (90 seconds). The longer times can be attributed to the novelty of participants interacting with a new paper prototype for the first time. In some tasks, time was spent familiarizing oneself with or appreciating other visual aspects of the low-fi prototype. The low-fi prototype was learnable, and supposing the participants were to perform the same tasks again, the prototype would also be quite efficient. From the results, the interaction with the form history (moderate task subtask) took the longest time on average. This suggests that the form history table can be further scrutinized. One of the critical incidents alluded to the need for more clarity in the date column. The error of misclicking the Status column was also common to all participants.

In terms of additional suggestions or comments on the overall prototype, beyond the tasks that were formally tested, all users expressed positive sentiment. However, one recurring suggestion was to add formal contact information, such as an email address or phone number, of the relevant party responsible for an in-progress form. This was preferred over a “nudge” feature, which would be limited to the interface where notifications might be likely to be missed.

The points below summarize the results and key findings from the usability testing in this phase, which will be taken into consideration as the project moves forward.

- The low-fi prototype was tested with three users.
- All users enjoyed testing the prototype and encountered no significant issues with the interface.
- Users found use in the prototype's features.
- The date and status columns in the form history table should be adjusted to provide clearer information.
- Users prefer simpler and more traditional communicative methods (such as email and phone numbers) over novel ones.
- The prototype should be refined further to increase clarity.
- The task flows made sense to users.

| | | |
|---------------------|----------------------|-------------------------------------|
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Appendices

Consent Form

Consent Form

The **CodeCraft Solutions UB FormFlow** application is being produced as part of the coursework for Information Technology course CMPS3141 – Human Computer Interaction at the University of Belize. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of **UB FormFlow**. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers (**Andres Hung, Jennessa Sierra, Tysha Daniels**) or with Lecturer Manuel Medina Jr., the instructor of CMPS3141:

Manuel A. Medina Jr.
MPIT Department
University of Belize
822-1000 ext.305
mmedina@ub.edu.bz

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their lecturer.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behaviour and opinions in relation to the **CodeCraft Solutions UB FormFlow** experiment. I also give permission for images/video of me using the application to be used in presentations or publications as long as I am not personally identifiable in the images/video. I understand I may withdraw my permission at any time.

Name _____

Participant Number _____

Date _____

Signature _____

Witness name _____

Witness signature _____

Figure A.1 - Empty Consent Form for participants

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
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| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

Observation Notes Form

| Observation Notes | | | |
|---|------------|------------------|--------------------|
| Participant Number | Major | | |
| | Year | | |
| 1) Simple Task | | | |
| Submit a withdrawal form that has an upcoming deadline. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Log in to the interface. | | | |
| Find the withdrawal form. | | | |
| Determine the deadline for submitting the form. | | | |
| Submit a completed form. | | | |
| 2) Moderate Task | | | |
| Download a submitted transcript form's receipt. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to form history. | | | |
| Interact with the form history interface. | | | |
| Download the receipt. | | | |

Figure A.2.1 - Observation notes form (page 1 of 2)

| | | |
|----------------------------|-----------------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
| | Course | CMPS3141 - Human-Computer Interface |
| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

| 3) Complex Task | | | |
|--|------------|------------------|--------------------|
| Investigate the status of a program completion form. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to the program completion form's status page. | | | |
| Find out about the form's current status. | | | |
| Find out which party currently holds the form. | | | |

| Other Notes & Suggestions |
|---------------------------|
| |

Figure A.2.2 - Observation notes form (page 2 of 2)

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
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| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

Observation Notes Raw Data

| Observation Notes | | | |
|---|------------|------------------|--|
| Participant Number | Major | NRM | |
| 1 | Year | 3 | |
| 1) Simple Task | | | |
| Submit a withdrawal form that has an upcoming deadline. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Log in to the interface. | 1 min | 1 | login hard to see |
| Find the withdrawal form. | 1:07 | 0 | "I like that it's highlighted!!" "It's really useful for students!" |
| Determine the deadline for submitting the form. | 1 sec | 0 | "People always ask for deadline" |
| Submit a completed form. | 0:10 | 0 | |
| 2) Moderate Task | | | |
| Download a submitted transcript form's receipt. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to form history. | 20 sec | 0 | "Date was unclear" |
| Interact with the form history interface. | 50 sec | 0 | "I would click on my status" |
| Download the receipt. | 70 sec | 0 | "The color coding helps!" |

Figure A.3.1 - Observation notes for Participant 1 (page 1 of 2)

