

FINAL PROJECT- IF184802

Design and Evaluation of User Interface and Experience on myITS WorkTime Responsive Web App

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Department of Informatics

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Institut Teknologi Sepuluh Nopember

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Surabaya

2023

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LEMBAR PENGESAHAN

DESIGN AND EVALUATION OF USER INTERFACE AND EXPERIENCE ON myITS WORKTIME RESPONSIVE WEB APP




TUGAS AKHIR

Diajukan untuk memenuhi salah satu syarat
Memperoleh gelar Sarjana Komputer pada
Program Studi S-1 Teknik Informatika
Departemen Teknik Informatika
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APPROVAL SHEET

DESIGN AND EVALUATION OF USER INTERFACE AND EXPERIENCE ON myITS WORKTIME RESPONSIVE WEB APP




FINAL PROJECT

Submitted to fulfill one of the requirements
for obtaining a bachelor degree at
Undergraduate Study Program of Bachelor
Department of Informatics
Faculty of Intelligent Electrical and Informatics Technology
Institut Teknologi Sepuluh Nopember

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Dengan ini menyatakan bahwa Tugas Akhir dengan judul “Design and Evaluation of User Interface and Experience on myITS WorkTime Responsive Web App” adalah hasil karya sendiri, bersifat orisinal, dan ditulis dengan mengikuti kaidah penulisan ilmiah.

Bilamana di kemudian hari ditemukan ketidaksesuaian dengan pernyataan ini, maka saya bersedia menerima saksi sesuai dengan ketentuan yang berlaku di Institut Teknologi Sepuluh Nopember.

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Bilamana di kemudian hari ditemukan ketidaksesuaian dengan pernyataan ini, maka saya bersedia menerima saksi sesuai dengan ketentuan yang berlaku di Institut Teknologi Sepuluh Nopember.

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DESIGN AND EVALUATION OF USER INTERFACE AND EXPERIENCE ON myITS WORKTIME RESPONSIVE WEB APP

Nama Mahasiswa / NRP : Salsabila Irbah / 05111942000007
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Abstrak

Produktivitas dan pengelolaan waktu sangat penting dalam era teknologi saat ini bagi sebagian besar profesional. Waktu memiliki peran yang sangat krusial dalam kehidupan kita, memberikan tekanan besar dalam kegiatan akademik dan pekerjaan. Kegiatan pendidikan dan pelatihan, serta total jumlah jam mengajar setiap minggunya, merupakan tugas dasar bagi tenaga kependidikan. Umumnya, waktu yang diperlukan untuk kegiatan ini tidak dapat diatur secara fleksibel. Aplikasi myITS Worktime dirancang untuk memudahkan dosen dan tenaga kependidikan dalam mencatat tugas dan absensi mereka, sehingga memaksimalkan efisiensi kerja dan mencatat histori pekerjaan mereka.

Dikembangkan menggunakan metode User-centered Design, aplikasi myITS Worktime bertujuan untuk memahami kebutuhan pengguna melalui survei dan evaluasi desain antarmuka pengguna. Dua evaluasi desain dilakukan untuk mengidentifikasi masalah dalam desain antarmuka pengguna: *usability testing* untuk mengevaluasi ketergunaan myITS Worktime, dan evaluasi heuristik untuk mengevaluasi kesesuaian desain antarmuka pengguna dengan prinsip evaluasi heuristik. Selain itu, pertanyaan Single Ease Question (SEQ) dan System Usability Questions digunakan untuk mengevaluasi ketergunaan antarmuka pengguna myITS Worktime. Nilai SEQ untuk versi prototipe mobile dan desktop relatif tinggi, dengan skor 9,25 untuk versi mobile dan 7,72 untuk versi desktop. Setelah dua iterasi evaluasi desain yang melibatkan pengujian ketergunaan dan evaluasi heuristik, myITS Worktime berhasil diimplementasikan sebagai website responsif.

Kata kunci: *myITS Worktime, metode User-centered Design, Usability Testing, Evaluasi Heuristik, Website Responsif*

DESIGN AND EVALUATION OF USER INTERFACE AND EXPERIENCE ON myITS WORKTIME RESPONSIVE WEB APP

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Department : Informatics ELECTICS - ITS
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Abstract

Productivity and time management are critical in today's technology age for most professionals. Time is incredibly crucial in our lives, putting a lot of strain on us in our academics and at work. Education and training activities, as well as the total number of class hours instructed each week, are among the basic tasks of academic staff. In general, the time necessary for these activities is not adjustable. The myITS Worktime application is designed to facilitate lecturers and academic staff in recording their tasks and attendance, thereby maximizing their work efficiency and keeping a record of their work history.

Developed using the User-centered Design method, the myITS Worktime app aims to understand user needs through surveys and design evaluations of the user interface. Two design evaluations were conducted to identify issues with the user interface design: usability testing to assess the usability of myITS Worktime and heuristic evaluation to assess the compliance of the user interface design with heuristic evaluation. Additionally, the Single Ease Question (SEQ) and System Usability Questions were used to evaluate the usability of the myITS Worktime user interface. The SEQ scores for both the mobile and desktop versions of the prototype were relatively high, with a score of 9.25 for the mobile version and 7.72 for the desktop version. After two iterations of design evaluation involving usability testing and heuristic evaluation, myITS Worktime was successfully implemented as a responsive website.

Keywords: *User-centered Design, myITS WorkTime, Usability Testing, Heuristic Evaluation, Responsive Website.*

PREFACE

I would like to express my gratitude and praise to Allah SWT and to all those who have contributed to the completion of this thesis, "Design and Evaluation of User Interface and Experience on myITS WorkTime Responsive Web App". Their support and assistance have been instrumental in the successful realization of this research endeavor.

First and foremost, I am immensely thankful to Allah SWT for His guidance, blessings, and grace, which have enabled me to accomplish this milestone in my academic journey. His unwavering mercy and wisdom have been a constant source of strength and inspiration.

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I would like to extend my sincere appreciation to my beloved parents for their boundless love, unwavering support, and unwavering belief in my abilities. Their constant presence and unwavering support have been the pillars of my strength throughout my academic journey.

I would also like to express my gratitude to the participants of the usability testing, who generously dedicated their time and provided valuable feedback, contributing significantly to the enhancement of the myITS WorkTime app's user interface. Their willingness to engage in this research endeavor is truly commendable.

Furthermore, I would like to acknowledge my colleagues from the Department of Informatics Engineering and the Systems Development and Maintenance Office (SDMO) for their valuable insights and contributions to the development of the myITS WorkTime app's interface. Their expertise and collaborative spirit have enriched the research process.

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CHAPTER I INTRODUCTION

1.1 Background

In our current technological age, productivity and the use of time are of central importance to most professionals today. Many complain about a lack of time and the impact and expectations of the global information and technology era. In our current technological age, productivity and the use of time are of central importance to most professionals today. Many complain about a lack of time and the impact and expectations of the global information and technology era. Time plays a very important role in our lives, exerting great pressure on us in our studies and our work. For this reason, the idea of managing time well or good “time management” emerges. Time management aims to ensure the allocation of unnecessary work, increased productivity, and completely necessary work faster and better.

Among the basic tasks of academic staff are education and training activities as well as the total class hours tutored per week. The time required for these tasks is generally not flexible. Academic staff must create a schedule for each teaching period that allows for the balancing of all these responsibilities (Erdem & Gozel, 2013).

In time management, especially in this globalization era, a university as a very complex institution requires benchmarks that can be used as a reference in assessing success in its management. One of the main benchmarks that can be used is the existence of an information system. Management information system (MIS) can be defined as a collection of interacting information systems that are responsible for collecting and managing data to provide useful information for all levels in planning and control activities. The role of information technology as part of an information system has changed dramatically. Currently, information technology is not only placed as a tool to assist organizational activities but has become an organizational strategy to achieve goals (Joko, 2010). In terms of time management, the information system attempts to make it easier to manage and monitor activities to reduce lateness and miscommunication in everyday tasks.

The Institut Teknologi Sepuluh Nopember (ITS) in Surabaya has launched myITS WorkTime, an information system used to track employees' working hours and activities. With this application, academic staff and lecturers in ITS will find it easier to plan their daily activities, whether in their unit or across many units within ITS. However, the application will require system development, particularly in the user interface.

As a result, the author wants to develop the myITS WorkTime application, which will improve the efficiency and effectiveness of the current system. User-centered Design will be employed in the development of the myITS WorkTime application, which focuses on solving problems according to the user needs. MyITS WorkTime is intended to become an application that meets user demands and promotes effectiveness, efficiency, and engagement with its use because of the results of this Final Project.

1.2 Formulation of The Problem

The following is a formulation of the problem stated in this thesis:

1. How to design a user interface prototype for myITS WorkTime application that meets the principles of usability and responsiveness on a web platform?
2. How do web users evaluate the myITS WorkTime user interface and application experience?

