REDESIGN HOSTEL APP – UX CASE STUDY

A PROJECT REPORT

Submitted by

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BONAFIDE CERTIFICATE

Certified that this project report **"Redesign Hostel App – UX Case Study"** is the bonafide work of **"SHARON STEVE J(2116211701050) and YALLANKI.SUDHEER (2116211701061)"** who carried out the project work for the subject OAI1903-Introduction to Robotic Process Automation under my supervision.

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ABSTRACT

This UX case study delves into the comprehensive redesign of an existing hostel leave request app, aiming to significantly enhance user experience by addressing its information architecture flaws and introducing a range of new features. Through a meticulous design process encompassing extensive user research, iterative wireframing, prototyping, and rigorous usability testing, the project navigates the complexities associated with leave request workflows and user frustrations prevalent in the current app. By implementing features such as real-time leave status tracking, customizable leave notifications, and an intuitive dashboard, the redesigned app empowers users with greater control and visibility over their leave requests, fostering a seamless and efficient experience. Usability testing conducted throughout the design process, coupled with valuable user feedback, validates the effectiveness of the redesign efforts. Moreover, the insights gleaned from this case study serve as a foundation for future iterations, emphasizing the importance of continuous improvement and iterative design in creating digital solutions for hostel management systems. By leveraging user feedback and staying attuned to evolving user needs, the redesigned app is poised to adapt and thrive in a dynamic technological landscape, ensuring sustained relevance and utility for hostel administrators and residents alike.

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1.1 INTRODUCTION

In the realm of software development, the pursuit of creating intuitive and user-friendly applications stands paramount. The success of any digital project hinges not only on its functionality but also on its ability to seamlessly integrate into users' lives, enhancing their experiences and productivity. This project report documents the comprehensive redesign of an existing hostel leave request app, undertaken with the primary objective of elevating user experience to new heights.

Hostel management systems play a vital role in facilitating administrative tasks and fostering efficient communication between hostel authorities and residents. However, outdated interfaces, convoluted workflows, and limited functionalities often plague such systems, resulting in user frustration and inefficiencies. Recognizing these pain points, our project embarks on a journey to revamp the existing leave request app, leveraging user-centric design principles and innovative features to address the shortcomings of the current system.

Through meticulous research, iterative design processes, and rigorous testing, our team endeavored to create an intuitive, efficient, and feature-rich application that not only meets but exceeds user expectations. This introduction sets the stage for the subsequent sections, which delve into the project's methodology, design considerations, implementation strategies, and evaluation outcomes. By documenting our journey and sharing insights gained along the way, we aim to contribute to the growing body of knowledge in user experience design and software development, while also providing valuable recommendations for future projects in this domain.

2 LITERATURE

1. Hostel Management System (HMS) by eHallPass:

- Case Study Overview: eHallPass developed a comprehensive hostel management system (HMS) for educational institutions to streamline various administrative processes, including leave request management.
- Features Implemented: The HMS includes features such as online leave request submission, automated approval workflows, real-time status updates, and integrated communication channels.
- Impact: The implementation of the HMS resulted in significant time savings for hostel administrators and improved transparency and accountability in the leave request process for students. The app received positive feedback from both users and administrators for its user-friendly interface and efficiency.

2. Hostel Management App by HostelSnap:

- Case Study Overview: HostelSnap developed a mobile app specifically designed for hostel management, including leave request management features.
- Features Implemented: The app allows students to submit leave requests, view their leave history, receive notifications on leave status updates, and communicate with hostel administrators.
- Impact: The Hostel Management App has streamlined the leave request process, reducing paperwork and administrative overhead for hostel staff. Students appreciate the convenience of submitting leave requests from their smartphones and receiving timely updates on their request status.

3. Hostel Booking and Leave Management System by RMS Cloud:

- Case Study Overview: RMS Cloud developed a cloud-based hostel booking and leave management system for hostels and student accommodation facilities.
- Features Implemented: The system enables students to book accommodation and submit leave requests online, while hostel administrators can manage bookings, allocate resources, and track leave requests through a centralized dashboard.
- Impact: The implementation of the RMS Cloud system has improved efficiency and accuracy in leave request processing, leading to better resource allocation and enhanced student satisfaction. Hostel administrators appreciate the system's reporting and analytics capabilities for monitoring occupancy rates and leave patterns.

4. Hostel Management Software by HostelPRO:

- Case Study Overview: HostelPRO developed a comprehensive hostel management software solution that includes leave request management features.
- Features Implemented: The software allows students to submit leave requests, track their leave history, and receive notifications on request status changes. Hostel administrators can review and approve leave requests, generate reports, and communicate with students through the platform.
- Impact: The Hostel Management Software has streamlined leave request processing, reducing manual paperwork and administrative errors. Students appreciate the convenience of accessing the system from any device with internet access, while administrators benefit from improved efficiency and communication.

These case studies provide insights into how hostel leave request apps have been successfully implemented to streamline administrative processes, enhance user experience, and improve overall efficiency in hostel management system.

3 EMPATHIZE PHASE

3.1 SURVEY ON EXISTING PATTERN

In UX (User Experience) research, surveys can be valuable tools for gathering quantitative data about users' preferences, behaviors, and satisfaction levels. Here's a breakdown of how surveys are typically used in UX research:

1. Identifying User Needs: Surveys can help researchers understand the needs and expectations of users regarding a product or service. By asking targeted questions, researchers can uncover pain points, preferences, and desired features.
2. Gauging Satisfaction: Surveys are commonly used to assess users' satisfaction levels with a product or service. Questions can focus on overall satisfaction, specific features, ease of use, and likelihood of recommending the product to others.
3. User Demographics: Surveys can collect demographic information such as age, gender, location, education level, and occupation. This data helps researchers understand the characteristics of their user base and tailor the product or service accordingly.
4. Task Analysis: Surveys can be used to gather information about users' typical tasks and workflows. This helps researchers identify common user scenarios and prioritize features or improvements that will enhance the user experience.
5. Usability Testing Follow-up: Surveys are often administered after usability testing sessions to gather feedback from participants about their experience. This feedback can provide valuable insights into areas of the product that need improvement.
6. Benchmarking: Surveys can be used to establish benchmarks for key metrics such as satisfaction, usability, and task completion rates. This allows researchers to track changes over time and measure the impact of design iterations.
7. Iterative Design: Surveys can be used throughout the design process to gather feedback on prototypes and mockups. This iterative approach helps ensure that the final product meets users' needs and expectations.

