POV and Experience Prototypes

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Introduction

Problem Domain

Our task was to identify a solution for the challenges transfer students at the University of Belize face when using the current transfer matrix. This matrix is inefficient, causing frustration and adding administrative burdens. Inconsistencies in credit acceptance, delays, and confusion over course equivalency can extend graduation timelines and lower student satisfaction. Development of a more streamlined, user-friendly system will help students navigate the transfer process more effectively, make informed academic decisions, and reduce the workload for university staff, improving the overall process.

Initial POV

As we moved into the next phase of our project, insights from our initial interviews shaped our perspective. The current transfer matrix at the University of Belize is not user-friendly, leaving students without the tools or information to navigate credit transfers efficiently. Its complexity and lack of clarity cause frustration for both students and staff, slowing down the process.

From the interviews conducted, our points of view were structured:

1. Providing students with clear instructions will offer greater clarity and ease in navigating the transfer process.
2. Enhanced search features will improve flexibility and precision, enabling users to easily filter and find specific information.
3. A general report for transferable courses will also simplify the process, making it less tedious for students.

Additional Needfinding Results

We conducted a second round of interviews to test our Point of Views. The general demographic includes University of Belize associates, students and employees.

Fig. 1 Silke Middleton
Corozal Junior College Transfer

Fig. 2 Abner Bobadilla
Centro Escolar Mexico Junior College Transfer

Fig. 3 Ms. Rose Pineda
University of Belize Registrar

Interviewees

Silke Middleton

Based on her experience, she finds the system difficult to navigate and often loses track of her actions. Searching for courses and checking their transferability status is challenging, leading to frustration.

Abner Bobadilla

Abner Bodadilla emphasizes the need for a more user-friendly interface with improved filters for institutions, majors, and course comparisons. The current system lacks visibility and simplicity, causing confusion and delays. Users are seeking a more visually appealing, accessible, and efficient tool within the UB platform.

Ms. Rose Pineda

Feedback indicates that the matrix lacks automation and depends on manual processes managed by advisors, leading to inefficiencies and delays. Limited communication between institutions also poses challenges in maintaining and updating the matrix.

Needfinding Results

An empathy map to summarize what the interviewees Say, Think, Feel and Do.