1.3 Scope of The Problem

The scope of the problem in this thesis is as follows:

1. The user interface design of the myITS WorkTime application is made with good usability principles based on the results of the usability test and heuristics evaluation.
2. The target users of the myITS WorkTime application are academic staff and lecturers at ITS.
3. The number of target users during the evaluation is 5 people for each persona.
4. The Figma program is used to create a user interface prototype design for middle-fidelity users.

1.4 Purposes

The following is the purpose for composing this thesis:

1. Evaluate and find a user interface solution for myITS WorkTime application.
2. Design the myITS WorkTime application's user interface based on a user-centered design method that prioritizes user experience and design guidelines applied to all myITS application platforms.
3. Create a responsive website using the myITS WorkTime user interface design ideas.

1.5 Advantages

The following are the targeted advantages of completing this thesis:

1. The myITS WorkTime application has a responsive user interface so that users can use the application effortlessly, effectively, and efficiently.
2. The usability element in the myITS WorkTime application can be fulfilled and under the needs of its users.
3. The myITS WorkTime application user interface can increase engagement and effectiveness with its users.

CHAPTER II LITERATURE REVIEW

2.1 Related Applications

There are now several applications that are similar to myITS WorkTime. These applications can keep track of work plans, user attendance, manage work-plans, track user positions, and so on. The above-mentioned features are similar like those found in the myITS WorkTime application. Other applications sometimes offer extra features that differ from one another. Additional features include reporting, invoicing, employee vacation tracking, and many more. Some applications that are similar to myITS WorkTime may be seen below.

2.1.1 Clockify

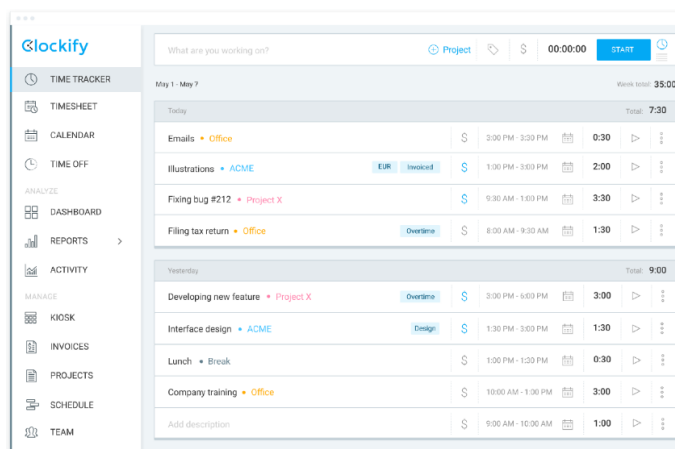


Figure 2.1. Clockify website interface

The most popular free time tracking and timesheet tool for teams of all sizes is Clockify. Clockify was first released in 2017. Clockify used to charge clients per hour to track how much time they spent on projects. Clockify allows you to have an infinite number of users for free. Clockify is a browser-based program that may also be installed on your PC or phone (Clockify, n.d.).

2.1.2 Hubstaff

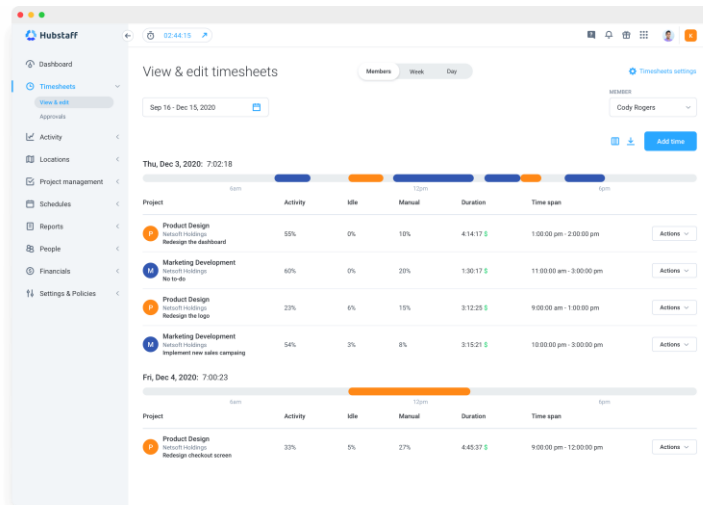


Figure 2.2. Hubstaff website interface

Hubstaff is a remote start-up that developed a workforce management software package that includes proof of work, time tracking, payroll administration, a remote talent locator, and project management tools. Hubstaff, founded in 2012 by Dave Nevogt and Jared Brown, now employs more than 90 individuals worldwide. The firm values openness, freedom, putting customers first, responsibility, and attention control (Hubstaff, n.d.). Hubstaff was recognized as an emerging technology firm in 2015, when they got a nomination for The Best of Tech in Indiana as part of TechPoint's Mira Awards (Hall, 2015). In addition, the start-up was named to the Inc. 5000 list in 2018 (Inc, 2018) and 2019 (Inc, 2019).

2.1.3 Timecamp

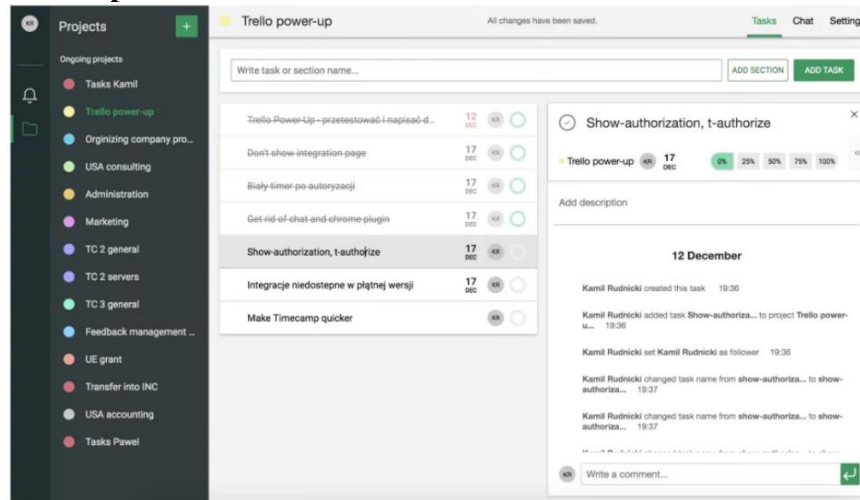


Figure 2.3. Timecamp website interface

TimeCamp is a web-based software introduced in 2009 by Kamil Rudnicki, a programmer and the founder of Time Solutions, to measure computer users' activity. The application is intended for either teams or freelancers. The tool is a time tracking program that invoices employees' labor on an hourly basis while also analyzing job performance and project management. One of TimeCamp's features is the use of automated time tracking to automate procedures related to project and task management.

2.2 Current Interface of myITS WorkTime

In the current user interface of myITS WorkTime right now, there is a dashboard to start working. After user click start working, more features can be unlocked. User can see which work is running, not started, and completed. Other features are Delegate the work to other staff, make a work become sub-work plan, delete, and edit work plan, fix the user location, and finish work for each day. The current interface of all pages can be seen on Figure 2.4, Figure 2.5, Figure 2.6, Figure 2.7, Figure 2.8, Figure 2.9, Figure 2.10, and Figure 2.11.