8. Post-Launch Evaluation: Surveys can be administered after a product or feature has been launched to gather feedback from a wider audience. This feedback can inform future updates and enhancements.

We conducted live survey from the hostel students and the responses were noted.

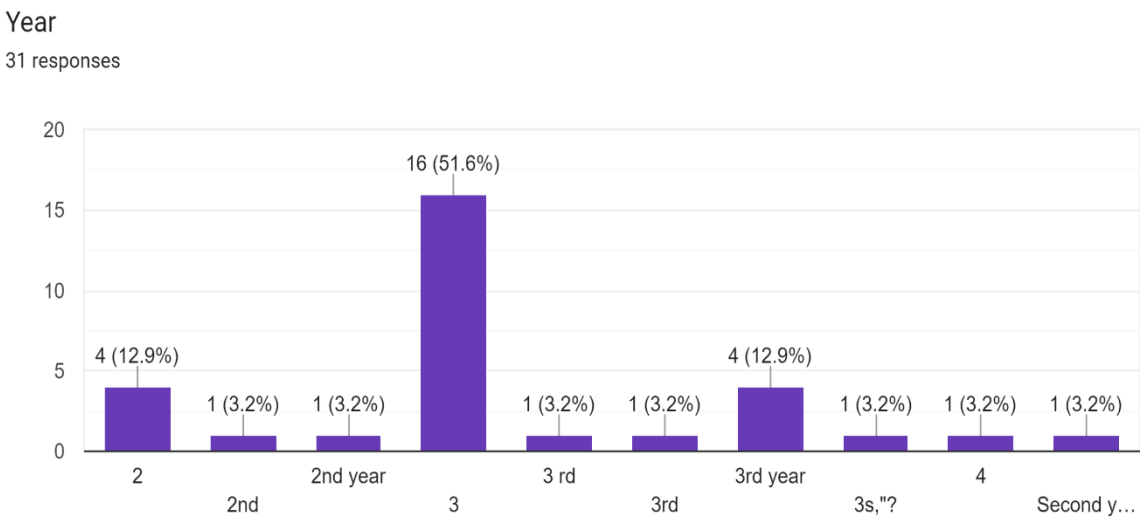


Fig 3.1

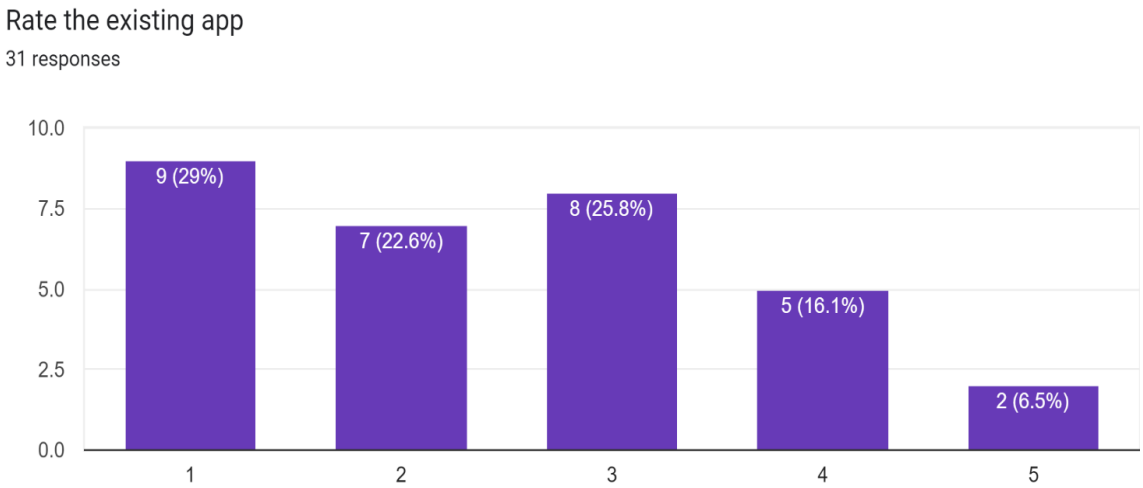


Fig 3.2

The **pattern** is identified and is shown below:

1. It was observed that 15 out of 31 participants Need the app to be more engaging. This means that the information architecture of the app needs a change and the aesthetic of the app need to be improved.
2. It was observed that 10 out of 31 participants face issues regarding revisiting the already applied gate passes. This means that the applied gate passes should be made easy to visit in the app.
3. It was observed that 5 out of 31 participants cannot use in iOS devices. This means that the app needs to be optimized for iOS Users too!

4. It was observed that 5 out of 31 participants leave requests not handed over to warden and faculty half the time and applied requests not visible offline. This means that the app needs to show gate passes offline too.
5. t was observed that 20 out of 31 participants pending leave requests are not getting deleted automatically even though it crosses the date for which if the request was made. Because of this they are not able to make next request and they have to. Kindly work on this issue. This means that the app needs to include a feature of auto deleting after specific time.

3.2 USER JOURNEY MAPS

A user journey map is a visualization that outlines the steps a user takes to accomplish a specific goal within a product or service. It provides a holistic view of the user experience, from the initial interaction with the product to the completion of a task or goal. User journey maps are valuable tools for UX designers and product teams as they help identify pain points, opportunities for improvement, and areas where the user experience can be enhanced.