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
| | Course | CMPS3141 - Human-Computer Interface |
| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

| 3) Complex Task | | | |
|--|------------|------------------|--|
| Investigate the status of a program completion form. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to the program completion form's status page. | 1 min | 1 | Status not clickable circle ("Arrow unclear") |
| Find out about the form's current status. | 5 sec | 0 | |
| Find out which party currently holds the form. | 10 sec | 0 | |

| Other Notes & Suggestions | |
|--|--|
| <ul style="list-style-type: none"> - provide all the email related to the form status progress. - prefer email service for notification - I like it - Quick to visualize - Straightforward. | |

Figure A.3.2 - Observation notes for Participant 1 (page 2 of 2)

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
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| Observation Notes | | | |
|---|------------|------------------|--|
| Participant Number | Major | Premed | |
| 2 | Year | 2 | |
| 1) Simple Task | | | |
| Submit a withdrawal form that has an upcoming deadline. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Log in to the interface. | 15 sec | 1 | |
| Find the withdrawal form. | 20 sec | 0 | went straight to the recent forms instead of all forms |
| Determine the deadline for submitting the form. | 30 sec | 1 | → "Good location there!" |
| Submit a completed form. | 10 sec | 0 | |
| 2) Moderate Task | | | |
| Download a submitted transcript form's receipt. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to form history. | 20 sec | 1 | Mistaken recent forms → all forms for form History |
| Interact with the form history interface. | 1:30 | 0 | → already have proof "of frm " fricken transcript fee!" |
| Download the receipt. | 10 sec | 0 | |
| I think this good "Not rocket science!" | | | |

Figure A.4.1 - Observation notes for Participant 2 (page 1 of 2)

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
| | Course | CMPS3141 - Human-Computer Interface |
| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

| 3) Complex Task | | | |
|--|------------|------------------|---|
| Investigate the status of a program completion form. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to the program completion form's status page. | 30 sec. | 1 | Forms on home page are general, but not the submitted forms. |
| Find out about the form's current status. | 10 sec. | 0 | |
| Find out which party currently holds the form. | 5 sec | 0 | "Not a dumb question" "Well... it's right" "Actually very helpful" "there" |

| Other Notes & Suggestions | |
|---|--|
| <ul style="list-style-type: none"> - extend deadline for forms @ UB - add contact info when you click on the stage - very good - very straightforward, not very hard <p>It was fun</p> | |

→ instead of nudge, make it contact info

Figure A.4.2 - Observation notes for Participant 2 (page 2 of 2)

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
| | Course | CMPS3141 - Human-Computer Interface |
| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

| Observation Notes | | | |
|---|------------|------------------|--|
| Participant Number | Major | Pharmacy | |
| 3 | Year | 2nd | |
| 1) Simple Task | | | |
| Submit a withdrawal form that has an upcoming deadline. | | | |
| → So far nothing major | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Log in to the interface. | 35s | 0 | No cover page first. Would look for profile pic |
| Find the withdrawal form. | 15s | 0 | Recent forms vs all forms confusing possibly |
| Determine the deadline for submitting the form. | 35s | 11 | Takes some time to see. "This is okay" Did think message @ bottom was it? "Sorry help!" |
| Submit a completed form. | 30s | 0 | "Physically submit?" |
| 2) Moderate Task | | | |
| Download a submitted transcript form's receipt. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to form history. | 16s | 0 | |
| Interact with the form history interface. | 1 min | 0 | "It's fine" "Help!" |
| Download the receipt. | 5 sec | 1 | Receipt button unclear View first then download |

→ clicks on "Status" to see form's stat instead of the name that is a link)

→ took longer to find deadline info on form than anticipated everyone

→ only to notice the upcoming deadlines on the home page [side view better?]

Figure A.5.1 - Observation notes for Participant 3 (page 1 of 2)

| | | |
|---------------------|----------------------|------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMP3141-P05-25S1 |
| | Course | CMP3141 - Human-Computer Interface |
| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

| 3) Complex Task | | | |
|--|------------|------------------|---|
| Investigate the status of a program completion form. | | | |
| Subtask | Time Spent | Number of Errors | Critical Incidents |
| Navigate to the program completion form's status page. | 1 min | 0 | + deadlines on front page is very good. |
| Find out about the form's current status. | 30 sec | 1 | |
| Find out which party currently holds the form. | 30 sec | | |

| Other Notes & Suggestions | |
|---|--|
| <ul style="list-style-type: none"> - Not too hard website - recommendations <ul style="list-style-type: none"> - support # - contact = phone VB - contact of form holder <ul style="list-style-type: none"> easy? nudge? <ul style="list-style-type: none"> for more formal feature contact method better → phone/email ↓ fine but | |

Figure A.5.2 - Observation notes for Participant 3 (page 2 of 2)

| | | |
|---------------------|----------------------|-------------------------------------|
| CODECRAFT SOLUTIONS | Assignment Number | CMPS3141-P05-25S1 |
| | Course | CMPS3141 - Human-Computer Interface |
| | Semester | 2025-1 |
| | Preparation Due Date | Oct 18, 2025 |

Mobile Application Storyboards

Extra storyboards done for the Mobile Application design.