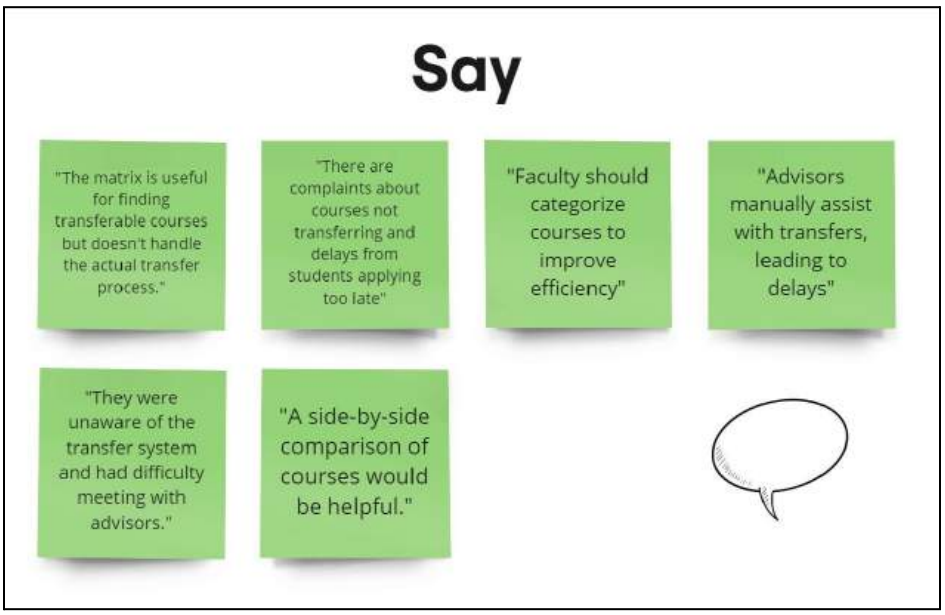

Fig. 4 The interviewees SAY

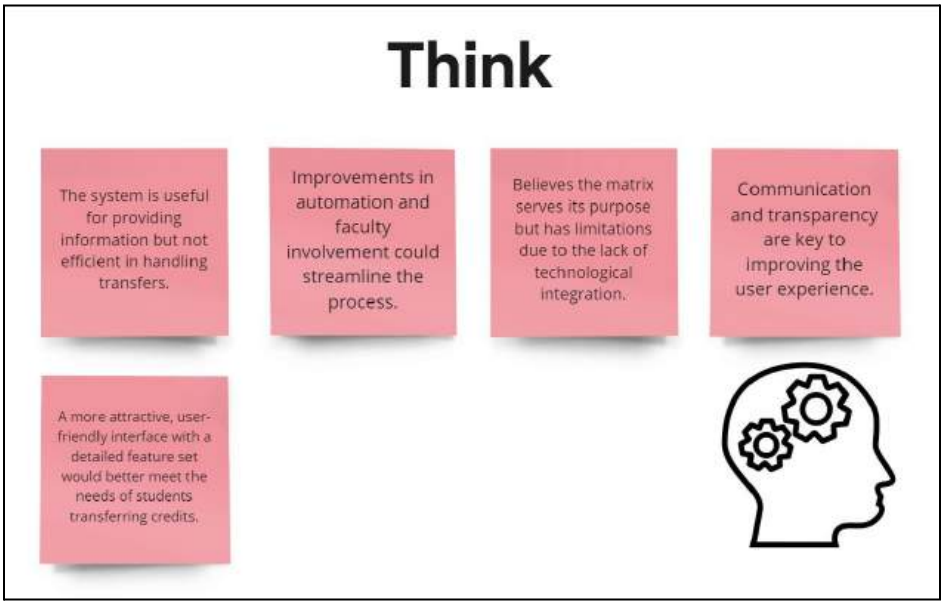

Fig. 5 The users may be THINKING

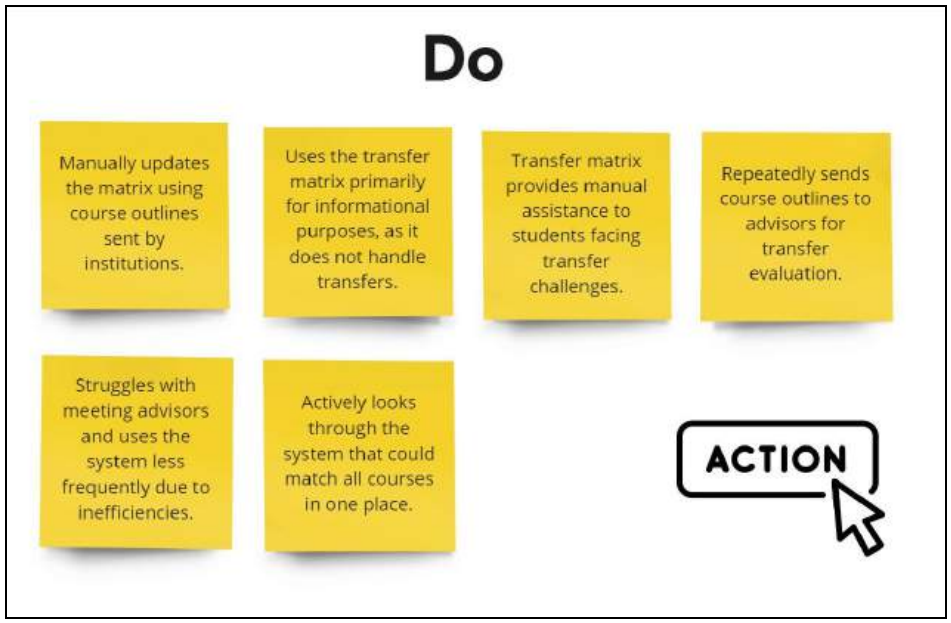

Fig. 6 ACTIONS or BEHAVIORS the users mention

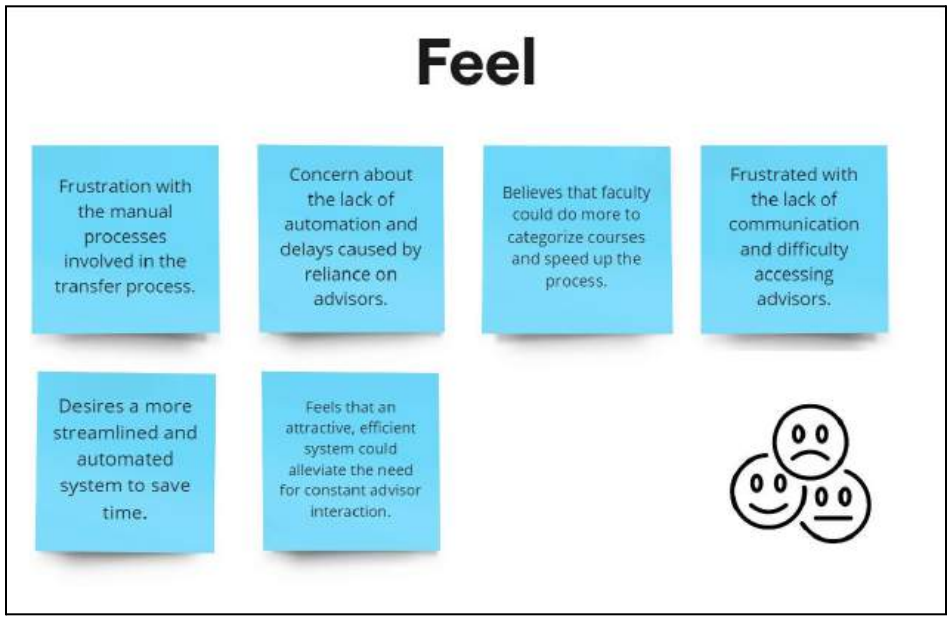

Fig. 7 Emotions they might be FEELING

Revised Point of Views (POVs)

After conducting our second round of interviews, we revised the POVs to determine our solutions.

We Met	We were amazed to realize	It would be game changing to
Silke Midleton	How tedious and frustrating it is to cycle back and forth between pages when searching for courses.	Implement a simplified one-page layout with a searchable database and automated course equivalency features, enabling users to easily track transferable credits.
Abner Bobadilla	The current credit transfer process is inefficient and lacks clarity, leading to confusion, frustration, and extended time frames for degree completion.	Develop a more transparent and user-friendly system, such as a searchable database, to provide clear information on transferable credits and streamline the entire process for students.
Ms. Rose Pineda	That the reliance on manual updates and limited institutional communication poses significant challenges, leading to delays and inefficiencies for both students and staff.	Automate the transfer matrix, allowing for real-time updates of course equivalencies, improved communication between institutions

Fig. 8 Revised POV Table

How Might We(HMW's) Statements

Developing How Might We statements allows our team to obtain ideas for potential web application designs

First POV: A simplified one-page layout with a searchable database and automated course equivalency features, enabling users to easily track transferable credits.

1. How might we ensure students can easily find information about their eligible transferable credits from different feeder institutions?
2. How might we design the one-page layout to be intuitive for tracking transferable credits?
3. How might we create a system that allows students to track the status of their transfer requests in real time?
4. How might we simplify the process of organizing courses by junior college and year of graduation to make navigation easier?
5. How might we streamline communication between students and advisors to speed up the credit transfer process?
6. How might we provide clear explanations for why a course is accepted or rejected for transfer?
7. How might we integrate an automated tool that estimates transferable credits based on student input?
8. How might we minimize delays in the transfer process through better automation of course matching and approval?
9. How might we allow students to save and revisit their transfer scenarios or simulations for future reference?

10. How might we enhance the visual appeal and usability of the transfer system to improve the overall experience for students?

Second POV: A more transparent and user-friendly system, such as a searchable database, to provide clear information on transferable credits and streamline the entire process for students.