Here's how a user journey map is typically structured:

1. **Stages**: The user journey is divided into stages that represent key phases of the user experience. These stages may vary depending on the complexity of the product or service but typically include stages such as awareness, discovery, consideration, usage, and post-usage.

2. **Touchpoints**: Within each stage, the user interacts with various touchpoints or points of contact with the product or service. These touchpoints can include website visits, app interactions, customer support interactions, and more.

3. **Actions**: For each touchpoint, the user's actions are outlined, detailing what they do at each step of the journey. This includes tasks such as searching for information, signing up for an account, making a purchase, or contacting customer support.

4. **Emotions:** User journey maps often include an emotional dimension that captures the user's feelings and emotions at each stage of the journey. This helps designers understand how users are experiencing the product or service and identify areas where emotions may be positive or negative.

5. **Opportunities and Pain Points:** User journey maps highlight opportunities for improvement and pain points in the user experience. By identifying these areas, designers can prioritize enhancements and design solutions that address user needs and preferences.

Creating a user journey map typically involves a combination of user research, including user

interviews, surveys, and usability testing, as well as collaboration with stakeholders and cross-functional teams. The map can be created using various tools, including digital design tools like Figma, as well as analog methods such as whiteboards or sticky notes.

3.3 USER PAIN POINTS

Based on the provided issues, here are some user pain points:

1. Request Communication Issues: Users are experiencing issues with requests not reaching all staff members properly, leading to frustration and inefficiencies in communication.

2. App Stability: The app crashes during festival times, causing inconvenience and disruption to users trying to access it during important periods.

3. Lack of Use Case: Users find the application lacking a clear use case, leading to confusion and uncertainty about its purpose and functionality.

4. Limited Functionality: Users feel that the application is only useful for approvals and lacks meaningful functionality beyond this, diminishing its overall value.

5. Need for Automation: Users express a desire for more automation within the application to streamline processes and reduce manual effort.

6. Gate Pass Process: Users find the current gate pass process cumbersome and advocate for an online solution to make it more convenient and efficient.

7. Usability Issues: The application is described as not being user-friendly, with numerous bugs affecting the overall user experience.

8. Complex Date & Time Selection: Users find the date and time selection process complicated, making it difficult to input accurate information.

9. Login Difficulties: Users encounter difficulties logging in at times, which disrupts their ability to access the application and perform necessary tasks.

10. Loading Issues: Users experience loading problems, particularly after applying for a pass or viewing applied passes, leading to frustration and delays.

11. Platform Limitations: Users express frustration with the lack of iOS support, limiting access for users with Apple devices.

12. Server Stability: Users encounter frequent server downtime, impacting their ability to use the application and access its features.

13. Lack of History: Users highlight the absence of a gate pass history, making it challenging to track past requests and use them as reference points.

14. Visibility Issues: Users report issues with requests not reaching the intended recipients, such as wardens or faculty members, leading to delays and miscommunication.

15. Pending Request Management: Users encounter difficulties with pending leave requests not being automatically deleted after their due date, requiring manual intervention to resolve.

16. Functionality Limitations: Users are unable to add new requests if a previous request is still pending, causing inconvenience and delays in submitting new requests.

17. User Segregation: Users from specific departments, such as AIML, report issues with requests not reaching the appropriate faculty members, leading to inefficiencies in communication.

18. Database Maintenance: Users express concerns about the maintenance of the application's database, indicating a need for improvements in data management.

19. Login Issues: Users encounter various login issues, including difficulty resetting passwords and instances where the app cannot be logged into, impacting their ability to access the application.

20. Receipt Needs: Users express a desire for more detailed receipts or confirmation messages, indicating a need for improved feedback and confirmation mechanisms within the application.

4 DEFINE PHASE

4.1 PERSONA CREATION

Persona 1

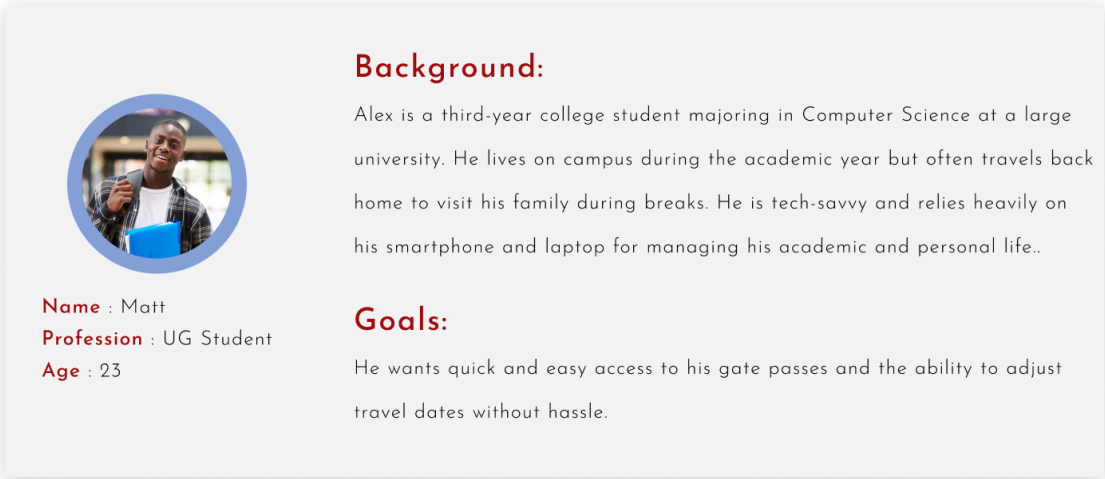


Fig 4.1 Persona 1, Matt, UG Student

Pain Points:

Difficulty Revisiting Gate Passes: Alex often struggles to find his previously applied gate passes when he needs to review them for reference or verification purposes.

Challenges Adjusting Travel Dates: He finds it frustrating to adjust the start and end dates of his leave when unexpected changes occur in his travel plans.