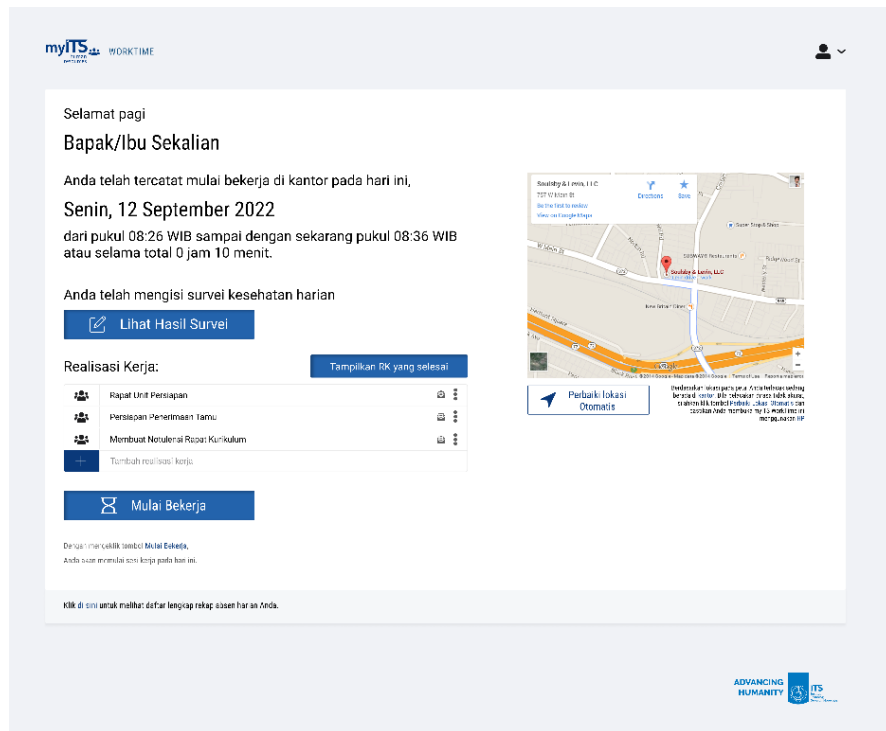


Figure 2.4 Dashboard Mid-fidelity Prototype Display

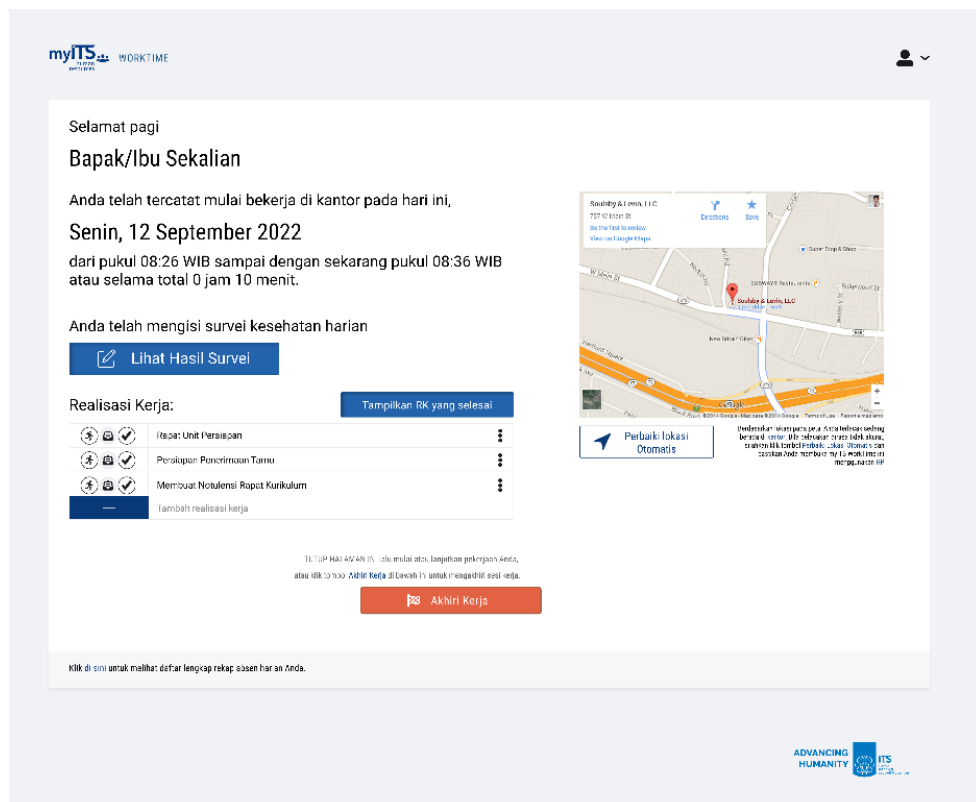


Figure 2.5 Mid-fidelity After Start Work Page Design

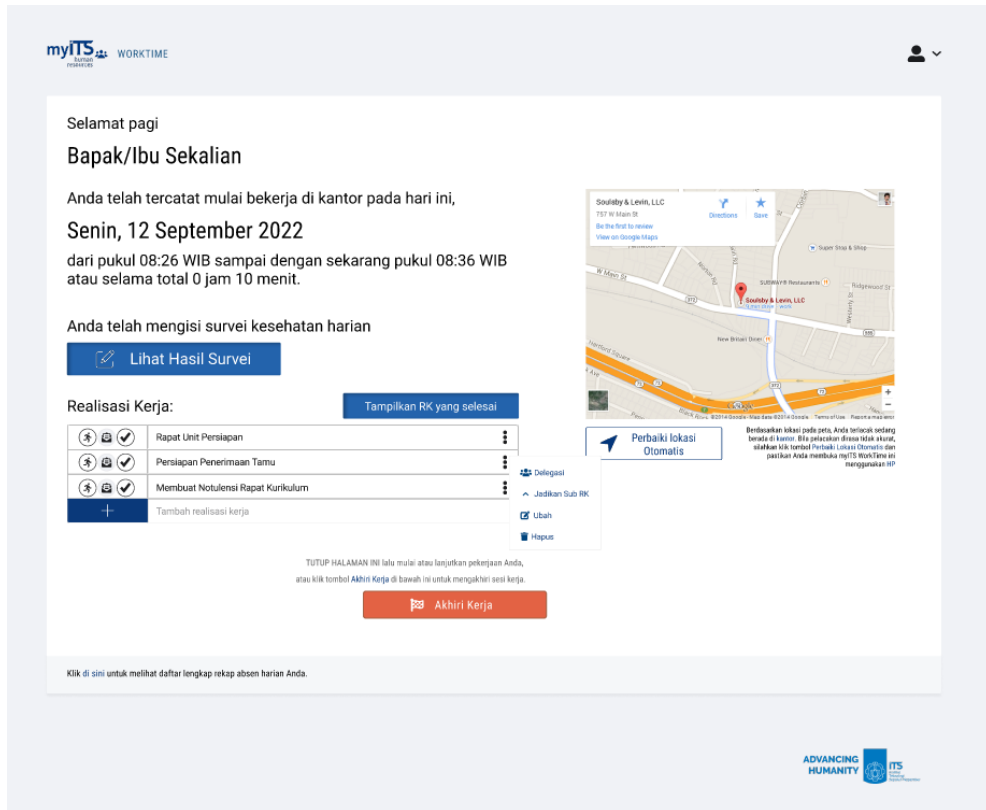


Figure 2.6 Mid-fidelity Prototype Navigation Page Design

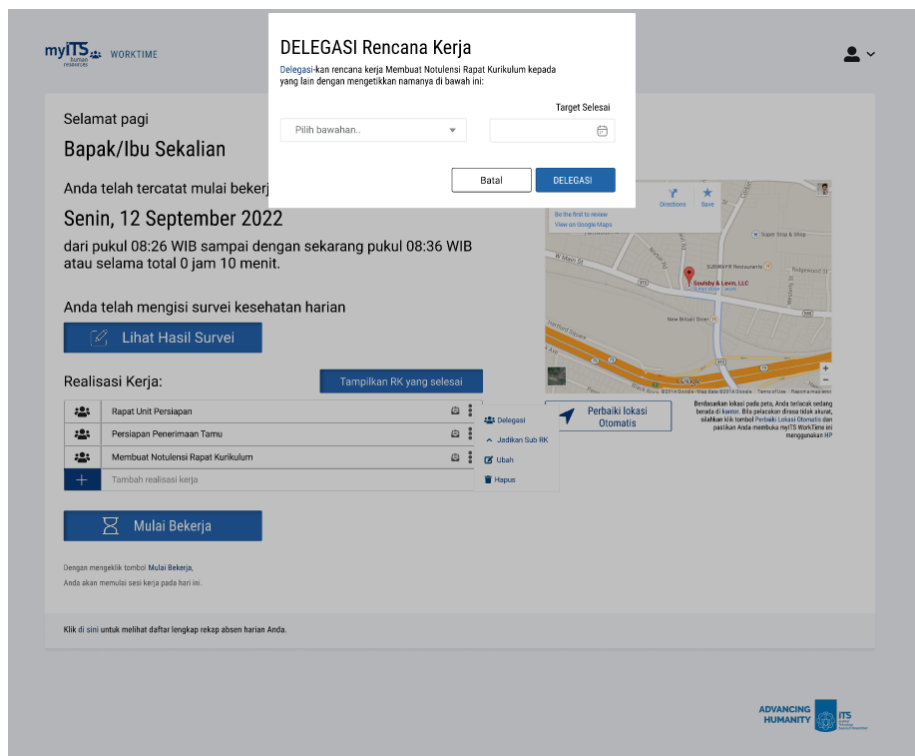


Figure 2.7 Mid-fidelity Prototype Design Delegation Modal

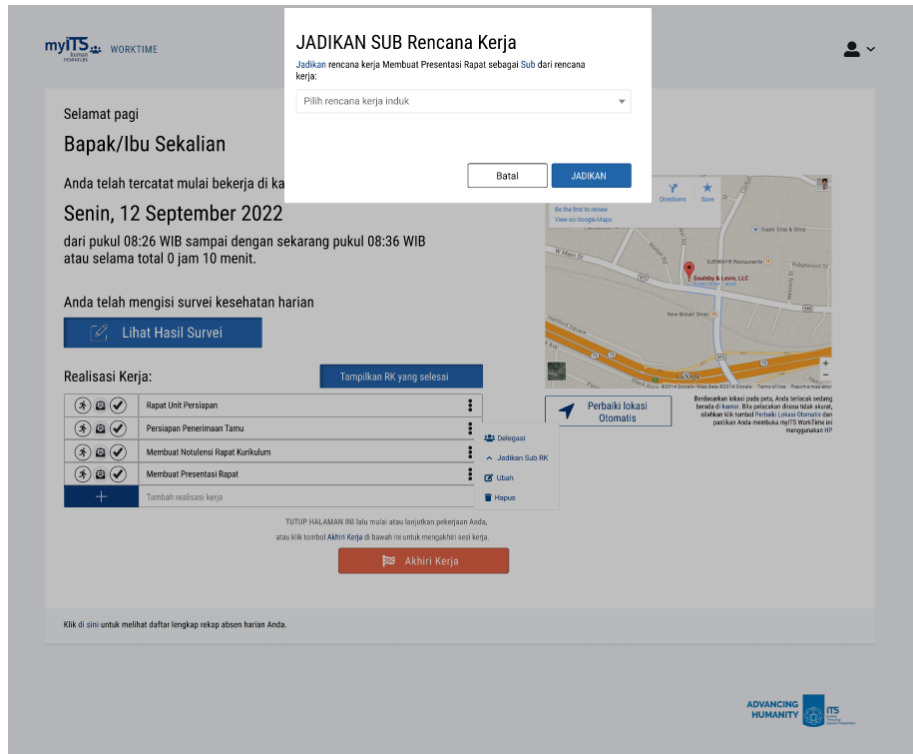


Figure 2.8 Mid-fidelity Prototype Design Make Sub Modal

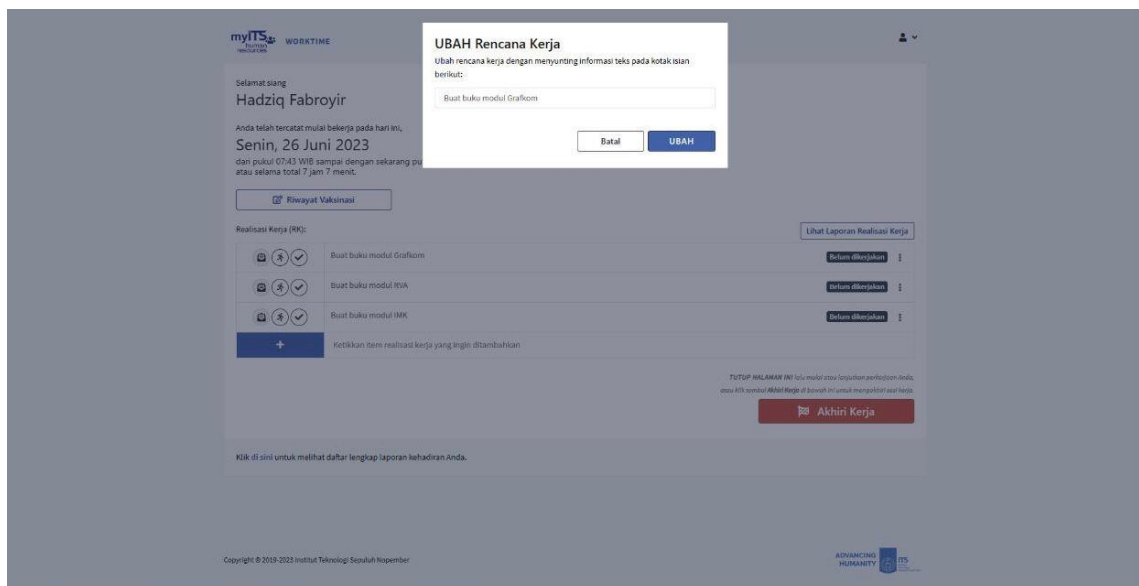


Figure 2.9 Mid-fidelity Prototype Design Edit Modal

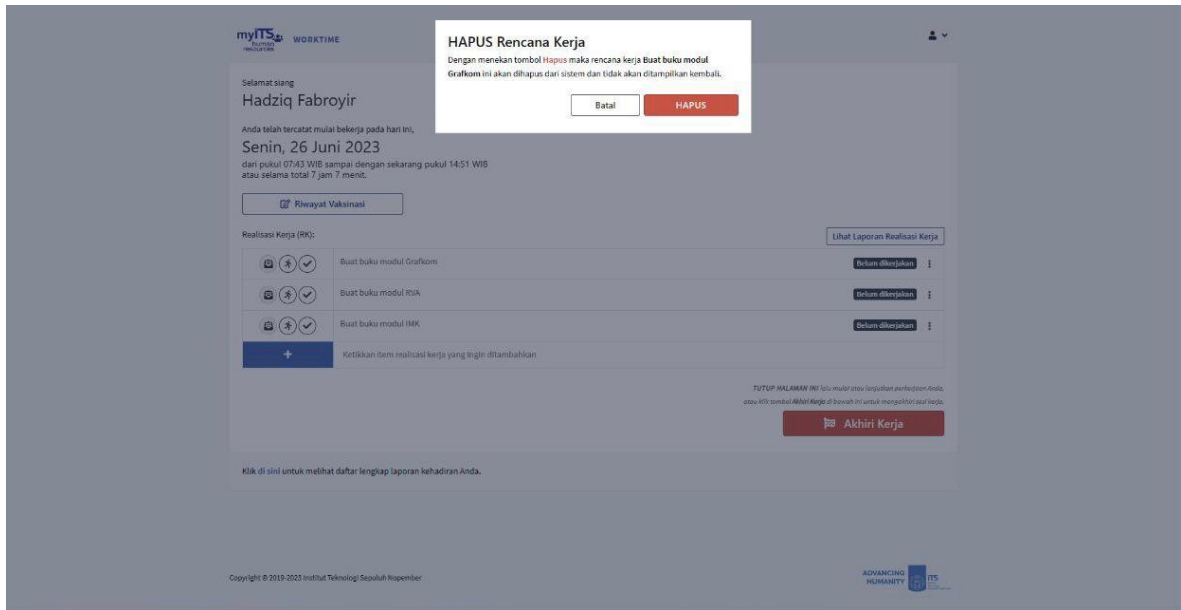


Figure 2.10 Mid-fidelity Prototype Design Delete Modal