1. How might we present the transferable courses to the user?
2. How might we simplify the navigation within the system to enhance the overall user experience?
3. How might we allow students to filter transferable courses by their major or institution to make searching more efficient?
4. How might we ensure that students receive real-time updates on the status of their credit transfer requests?
5. How might we incorporate a side-by-side comparison of courses to help students easily understand course equivalencies?
6. How might we make the system intuitive for first-time users to navigate without prior training or support?
7. How might we automate the submission and review process for credit transfers to reduce manual effort?
8. How might we design the interface to make key information easily visible and accessible at all times?
9. How might we enable students to provide feedback on their transfer experience to help continually improve the system?
10. How might we integrate a step-by-step guide or chatbot to assist students in navigating the transfer process efficiently?

Third POV: An automated transfer matrix, allowing for real-time updates of course equivalencies, improved communication between institutions

1. How can we refine the search for transferable courses to align with a student's program?
2. How might we develop an automated transfer matrix that provides real-time updates on course equivalencies?
3. How might we create a user-friendly dashboard for registrars to manage and review course equivalencies and transfer data efficiently?
4. How might we address potential discrepancies in course equivalencies and ensure the system maintains high accuracy and reliability?
5. How might we improve the clarity of course equivalency information so students can easily understand what credits are transferable?
6. How might we ensure the matrix displays the most relevant transferable courses based on a student's specific major and past coursework?
7. How might we provide students with detailed explanations for why certain courses are or aren’t eligible for transfer?
8. How might we allow students to explore potential credit transfers by simulating different course selection scenarios in the matrix?
9. How might we incorporate a visual guide or summary that shows students all their transferable courses at a glance?
10. How might we make it easier for students to search and filter courses by institution, program, or year of completion?

Best HMWS and Solutions

POVs	HMW Statements	Solutions
A simplified one-page layout with a searchable database and automated course equivalency features, enabling users to easily track transferable credits.	How might we ensure students can easily find information about their eligible transferable credits from different feeder institutions?	Implement a simplified one-page layout with integrated search filters for transferable courses, to address the need for easier access to information about eligible transferable credits from different feeder institutions.
A more transparent and user-friendly system, such as a searchable database, to provide clear information on transferable credits and streamline the entire process for students.	How might we present the transferable courses to the user?	Display a searchable database on a single page, with a search box to filter results by course or feeder institution
An automated transfer matrix, allowing for real-time updates of course equivalencies, improved communication between institutions	How can we refine the search for transferable courses to align with a student's program?	Integrate dynamic search filters that render relevant data only when filters are applied. This improves alignment with students' programs and streamlining the search process.

Fig. 9 Table of the Top 3 Best How Might We's and Their Solutions

Experience Prototypes

Prototype 1:

This prototype introduces a simplified one-page layout with integrated search filters for transferable courses. The goal is to improve access to information on eligible transferable credits from various feeder institutions. We focused on enhancing the existing system by adding additional filters while maintaining a minimalistic design.

Design:

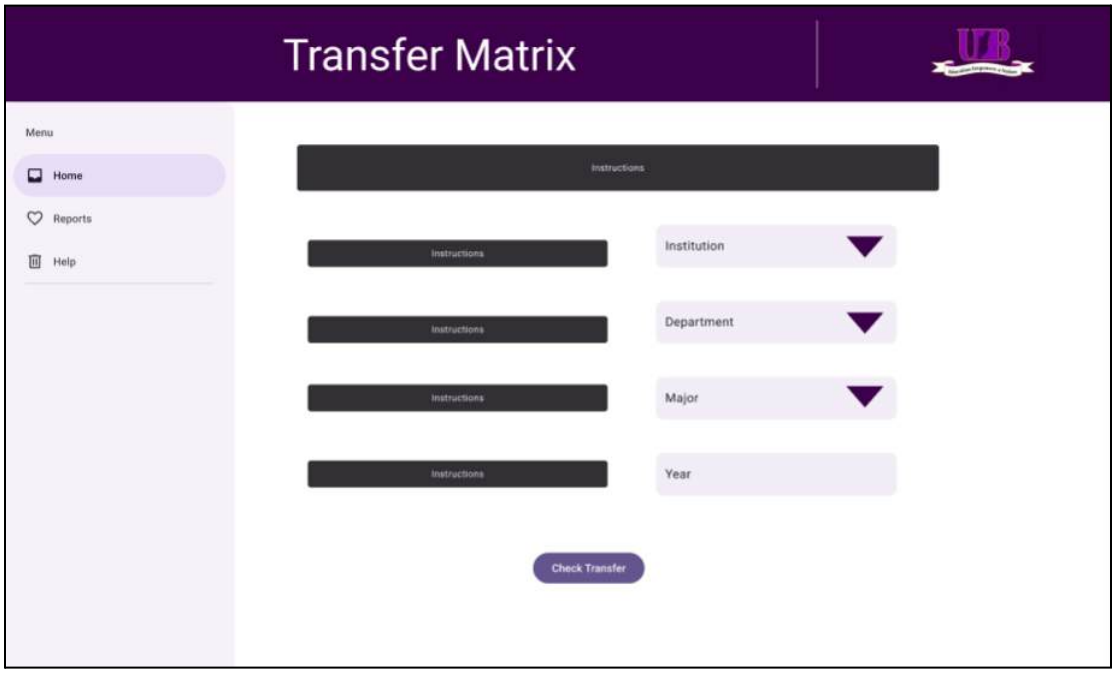

Fig. 10 Prototype 1 - one-page search form

Prototype Testing:

This enhancement was tested in-person through a simulation, mimicking the user experience to evaluate the effectiveness of the new search filters. The results confirmed that the filters improved search efficiency while preserving the existing user flow of redirecting to another page for additional details.

Prototype Findings

Things that worked: The prototype successfully allowed users to evaluate transferable courses based on their major, creating a more focused search experience. The integration of search filters streamlined access to course transferability.

Things that didn't work: The assumption that students would search only by major was incorrect. Users wanted more flexible search options beyond just their major.

Surprises: It was unexpected to find that while the homepage layout was useful, users preferred having all search options consolidated on a single page for improved efficiency, indicating a need for more comprehensive search features to be included directly within the interface.

Prototype 2:

The second prototype implemented a searchable database on a single page, featuring a search box to filter results by course or feeder institution. This design allows users to view results on a single page, with the search box helping to narrow down results in the table, creating a more focused and efficient user experience.

Design:

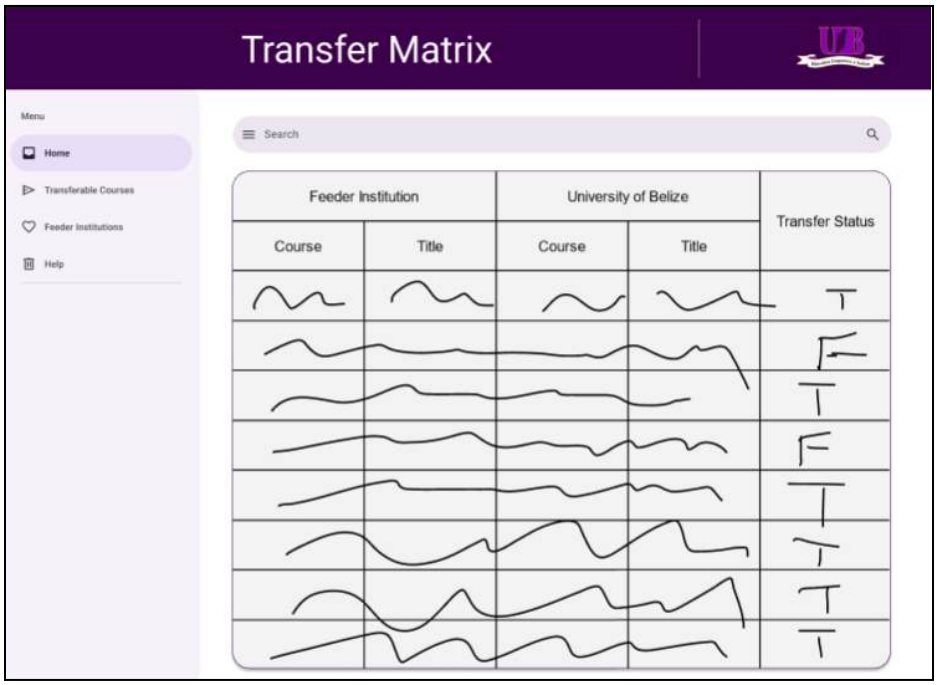

Fig. 11 Prototype 2 - Search and results on the one-page

Prototype Testing:

This prototype was tested using an impersonation simulation, focusing on the efficiency and usability of the one-page layout. Feedback showed that displaying all results on one page

improved efficiency simultaneously leading to information overload, declining readability of large datasets

Prototype Findings

Things that worked: The one-page layout enhanced the search process by allowing users to view all results at once, improving speed and efficiency. The search box helped users quickly filter results, making it easier to find relevant transferable courses based on their criteria.

Things that didn't work: Although the system was efficient, the layout risked causing information overload, making the page hard to read and navigate, with potential for slower load times.

Surprises: Users appreciated the efficiency of having all results on one page, they expressed a preference for a simpler, more readable user interface.

Prototype 3:

The third prototype integrates dynamic search filters that display data only when applied, aligning with students' programs and streamlining searches. This approach improves usability by showing relevant data and reducing information overload.

Design:

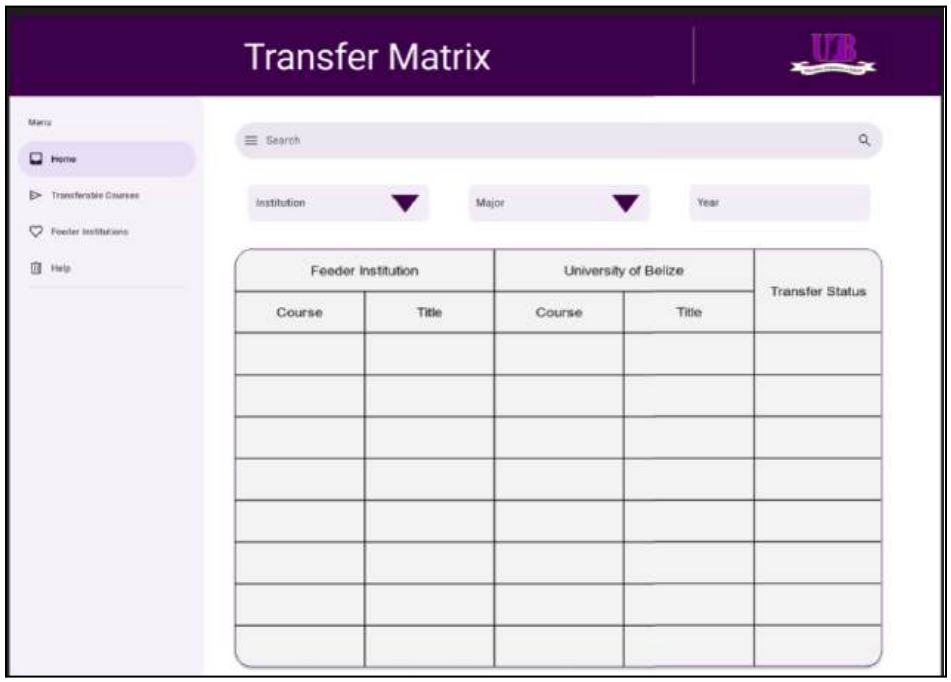

Fig. 12 Prototype 3 - Result of a combination of all efficient features

Prototype Testing:

Testing revealed that dynamic filtering was highly effective, showing users only relevant information and improving alignment with their academic programs. The one-page layout with dynamically updated content offered a seamless experience, and users appreciated the clarity it brought to course searches.

Prototype Findings

Things that worked: The dynamic search filtering system was highly successful in aligning the search results with students' academic programs.

Things that didn't worked:

Surprises: One of the unexpected outcomes was the positive response to the minimalist and dynamic design.

Prototype Conclusion

Prototype 1

- Strengths: Introduced a simplified one-page layout with integrated search filters, providing easy access to transferable courses.
- Areas of improvement: Users wanted more flexibility in searching beyond their major.