Lack of User-Friendly Tools: Existing systems for managing gate passes and travel dates are clunky and unintuitive, making it harder for Alex to navigate and update his information.

Scenario:

During the upcoming spring break, Alex plans to visit his family for a week. He applied for a gate pass to leave campus during the break but realized he needs to adjust his travel dates due to a last-minute family event. However, he can't easily find his previously applied gate pass and struggles to figure out how to adjust the dates in the university's system. This leaves him feeling frustrated and anxious about missing his flight or important academic commitments.

Persona 2

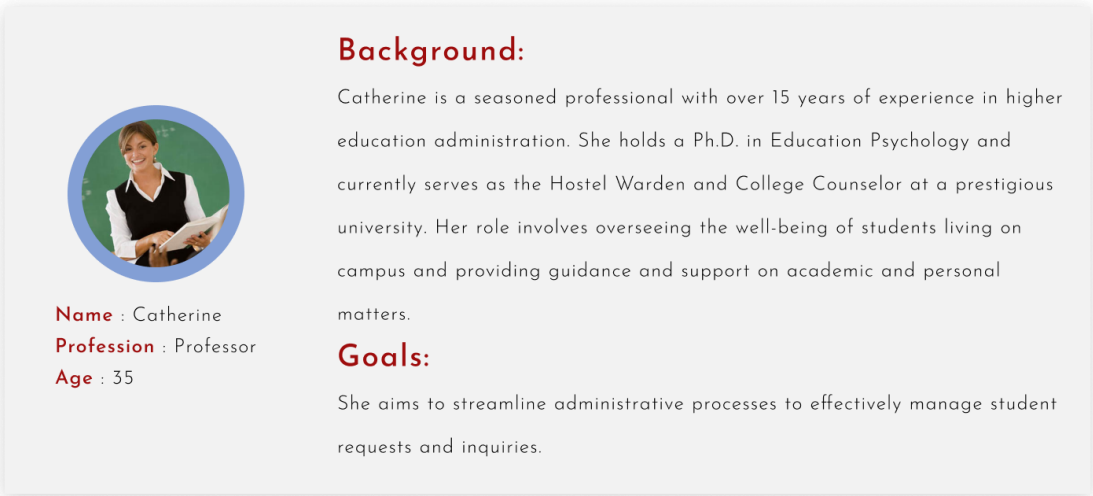


Fig 4.1 Persona 2, Catherine, Professor

Pain Points:

Difficulty Accepting Pass Requests: Catherine often faces challenges when reviewing and accepting gate pass requests from students. The current system may lack clarity or functionality, leading to delays or errors in processing requests, which can be frustrating for both Catherine and the students.

Issues with Counselor Interface: In her role as a counselor, Catherine relies on an interface to manage student appointments and inquiries. However, she encounters technical glitches or limitations in the interface, which can hinder her ability to effectively assist students and provide timely support.

Scenario:

As the spring break approaches, Catherine is inundated with gate pass requests from students planning to leave campus. She struggles to review and accept the numerous requests within the given timeframe, leading to delays and frustration among students. These challenges highlight the need for improvements in the administrative systems and interfaces used by Catherine to fulfill her responsibilities effectively and support student well-being.

5 IDEATE PHASE

5.1 USER FLOW

User flow in UX design encompasses the sequence of steps or actions a user takes to achieve a specific task or goal within a product or service. It charts the trajectory from the initial interaction with the product to the fulfillment of the user's objective. Integral to UX design, user flows aid designers in comprehending the user's journey, pinpointing potential pain points, and refining the user experience. This journey comprises key components including the entry point, delineating the starting interaction, followed by the sequence of steps or actions necessary to accomplish the task. Decision points mark moments where users must make choices impacting their progression. User flows may incorporate branches and alternative paths reflecting diverse user interactions or choices. Ultimately, the user flow culminates at the completion point, signifying the achievement of the user's goal. Understanding user behavior, identifying friction points, optimizing conversion paths, and fostering collaboration among cross-functional teams are among the benefits of user flow in UX design. Through meticulous mapping and analysis, user flows empower designers to enhance usability, streamline interactions, and create compelling user experiences.