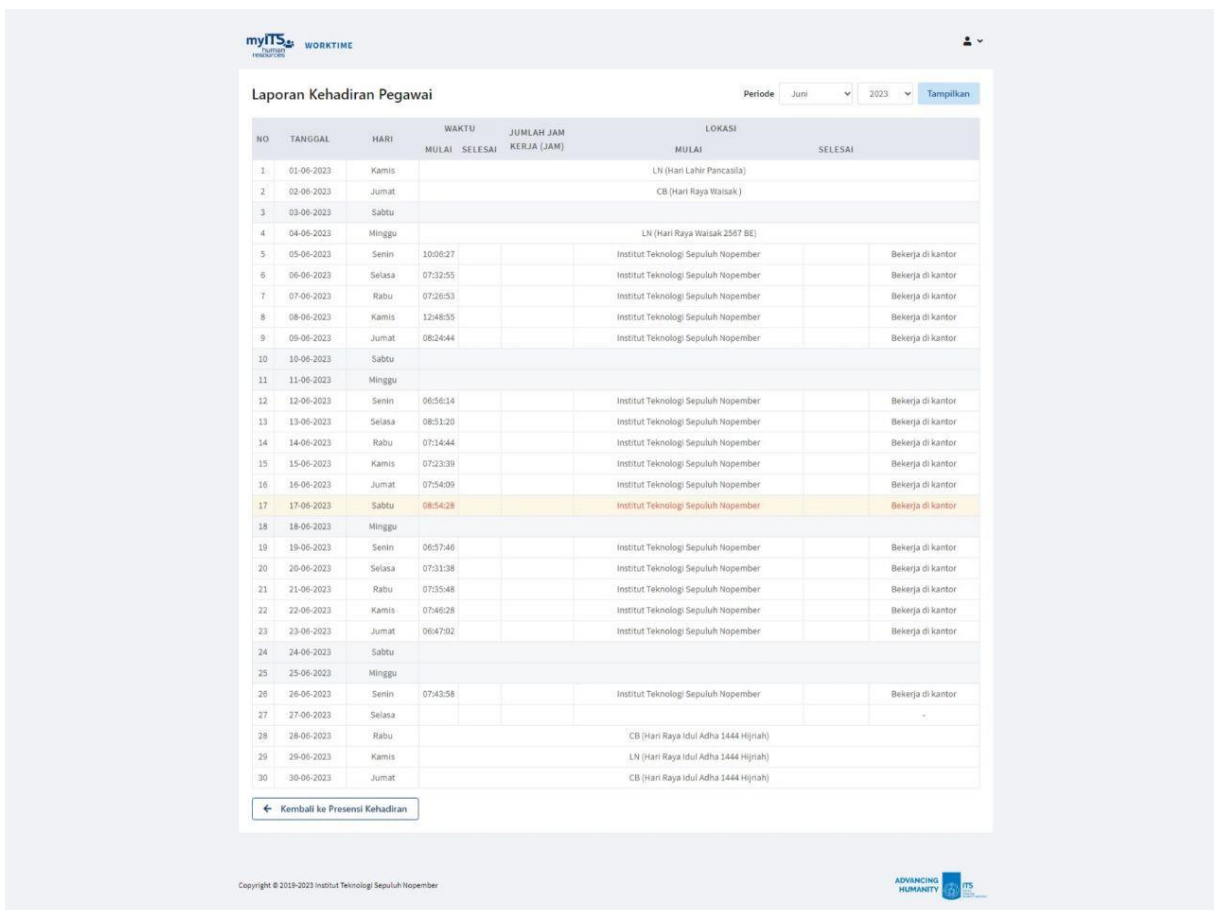


Figure 2.11 Mid-fidelity Prototype Design Attendance Recap Page

2.3 User Experience Design

User experience (UX) is the other important aspect of interface evaluation. User Experience (UX) is the latest and the hottest trend in the job market in recent years. The concept of UX has reached no consensus, and it has been conceptualized in a variety of ways in the field of Human-Computer Interaction (HCI) (Wang & Yang, 2021). UX design describes the iterative set of decisions leading to a successful outcome with the interactive, as well as a productive and satisfying process while arriving at this outcome (Ssemugabi & De Villiers, 2010).