Prototype 2

- Strengths: : Created a one-page searchable database with general search filters, improving efficiency.
- Areas of improvement: Displaying too much data simultaneously led to information overload.

Prototype 3

- Strengths: Combined the best features of previous versions, using dynamic search filters to show relevant data only when applied. This improved usability, aligned results with academic programs, and reduced information overload.
- Areas of improvement: Students should be able to export their findings for future reference.

Prototype 3 was the most successful, balancing usability and information clarity with dynamic filtering and a minimalist design. It reduced information overload and made the course search process intuitive and efficient.

Appendix

HMW Solutions gathered from the three POVs:

First POV HMWs Solutions:

1. Implement a simplified one-page layout with integrated search filters for transferable courses, to address the need for easier access to information about eligible transferable credits from different feeder institutions.
2. Use a neat, minimalist design approach that will focus on user-friendliness. The layout would have clear sections that serve distinct purposes, allowing users to easily navigate through the page.
3. Create a feature where students can save courses they have already transferred and track any pending transfers that were not processed.
4. Introduce predefined filters where students can select their junior college and graduation year.
5. Integrate a messaging feature within the platform, allowing students to communicate directly with advisors.
6. When displaying transfer results, include a notes section that explains why a course is accepted or rejected.
7. Develop an automated credit estimator where students input their completed courses, and the system calculates potential transferable credits based on current equivalency rules.
8. Implement an automated course matching system that checks for completed courses against a tailored criteria, to determine its equivalency.

9. A save feature can be implemented that would allow users to revisit any transfer scenarios that they had previously completed.
10. Use a modern design to enhance the overall appeal of the site. It should also be responsive to work across different devices.

Second POV HMWs Solutions:

1. Display a searchable database on a single page, with a search box to filter results by course or feeder institution
2. Set distinct categories for the navigation that can be easily backtracked by the students. The navigation would be clear and to the point in what they are used for.
3. Create filters that allow students to select their major, institutions, etc. automatically narrowing down the relevant courses available.
4. Design a notification system that pushes real-time updates via email, sms or another form of communication, everytime a change is made in the transfer process.
5. Implement a split view layout, showing information on both courses belonging to the University and feeder institutions. The view will display information about the courses(course code, name, description, etc.), feeder on the left and University on the right.
6. Offer tooltips, a guided tour, or an FAQ section to help first-time users get started smoothly.
7. Designing a form submission process that integrates with the university's registration system. Triggering automated workflows for staff to accept or review
8. Ensure that critical information is displayed on a dashboard or summary card.
9. Include a feedback option to request feedback after using the transfer matrix, with analytics to track common issues.

10. Incorporate a messagebox somewhere on the page, that would provide frequently asked questions to aid the user in navigating through the transfer matrix.

Third POV HMWs Solutions:

1. Implement a program-specific filter that displays only relevant courses based on the student's declared major.
2. Integrate a real-time update system that automatically syncs with feeder schools' program offerings. Use an API or a centralized database where schools can submit course data, and staff or the system can cross-check equivalencies with the university.
3. Design a custom admin dashboard for registrars with filtering tools, bulk approval options, and access to detailed reports on course transfers. The dashboard should support easy navigation and provide alerts for pending reviews.
4. Integrate a peer review system where registrars from different institutions can cross-check and validate equivalencies. Additionally, allow lecturers to upload course objectives for comparison, helping to resolve discrepancies.
5. Provide clear equivalency charts with explanations for transferable courses, including links to more detailed information. Use pop-up toasts or notes from registrars on specific course decisions.
6. Customize the transfer matrix to highlight courses that are highly relevant to the student's declared major and previously completed courses, ensuring students see the most applicable options.
7. Implement toasts or pop-up notes from registrars on each course that outline eligibility criteria, reasons for rejection, or additional steps needed for approval.

8. Create a “simulation mode” where students can input potential courses and get feedback on what credits might transfer, helping them plan better.
9. Use infographics or a visual dashboard to provide a summary of all eligible transfers and ineligible courses, allowing students to easily see their transfer status in one place.
10. Implement advanced search filters by program, institution, and year of completion.. This will streamline the search process for students looking for transferable credits.