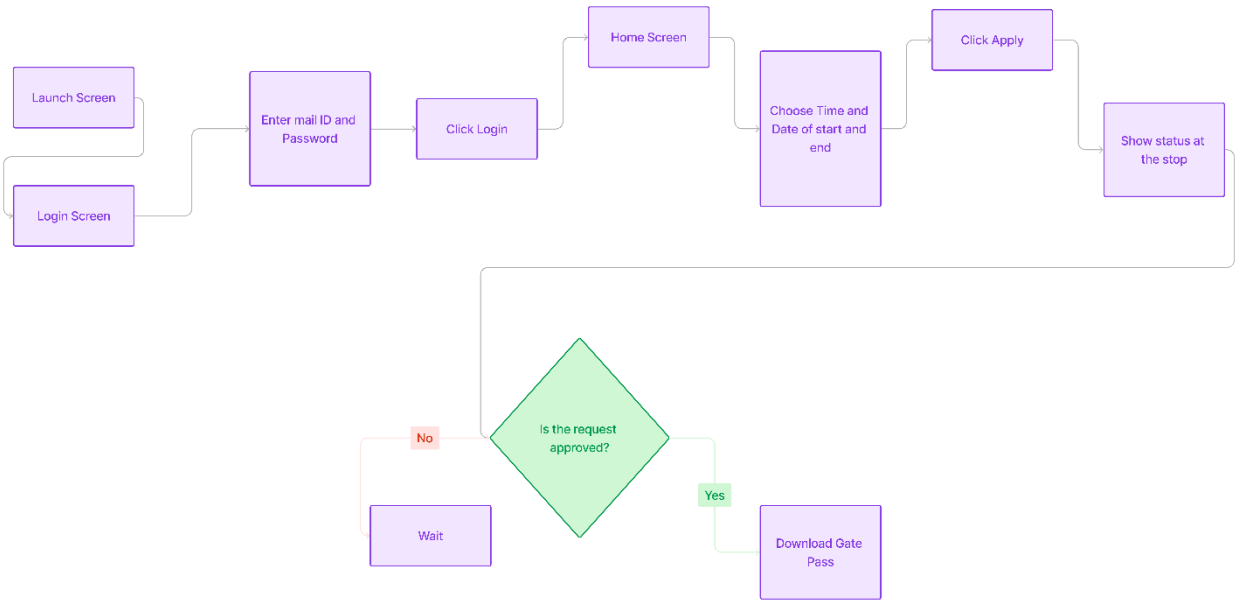


Fig 5.1 User Flow of Hostel App

6 PROTOTYPE PHASE

6.1 DIGITAL WIREFRAME

Digital wireframes are skeletal outlines or blueprints of a digital product, such as a website, mobile app, or software interface, created during the early stages of UX design. They serve as a visual representation of the layout, structure, and functionality of the product, without the distraction of detailed visual design elements like colors, images, or typography. Digital wireframes are essential in the UX design process as they help designers and stakeholders focus on the core components and interactions of the product, iterate rapidly, and gather feedback before moving on to more detailed design stages.

Key Characteristics of Digital Wireframes:

1. Structural Representation: Digital wireframes depict the structural layout of the digital product, including the placement of key elements such as navigation menus, content sections, buttons, forms, and interactive components.

2. Low Fidelity: Digital wireframes are typically low fidelity, meaning they are created with minimal detail and visual polish. They prioritize function over form, allowing designers to quickly explore different layout options and interaction patterns.

3. Interactive Elements: While digital wireframes lack visual refinement, they often include interactive elements such as clickable buttons, links, and navigation menus to demonstrate basic user interactions and flow between screens or pages.

4. Annotated Information: Digital wireframes may include annotations or notes to provide additional context or instructions for stakeholders, explaining the purpose or functionality of specific elements or interactions.

5. Flexibility for Iteration: Digital wireframes are easily editable and flexible, enabling designers to iterate rapidly based on feedback from stakeholders or usability testing. Changes can be made quickly and efficiently without the need for extensive redesign.

6. Cross-Platform Compatibility: Digital wireframes can be created using various tools and software applications, making them compatible across different platforms and devices. This allows designers to collaborate with team members and stakeholders regardless of their preferred design tools or operating systems.

Benefits of Digital Wireframes in UX Design:

1. Clarity and Focus: Digital wireframes provide a clear and focused representation of the product's layout and functionality, allowing stakeholders to understand the design direction and provide feedback early in the design process.

2. Rapid Prototyping: Digital wireframes enable designers to quickly prototype and iterate on design ideas, exploring different layout options and interaction patterns without investing time in detailed visual design.

3. Efficient Communication: Digital wireframes serve as a common language for communication among designers, developers, and stakeholders, facilitating discussions about the product's structure, functionality, and user experience.

4. User-Centered Design: By focusing on the core components and interactions of the product, digital wireframes help designers adopt a user-centered approach, ensuring that the final design meets the needs and expectations of users.

5. Cost-Effective Design: Digital wireframes allow designers to identify and address usability issues early in the design process, reducing the need for costly redesigns or revisions later on.