UX is a person's perceptions and responses that result from the use or anticipated use of a product, system, or service. This study adopts the definition from Nielsen and Norman (n.s.) by conceptualizing UX as all aspects of the end user's interaction with the company. Usability is a concept that is closely related to UX. According to ISO (2013), usability refers to the extent to which specified users can use a product to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context. Both usability and UX are considered part of user-centered design, which is an approach to interactive systems development that aims to make systems usable and useful (Wang & Yang, 2021).

2.4 User-centered Design

User-centered approaches to design are considered particularly useful in supporting positive user experience. User-centered design (UCD) emphasizes understanding users' needs and expectations throughout all design phases. The goal of user-centered design is to approach systems development from the end-user's perspective. Using tools such as personas and prototypes, the learning design process becomes iterative, dynamic, and more responsive to learner needs (Schmidt et al., 2020).

The UCD method is divided into 5 stages: analysis, specifying the context of use, user and organizational requirements, product design, and evaluate the design. In the initial stage, the researcher must decide the process of developing myITS WorkTime is user-centered. The second step generates the user of the mapping website. In the third step, each user's requirement is identified using a questionnaire approach. The solution design stage comes next, and finally, the test findings are assessed and, most importantly, fed back into the UCD cycle (Sasmito & Fikri Hidayattullah, 2021).

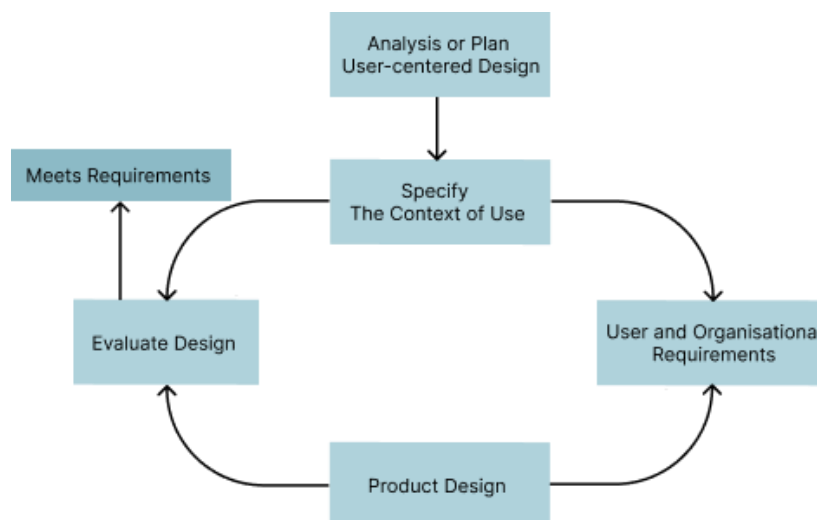


Figure 2.12. User-centered Design Model

2.5 Persona

In the literature, there is a common understanding that personas should be based on field data such as surveys, user interviews, observations, and a combination thereof, that they are created at the beginning of the design process and should be used for different design activities. Furthermore, a set layout for the persona descriptions can be observed in the literature. The persona has a name; the description is most often 1-2 pages long and has several subsections that describe the persona's characteristics, life, behaviors, goals, and preferences. Often a photo accompanies the description (L. Nielsen & Storgaard Hansen, 2014).

Personas are used to actively engage team members in the development process. They build a shared understanding of user characteristics and can facilitate stakeholder communication by showing current and future users' needs. Personas are useful for guiding design requirements or evaluating existing artifacts (Baldi, 2021).

2.6 Heuristic Evaluation

Heuristic evaluation is the most extensively used UEM since it is affordable and simple. Heuristic evaluation is a usability examination approach established by Jakob Nielsen, the usability champion. According to Dix, Finlay, Abowd, and Beale, Heuristic evaluation is defined as 'evaluation by expert analysis,' which differs from the category 'evaluation through user involvement' in that Heuristic evaluation is not undertaken by real users (Ssemugabi & De Villiers, 2010).

Heuristic evaluation presents several advantages over other techniques: its implementation is easy, fast, and cheap, and it is suitable for every life-cycle software phase and does not require previous planning. Furthermore, evaluators don't need to be usability experts. It is possible for engineers or technicians with basic usability knowledge to drive an evaluation. Furthermore, regarding the number of evaluators, Nielsen demonstrated empirically that between three and five experts should be enough (Yáñez Gómez et al., 2014).

Nielsen's (2002) ten heuristics are normally used to guide usability evaluation. These heuristics consist of:

1. **Visibility of system status**
The system should always inform users about what is going on through appropriate feedback within a reasonable time (J. Nielsen, 2002).
2. **Match between system and the real world**
The design should speak the users' language. Use words, phrases, and concepts familiar to the user rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order (J. Nielsen, 2020).
3. **User control and freedom**
Users often choose system functions by mistake and need a marked "emergency exit" to leave the unwanted state without going through an extended process (J. Nielsen, 2020).
4. **Consistency and standards**
Users should not wonder whether different words, situations, or actions mean the same thing. Follow platform conventions (J. Nielsen, 2002).
5. **Error prevention**
Even better than good messages are careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action (J. Nielsen, 2020).
6. **Recognition rather than recall**
Make objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for using the system should be visible or easily retrievable whenever appropriate (J. Nielsen,

- 2002).
7. **Flexibility and efficiency of use**
Shortcuts — hidden from novice users — may speed up the interaction for the expert user so that the design can cater to inexperienced and experienced users. Flexible processes can be carried out in different ways so people can pick whichever method works for them. (Nielsen link)
 8. **Aesthetic and minimalist design**
Dialogues should not contain information that is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant information units and diminishes their relative visibility (J. Nielsen, 2002).
 9. **Help users recognize, diagnose, and recover from errors**
Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution (J. Nielsen, 2002).
 10. **Help and documentation**
Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large (J. Nielsen, 2002).

2.7 Figma

Figma is a vector graphics editor and prototype tool; its main feature is that it is available as an application as well as on the internet. Figma allows you to create everything from a user interface for websites to vector graphic pictures (Vatsal Sharma & Ankit Kumar Tiwari, 2021). Figma itself is a cloud-based design and prototyping solution for digital applications. Figma was intended to allow users to collaborate on projects and work in teams simultaneously from anywhere. Figma is a vector graphics editor and prototype tool with web-based and offline functionalities provided by Mac OS and Windows desktop programs (Yoyon Efendi et al., 2022).

2.8 NextJS

Next.js combines developer expertise with production-ready attributes such as server-side rendering, TypeScript compatibility, route prefetching, smart bundling, and many more. It provides structure to React.js features while also providing some of its own. It also has a perspective on how the software should be arranged, routing pages via a basic file folder system (Dinku, 2022).

Based on a review of the research literature and case studies, the Next.js framework has several advantages. To begin, the Next.js framework already has CSS support. Furthermore, the Next.js framework has straightforward support for the routing mechanism in the pages folder, eliminating the requirement for a third-party library to handle routing. Moreover, the Next.js framework currently supports SSR in web page rendering, which prevents the user from seeing a blank page during the first load and reduces the burden on the browser. Unlike the React.js app, which only allows data fetching via CSR, the Next.js framework enables data fetching via SSR, CSR, ISR, and SSG, according to the official documentation. So that the data retrieval process may be personalized to the demands of the application (Fariz et al., 2022).

2.9 Tailwind

Tailwind CSS, a CSS framework that presents an alternative approach to traditional CSS styling, has gained significant recognition among developers recently. Compared to other popular frameworks, Tailwind CSS stands out for its exceptional satisfaction ratio among surveyed developers. It employs a unique approach by offering lower-level atomic

utility CSS classes, gradually gaining popularity (Klimm, 2021). These utility classes, known as Utility-first CSS, allow the creation of customized designs in HTML files. The primary goal behind Tailwind CSS is to simplify and speed up prototyping web pages.