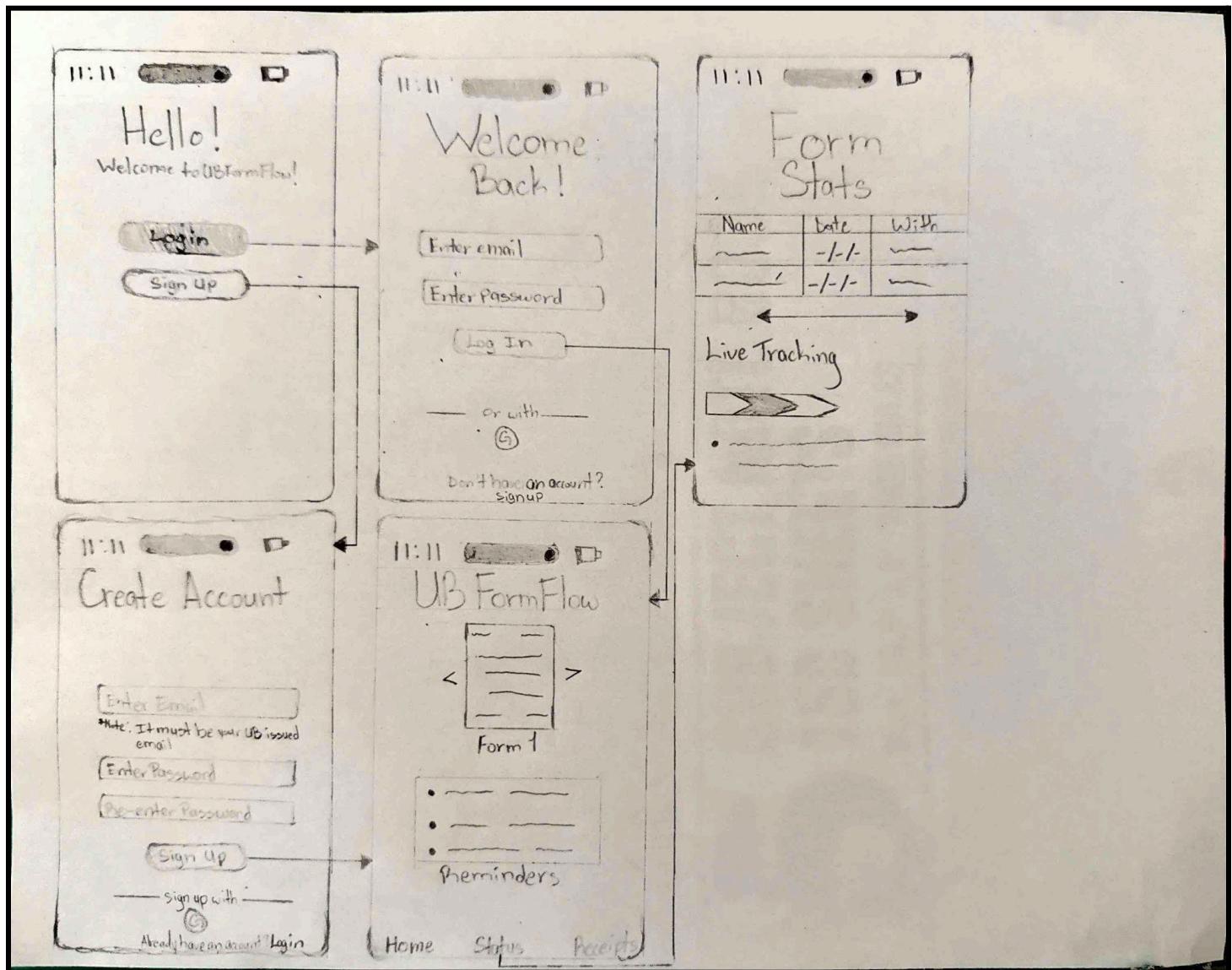


Figure A.6 - Storyboards for the Mobile Application design.

| | | |
|---------------------|----------------------|-------------------------------------|
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| | Preparation Due Date | Oct 18, 2025 |

Report Word Count

1449 (not counting figure and table captions)