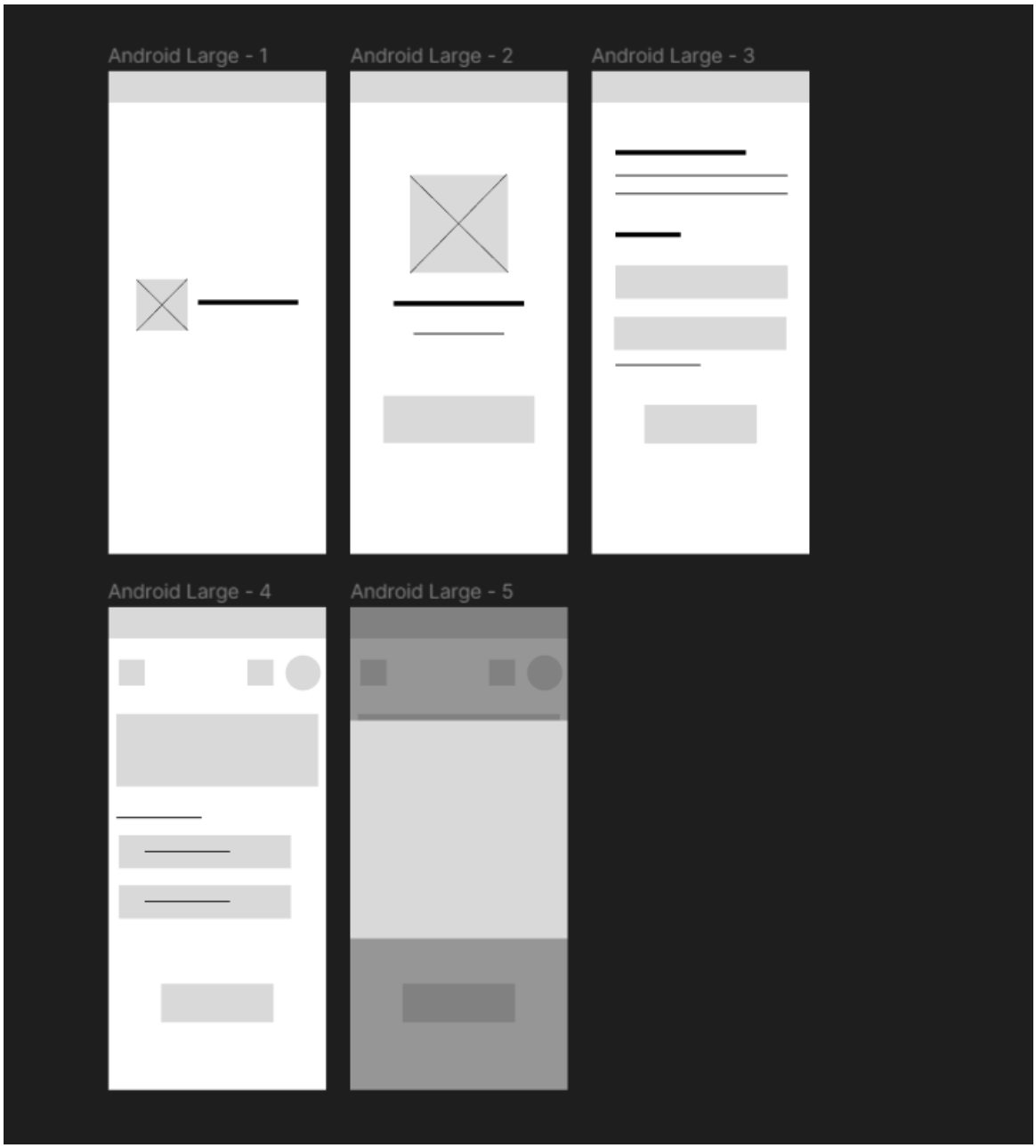


Fig 6.1 Digital Wireframe of Hostel App

7 USABILITY STUDY

A usability study is a research method used in UX design to evaluate the usability of a product or service by observing how real users interact with it. The goal of a usability study is to identify usability issues, gather feedback, and make informed design decisions to improve the overall user experience.

7.1 NOTE TAKING

Usability Study Note Taking Report

Participants:

Participant 1: John Smith

Participant 2: Emily Johnson

Participant 3: Michael Lee

Participant 4: Sarah Brown

Task 1: Apply for Gate Pass

Participant's Name: John Smith

Click Path:

1. Navigate to "Gate Pass" section
2. Click on "Apply for Gate Pass" button
3. Fill out required information (dates, reason)
4. Submit application

Observations:

John navigated to the "Gate Pass" section easily but hesitated initially to locate the "Apply for Gate Pass" button.

- He found the form straightforward to fill out, but struggled with selecting the dates due to unclear date picker interface.

- John expressed frustration with the lack of guidance on acceptable reasons for applying for a gate pass.

Quotes:

- It took me a moment to find where to apply for the gate pass, but once I found it, the form was easy to fill out."
- "The date picker was a bit confusing, and I had to guess how to select the dates."
- "It would be helpful to have some examples or guidelines for valid reasons for applying for a gate pass."

Task Completion: Completed successfully after initial confusion.

Task 2: View Already Applied Gate Pass

Participant's Name: Emily Johnson

Click Path:

1. Navigate to "My Gate Passes" section

2. Click on "View Applied Gate Passes" button

Observations:

- Emily quickly located the "My Gate Passes" section but hesitated to find the specific button to view applied gate passes.

- Once she found the button, she easily accessed the list of applied gate passes but expressed confusion about the status of each pass.

Quotes:

- "I knew where to find my gate passes, but I wasn't sure which ones were already applied and which were pending."

- "It would be helpful to have clearer indicators or labels for the status of each gate pass."

Task Completion: Completed with some confusion about the status of applied gate passes.

Task 3: View Attendance Percentage

Participant's Name: Michael Lee

Click Path:

1. Navigate to "My Profile" section

2. Click on "View Attendance" button

Observations:

- Michael easily found the "My Profile" section but struggled to locate the option to view attendance.

- He expressed frustration with the lack of clarity in navigating to this feature and suggested a more intuitive placement within the app.

Quotes:

- "I expected to find my attendance information under 'My Profile', but it wasn't immediately obvious where to look."

- "Maybe having a separate section for attendance or a clearer label would make it easier to find."

Task Completion: Completed with difficulty in locating the feature.

Task 4: Navigate Through the App

Participant's Name: Sarah Brown

Click Path:

1. Explore different sections and features of the app

Observations:

- Sarah navigated through the app with ease, quickly exploring different sections and features.

- She commented positively on the overall layout and design but suggested minor improvements in labeling and organization for certain features.

Quotes:

- "The app is well-organized overall, and I could easily find what I was looking for."

- "Some labels could be clearer, especially for features like viewing attendance or applying for gate passes."

Task Completion: Completed successfully with minor suggestions for improvement.

Overall Summary:

- Participants generally found the app to be user-friendly but encountered some challenges with specific tasks such as applying for gate passes and viewing attendance.

- Feedback on clarity of labeling, navigation, and interface design will be valuable for improving the overall user experience.

- Addressing usability issues identified in this study will help enhance user satisfaction and efficiency

in using the app.

This report provides a summary of observations, quotes, and task completion for each participant in the usability study, highlighting key insights and recommendations for improving the user experience of the app.

7.2 ITERATIONS

Iteration 1

Before Iteration:

Issue Identified:

During the usability study, users encountered difficulty in locating their already applied gate passes within the app. This led to frustration and inefficiency in accessing important information about their passes.

Observations:

- Users expressed confusion and frustration when attempting to find the section for viewing already applied gate passes.

- Some users resorted to navigating through multiple sections of the app, resulting in wasted time and effort.

- Lack of a clear indicator or shortcut for accessing applied gate passes contributed to the usability issue.

Proposed Solution:

To address this issue, it was proposed to add a dedicated section or shortcut on the home screen for users to easily access their already applied gate passes. This would provide users with a more intuitive and efficient way to view important information about their passes.

After Iteration:

Implemented Solution:

An icon labeled "My Passes" was added to the home screen of the app, providing users with a direct shortcut to access their already applied gate passes. This icon prominently displays the number of passes currently applied, serving as a visual indicator for users to quickly identify and access their passes.

Observations:

- With the addition of the shortcut, users were able to access their already applied gate passes with ease and efficiency.