One notable advantage of Tailwind CSS is its inclusion of responsive types within each utility class. This feature simplifies the creation of responsive interfaces without needing special CSS commands. To identify which responsive classes are used in the markup, Tailwind CSS employs a straightforward `{screen}:` prefix while preserving the original class names.

Tailwind CSS is component-friendly, providing tools for extracting component classes from iterative utility patterns. It also enables easy updating of multiple instances within a component from a centralized location. The framework is implemented in PostCSS format and configured using JavaScript. In essence, Tailwind CSS serves as a powerful tool for developing design systems (Rifandi et al., 2022).

CHAPTER III METHODOLOGY

3.1 Designed Method

The Methodology chapter discusses the research conducted on the target users of myITS Worktime, which consists of two user roles: lecturers and academic staff. The research aims to identify the needs and issues faced by each user role concerning the myITS Worktime website. Several stages were undertaken, including collecting user requirements, analyzing user needs, implementing user interface design based on the determined solutions for user requirements, and conducting user surveys and prototype testing for myITS Worktime. User surveys and prototype testing were performed on both user roles, with different personas assigned to each role. These distinct personas were created to gain insights from a diverse group of users, as each persona has distinct identities and behaviors toward the application being developed. Following this, the author conducted design iterations on the created prototype design, clarifying the user needs, habits, and issues encountered. By refining the user needs, the author improved the list of requirements and sitemap created in the initial analysis stage. Subsequently, this list of requirements was utilized to reimplement the myITS Worktime prototype design.

3.2 Supporting Tools

During this final project research, various tools were utilized to ensure its successful completion. These tools include Maze, Figma, Microsoft365, and Visual Studio Code, which played crucial roles in different stages of the research process. Additionally, the research was conducted using an Asus A409FJ - EK701T laptop equipped with an Intel Core i7 processor, 8 GB DDR4 RAM, and Windows 11 operating system. This hardware provided the necessary computational power and resources for conducting the survey and carrying out user testing activities for the myITS Worktime application. The respondents actively participated by utilizing their own devices to complete the survey and perform user testing, contributing valuable insights to the research findings.

3.3 User-centered Design Method

As mentioned in section 2.4, the UCD method consists of five stages, and for this thesis, there are several stages that may be completed twice or more. In the first step, the author has the opportunity to have a meeting with the SDMO and DPTSI teams to align the perceptions regarding the myITS Worktime application. Secondly, a prototype for myITS Worktime is created and tested. In this stage, the design of myITS Worktime utilizes the existing design. Subsequently, the prototype is tested with users, namely teachers and educational staff, using the Maze platform. After testing, the survey results are processed to determine user needs, personas, and so on. Then, a second prototype design is created based on the results of the first user testing and the current ITS system design. The second prototype is then tested using Maze, similar to the first user testing. After processing the data from the second survey, heuristic evaluation is conducted, and improvements are made based on unmet heuristic principles. The figure below illustrates the specifics of each stage that the author must complete in order to obtain results.

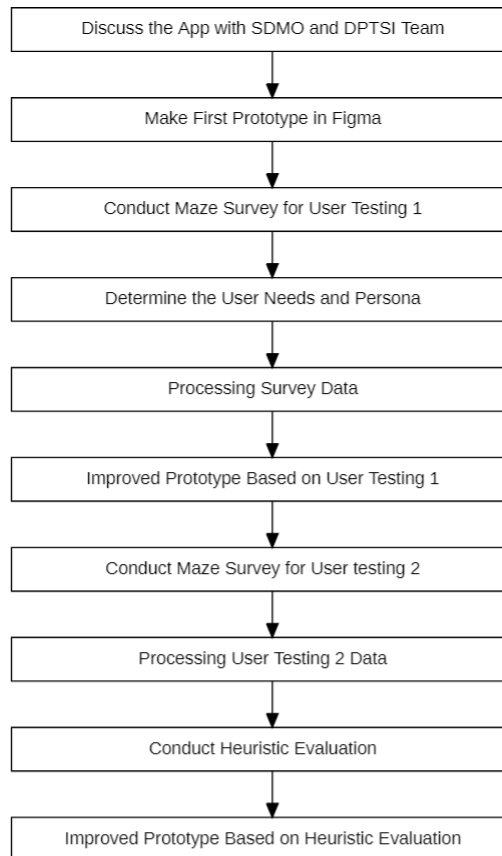


Figure 3.1 Detailed Steps for myITS Worktime

3.4 The Context of Use

The author will identify users' needs for the myITS WorkTime application. Surveys, interviews, and other methods can be used at this point. In this step, a meeting with DPTSI and SDMO was held. After that, Maze is used to conduct the survey. In the maze, the user will try to do some essential actions in the myITS WorkTime and answer some questions.

3.4.1 Maze Survey

Maze was used to review current myITS WorkTime users to make future upgrades to the myITS WorkTime application more optimum and in line with user demands. MyITS WorkTime users at ITS Surabaya are currently lecturers and academic staff. This maze survey will be sent to ITS lecturers and academic staff as part of a survey. On the current myITS WorkTime interface, users will be required to do several key tasks. Following that, users are requested to submit feedback and suggestions for myITS WorkTime in the future. This survey also asks participants if they will participate in future surveys. The following are the questions asked in the maze survey:

Table 3.1 Maze Survey Questions

Mission	Title	Question
	Respondent Information	Choose the one that suits your profile, namely lecturers or academic staff
Mission 1	Starting Work	Now you are on the myITS WorkTime start page. Please take action so that you can be recorded as starting work at myITS WorkTime.

	Asked each surveyor after carrying out the action	How easy for you to execute this action?
Mission 2	Added Work Realization	You have successfully started work. Now, please take action so that your new work realization can be recorded in the myITS WorkTime application.
Mission 3	Delegating Work	You are currently on the myITS WorkTime main page. Please delegate the work "Membuat Notulensi Rapat Kurikulum" to your colleague/subordinate named Alex John to be completed as of September 12, 2022.
Mission 4	Make Sub-Work Plan	You are currently on the myITS WorkTime main page. Please take action so that the work "Membuat Presentasi Rapat" becomes sub-work plan "Rapat Unit Persiapan"
Mission 5	Starting Work Realization	You are currently on the myITS WorkTime main page. Please take an action so that the application can record that you started the "Persiapan Penerimaan Tamu" work.
Mission 6	Completing Work Realization	You are currently on the myITS WorkTime main page. Please take action so that the application can record that you have completed the work "Membuat Notulensi Rapat Kurikulum".
	Suggestion	Please write suggestions or improvements for myITS WorkTime.
	Further Interview	We are planning to create a new myITS WorkTime version. Are you willing to become an interview respondent to improve the quality of the myITS WorkTime application? (If you are willing, please fill in your name and WA number (example: Salsabila Irbah (081230445795)))

3.5 Design System

The user interface components used by the author in designing the myITS Worktime application are based on the latest version of the myITS website template. This is done to align the system design of myITS Worktime with the design system used by other DPTSI projects.

3.5.1 Color Palette

Color palette is one of the design components of the system that is used as a guide for color combinations in the user interface design of the myITS Worktime application. This color palette is used to ensure that the user interface design of the myITS Worktime application has consistent colors and users can feel familiar with the colors used. Figure 3.2 below shows the color palette for myITS Worktime.

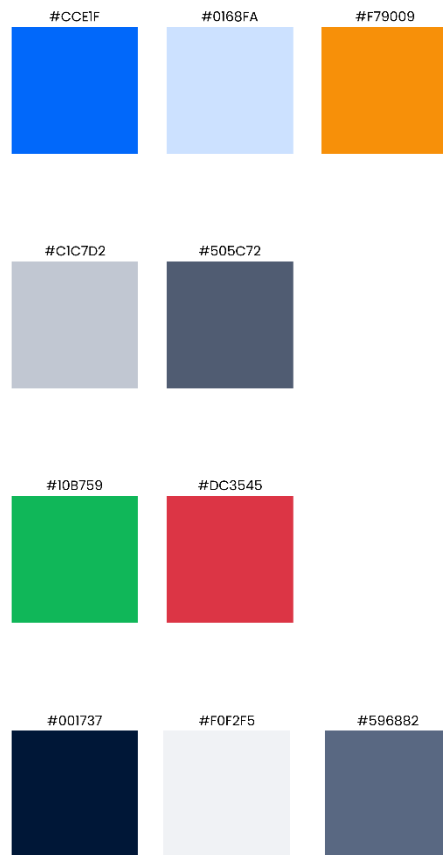


Figure 3.2 Color Pallete for myITS Worktime Design System

3.5.2 Typography

Typography is an important aspect in system design as it is a determining component for conveying information to users and users' perception of information. The type of typography used can determine how much information users can comprehend. Additionally, typography is a key component used to provide consistency in the user interface design by aligning typography with other user interface elements. There are several considerations in determining typography, such as typefaces, font weights, font sizes, and font styles. 3.3 below show the typography components used in the user interface design of the myITS Worktime application.