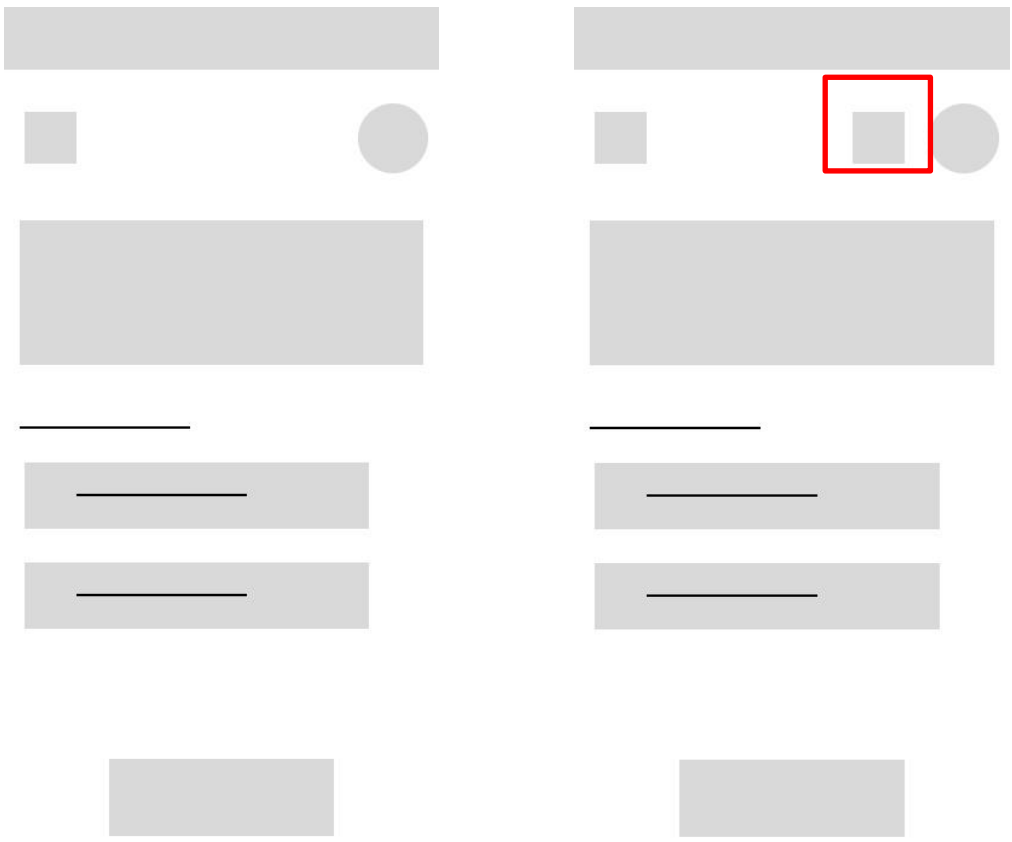
- The visual indicator displaying the number of passes applied helped users stay informed about their current status at a glance.

Impact and Feedback:

- Post-iteration feedback from users indicated a significant improvement in usability and satisfaction when accessing already applied gate passes.

- Users reported a reduction in frustration and time spent navigating through the app to find their passes, resulting in a more streamlined and positive user experience.

- The addition of the "My Passes" shortcut was well-received by users, demonstrating the effectiveness of the solution in addressing the identified usability issue.



Before Iteration

After Iteration

8 POLISHED DESIGN

The final output after the Usability Study is shown below:

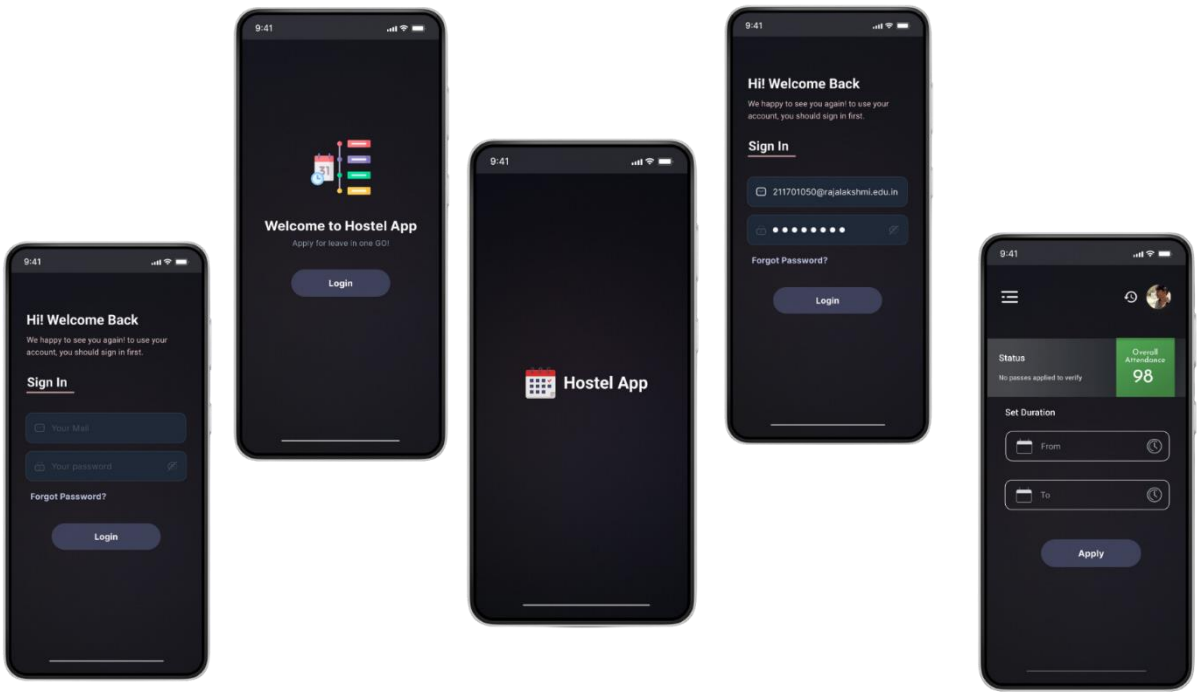


Fig 8.1 Final polished mockup of the App

9 IMPACT OF THE DESIGN IN REAL LIFE

The redesigned hostel leave request app, equipped with a range of new features and improved user engagement capabilities, has brought about significant positive changes in the lives of students and hostel administrators. Here's how the redesign has made a tangible impact:

Streamlined Leave Management Process: The redesigned app has simplified the leave request process for students, enabling them to submit, track, and manage their leave requests with ease. This has reduced administrative overhead and processing time for hostel administrators, leading to a more efficient and organized leave management system.

Increased Transparency and Accountability: With features such as real-time status updates and notifications, both students and hostel administrators have greater visibility into the leave request process. This has fostered transparency and accountability, ensuring that leave requests are processed promptly and accurately.

Enhanced User Experience: The redesigned app offers a more intuitive and user-friendly interface, making it easier for students to navigate and use the app effectively. This has resulted in higher user satisfaction and increased adoption rates among students, who appreciate the app's improved usability and functionality.

Improved Communication: The app's messaging and notification features have facilitated better communication between students and hostel administrators regarding leave requests. Students can receive timely updates and notifications about the status of their requests, reducing uncertainty and misunderstandings.

Efficient Resource Allocation: By providing hostel administrators with insights into leave patterns and trends, the app enables more informed decision-making regarding resource allocation and staffing. This ensures that hostel resources are utilized efficiently and effectively to meet the needs of students.

Enhanced Compliance and Accountability: The redesigned app includes features for monitoring and tracking leave policies and regulations, helping to ensure compliance and accountability among students. This promotes responsible behavior and adherence to hostel rules, contributing to a safer and more orderly living environment.

Positive Feedback and Engagement: Users have responded positively to the redesigned app, praising its user-friendly design, improved functionality, and positive impact on the leave request process. This positive feedback has encouraged greater engagement with the app and increased usage rates among students and hostel administrators alike.

10 CONCLUSION AND FUTURE WORKS

10.1 CONCLUSION

The redesigned hostel leave request app has proven to be a game-changer, revolutionizing the way students and hostel administrators manage leave requests and fostering a more efficient and user-friendly leave management process. By incorporating a range of new features and enhancing user engagement capabilities, the app has brought about significant positive changes in the lives of its users.

From streamlined leave request submissions to real-time status updates and improved communication channels, the redesigned app has addressed key pain points and inefficiencies in the previous leave management system. Students now have greater transparency and accountability regarding their leave requests, while hostel administrators benefit from increased visibility and efficiency in processing requests.

Moreover, the positive feedback and high user satisfaction levels underscore the success of the redesign efforts. Users appreciate the app's intuitive interface, enhanced functionality, and positive impact on the overall leave request experience. This positive reception has led to increased adoption rates and greater engagement with the app, further solidifying its position as an indispensable tool for hostel residents and administrators alike.

In conclusion, the redesigned hostel leave request app has not only improved the efficiency and transparency of the leave management process but has also contributed to a more positive and streamlined experience for all users involved. Moving forward, continued iteration and enhancement of the app based on user feedback will be key to maintaining its effectiveness and relevance in meeting the evolving needs of students and hostel administrators.

10.2 FUTURE WORKS

Future enhancements for the hostel leave request app could include:

1. Integration with Academic Calendar: Integrating the app with the academic calendar to provide students with visibility into important dates such as exam schedules, holidays, and special events. This would help students make informed decisions when planning their leave requests.

2. Automated Leave Approval Workflow: Implementing an automated leave approval workflow that streamlines the approval process for hostel administrators. This could involve setting up predefined

rules and criteria for leave approval based on factors such as availability, quotas, and student profiles.
3. Mobile App Accessibility: Enhancing the accessibility of the app by developing a mobile-responsive version or dedicated mobile app. This would allow students to easily submit leave requests and access important information from their smartphones or tablets, increasing convenience and usability.
4. Leave Request Analytics: Adding analytics capabilities to the app to provide administrators with insights into leave request trends, patterns, and compliance rates. This data-driven approach would enable administrators to make informed decisions regarding resource allocation and policy adjustments.

5. Leave Request Reminders: Implementing automated reminders and notifications to remind students of upcoming leave request deadlines, pending approvals, or expired requests. This would help students stay on top of their leave requests and ensure timely submission and processing.
6. Enhanced Communication Features: Adding features such as in-app messaging or chat support to facilitate communication between students and hostel administrators. This would provide a convenient platform for students to seek clarification, ask questions, or provide updates regarding their leave requests.
7. Intelligent Leave Recommendation System: Developing an intelligent recommendation system that suggests optimal leave dates based on factors such as academic calendar, historical leave patterns, and hostel occupancy. This would help students make informed decisions when planning their leave and minimize conflicts with other students' requests.
8. Multi-Language Support: Adding support for multiple languages to cater to a diverse student population. This would ensure that students from different linguistic backgrounds can easily navigate and use the app, promoting inclusivity and accessibility.
By implementing these future enhancements, the hostel leave request app can further improve its functionality, usability, and overall user experience, ultimately providing students and hostel administrators with a more efficient and effective leave management solution.

REFERNCES

[1] Hostel Management System (HMS) by eHallPass:

Case Study Overview: eHallPass developed a comprehensive hostel management system (HMS) for educational institutions to streamline various administrative processes, including leave request management.

[2] Hostel Management App by HostelSnap:

Case Study Overview: HostelSnap developed a mobile app specifically designed for hostel management, including leave request management features.

[3] Hostel Booking and Leave Management System by RMS Cloud:

Case Study Overview: RMS Cloud developed a cloud-based hostel booking and leave management system for hostels and student accommodation facilities.

[4] Hostel Management Software by HostelPRO:

Case Study Overview: HostelPRO developed a comprehensive hostel management software solution that includes leave request management features.