Font: Poppins

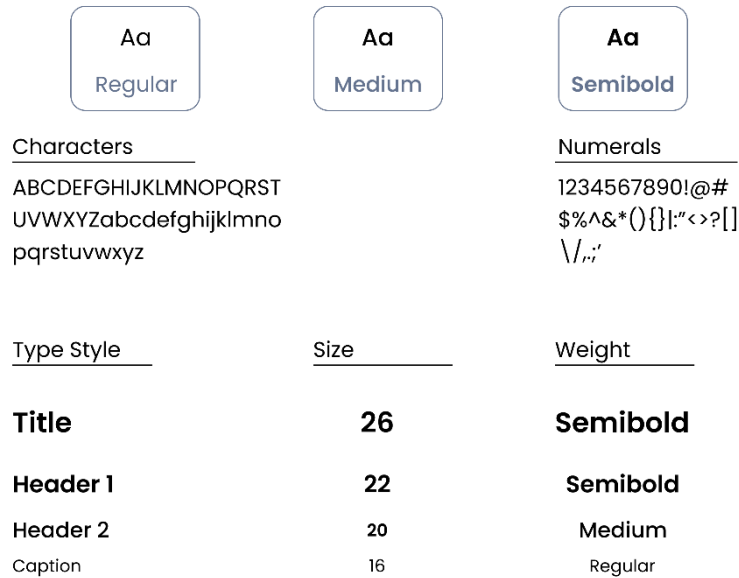


Figure 3.3 Typography Components for myITS Worktime Design System

3.5.3 Button

The button components used in myITS Worktime consist of three types based on their size: small, medium, and large. The difference in button sizes is used according to their placement in the user interface design. Small buttons are used for notification pop-ups and modals, medium-sized buttons are used for content within cards, and large buttons are used for buttons aligned with the page header. Additionally, the author also provides button styles based on their conditions: default, hover, and active. These three button styles are intended to display the appearance of buttons used in the web application and help emphasize that the buttons are clickable.



Figure 3.4 Button Components for myITS Worktime Design System

3.5.4 Icon

Icon components have symmetrical and consistent shapes, generally small but easily understandable by users. Icons are commonly used in conjunction with sentences or words to emphasize the meaning of the sentence or word. There are two types of icon components used in the user interface design of myITS Worktime: colored icons and black and white icons. Figure 3.5

below shows the icon components used in the user interface design of the myITS Worktime application.

Colored Icons



Black and White Icons

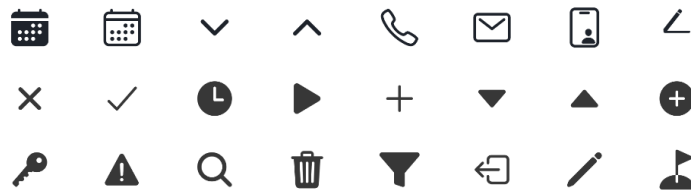


Figure 3.5 Icon Components for myITS Worktime Design System

3.5.5 Badge

Badges are used to display the status information of a system by differentiating words or numbers using colored boxes. There are two types of badge components used in the user interface design of myITS Worktime: status badges and interactive badges that can be clicked to filter statuses in a table. Figure 3.6 below shows the badge components used in the user interface design of the myITS Worktime application.



Figure 3.6 Badge Components for myITS Worktime Design System

3.5.6 Modal and Dialog

Modal and dialog are user interface components that appear as pop-ups on the screen. Modal components consist of dialogs that contain brief information and require user input to proceed to the next page. On the other hand, the dialog component consists of a dialog with brief information and buttons to proceed to the next page. Figure 3.7 below shows the modal and dialog components used in the user interface design of the myITS Worktime application.

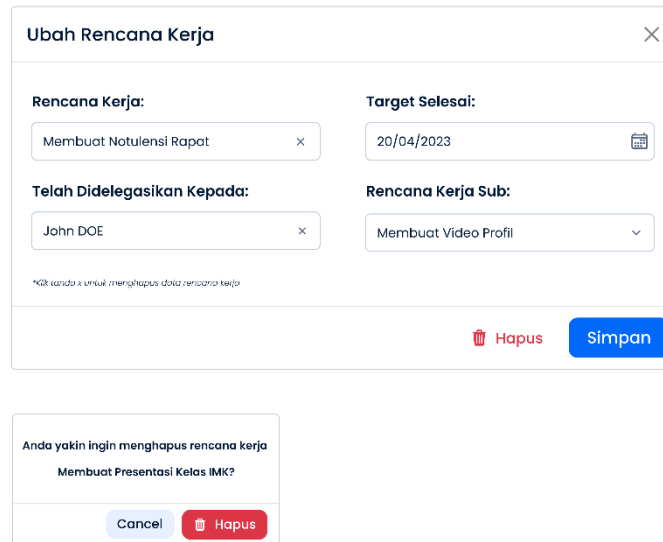


Figure 3.7 Modal and Dialog for myITS Worktime Design System

3.5.7 Text Field

Text fields are used to input data into the system. As shown in Figure 3.8, myITS Worktime utilizes two types of text fields distinguished by their input areal: short text input fields and long text input fields. In Addition to text, text fields in myITS Worktime can also accept numerical input.

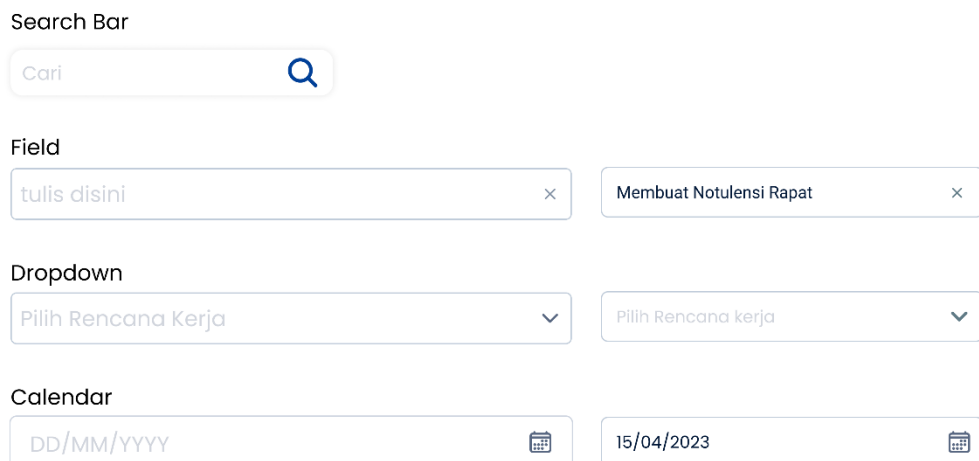


Figure 3.8 Text Field for myITS Worktime Design System

3.5.8 Dropdown

Dropdown is a component that can display a list of options or actions to the user. Additionally, users can perform a search within the list of options by

entering data in the available text field. Figure 3.9 below shows the dropdown component used in the user interface design of the myITS Worktime application.

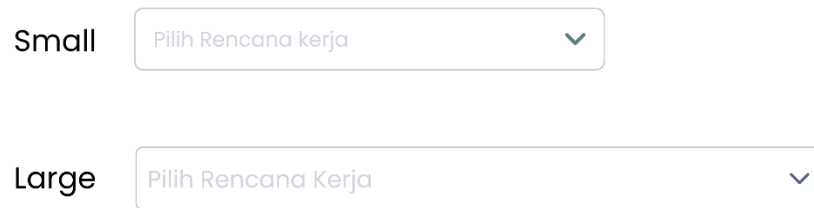


Figure 3.9 Text Field for myITS Worktime Design System

3.5.9 Table

Tables are used to display a set of data in a row and column format. The table format makes it easier for users to access information. Figure 3.10 below shows the table component used in the user interface design of the myITS Worktime application.

	Rencana Kerja	Target Selesai	Aksi
	Rapat Persiapan Unit	15 April 2023	
	Membuat Notulensi Rapat	08 April 2023	
	Rekap Nilai kelas IMK A dan D	26 April 2023	
	Rekap Nilai kelas IMK A dan D	26 April 2023	
	Rekap Nilai kelas IMK A dan D	26 April 2023	

Figure 3.10 Table for myITS Worktime Design System

3.5.10 Calendar (Datepicker)

The calendar or datepicker component is used to facilitate the selection of date, month, and year inputs. Figure 3.11 below shows the calendar component used in the user interface design of the myITS Worktime application.

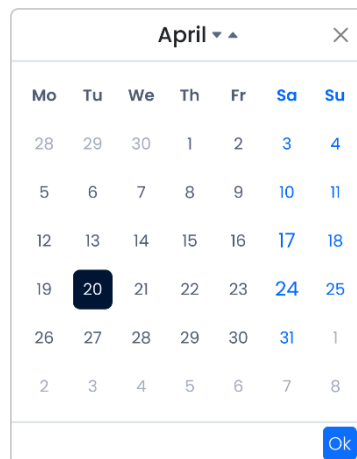


Figure 3.11 Calendar or Datepicker for myITS Worktime

3.5.11 Navigation

Navigation components are used as user guidance for navigating the myITS Worktime website application. These components indicate the structure of the website being accessed by the user. Therefore, icons and phrases used in the navigation components should consist of menu names that can describe the content of each menu and icons that can clarify the intention of the menu name used. The navigation components in myITS Worktime consist of two parts: the navigation bar located at the top of the page and the sidebar located on the left side of the page.

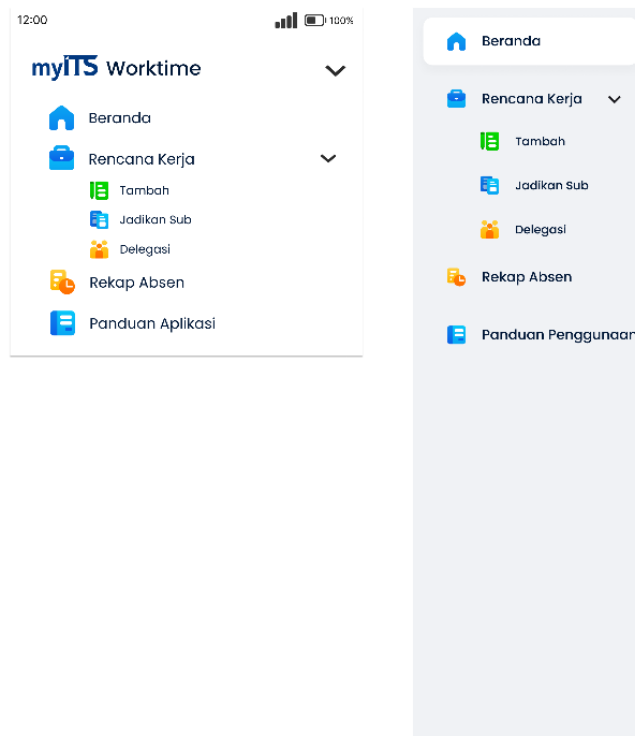


Figure 3.12 Navigation and SideBar for myITS Worktime Design System

3.6 Architecture for User Interface Navigation

The user interface navigation architecture aims to depict the flow of the myITS Worktime website currently used by users. This architecture is created in the form of a sitemap to understand user needs and the relationships between available features. The following is the sitemap for the myITS Worktime website.

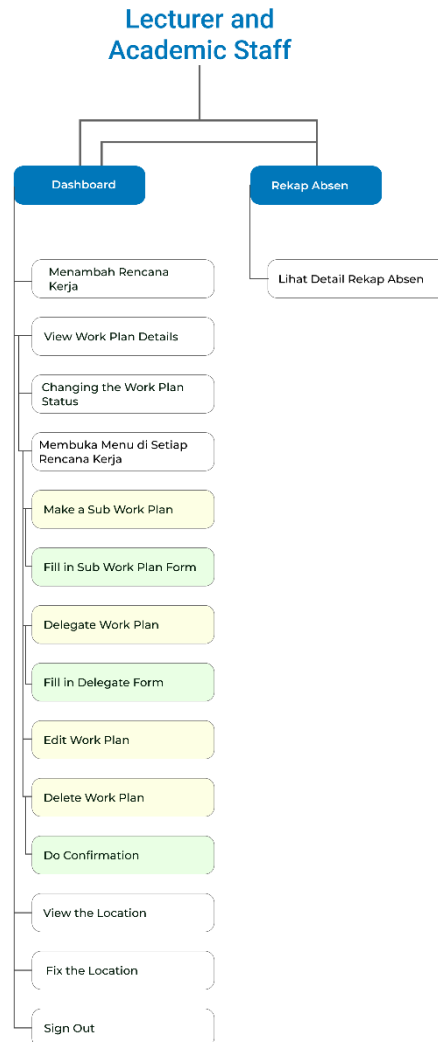


Figure 3.13 The Current Sitemap of myITS Worktime

3.7 Evaluation Method

The author conducted one iteration of design evaluation for the myITS Worktime website and one iteration of design evaluation for the myITS Worktime prototype. This was done to obtain a final design that can meet the needs of each user role. In each design iteration, two types of evaluations were conducted: summative evaluation and formative evaluation.

Summative evaluation involves assessing the overall effectiveness and usability of the design. It aims to gather feedback and measure the success of the design in meeting the desired goals and requirements. This evaluation helps determine if the design is suitable for its intended purpose.

Formative evaluation, on the other hand, focuses on gathering feedback and insights during the design process. It aims to identify potential issues, gather suggestions for

improvement, and guide the iterative design process. Formative evaluation helps refine the design and make necessary adjustments based on user feedback.

By conducting both summative and formative evaluations during each design iteration, the author ensures that the final design of myITS Worktime meets the needs and expectations of the users while continuously improving its usability and effectiveness.

3.7.1 Pilot Testing

Pilot Testing was conducted to validate the tasks and prototypes that were inputted into Maze prior to the usability testing. It aimed to test the design prototype of myITS Worktime with a single participant. The task list used during the pilot testing consisted of tasks for evaluating the first iteration design. This was done to ensure that the instructions used to describe the tasks were understandable to the participant, preventing any confusion while interacting with the prototype. Additionally, the pilot testing aimed to identify any flow and design issues that needed to be addressed before testing with the participants.

3.7.2 Formative Evaluation

Formative evaluation involves design evaluation using usability testing conducted in two iterations. This Usability Testing was performed using a prototype testing tool called Maze, with a mid-fidelity prototype created in Figma. The evaluation was conducted online using Maze by distributing surveys through an official letter and WhatsApp. Documentation of the design evaluation is included in the Appendix section. The evaluation was conducted for two user roles in myITS Worktime: Lecturers and Academic staff. The aim was to test the usability of the myITS Worktime user interface design according to user needs. The following is a list of tasks tested with participants in the second iteration.

Table 3.2 List of Users Usability Testing Tasks for the Second Iteration

LIST OF USABILITY TESTING ASSIGNMENTS LECTURERS AND ACADEMIC STAFF	
Mission 1	
Question	Starting work
Initial State	Dashboard Page with “Mulai Kerja” Button
Final State	Dashboard page with “Akhiri Kerja” Button
Mission 2	
Question	Add Work plan (<i>Rencana kerja</i>)
Initial State	Dashboard Page
Final State	Work plan (<i>Rencana kerja</i>) page
Mission 3	
Question	Delegate Work plan (<i>Rencana kerja</i>)
Initial State	Dashboard Page
Final State	Delegation (<i>Delegasi</i>) page
Mission 4	
Question	Make a Sub work plan (<i>Rencana Kerja Sub</i>)
Initial State	Dashboard Page
Final State	Sub work plan (<i>Rencana kerja sub</i>) page
Mission 5	
Question	Starting work plan
Initial State	Dashboard Page

Final State	Dashboard page with the status of the work plan has changed
Mission 6	
Question	Completing work plan
Initial State	Dashboard Page
Final State	Dashboard page with the status of the work plan has changed

3.7.3 Summative Evaluation

Summative evaluation was conducted to obtain the assessment metrics results from the tasks given to users during the formative evaluation. These assessment metrics include completion time, number of click errors, completion rate, and Single Ease Question (SEQ).

The SEQ question asks users to rate the ease or difficulty of the tasks they performed using a numerical scale ranging from 1 (very difficult) to 10 (very easy). Then, system usability questions are conducted by distributing a questionnaire after the second iteration of the design evaluation. The questionnaire consists of 5 questions to measure the usability of the myITS Worktime design using a numerical scale ranging from 1 (strongly disagree) to 10 (strongly agree). Table 3.3 below shows the questions asked for the system usability.

Table 3.3 System Usability Question

No.	Question
1.	I think this application is easy to use / <i>Saya rasa aplikasi ini mudah untuk digunakan</i>
2.	I feel the features in this app are just right for my needs / <i>Saya merasa fitur-fitur pada aplikasi ini tepat untuk kebutuhan saya</i>
3.	I have a feeling that others will understand how to use the app quickly / <i>Saya merasa orang lain akan memahami cara menggunakan aplikasi ini dengan cepat</i>
4.	I find this app confusing / <i>Saya merasa aplikasi ini membingungkan</i>
5.	I think this application is too complicated, but it could be simplified more / <i>Saya rasa aplikasi ini terlalu rumit, padahal bisa lebih disederhanakan</i>

CHAPTER IV RESULTS AND ANALYSIS

4.1 Result of the First Iteration

The first iteration of the prototype was created using a mid-fidelity prototype. The purpose of using this type of prototype is to facilitate the design process of myITS Worktime by using the user interface design from the mid-fidelity prototype as the responsive web user interface for myITS Worktime. The evaluation and testing process of the first iteration was conducted with two user roles, namely lecturers and academic staff. The objective was to evaluate the user interface of myITS Worktime and its features.

4.1.1 Result of Pilot Testing

Pilot testing was conducted to evaluate the user interface of myITS Worktime before testing the design prototype with users. Following the pilot testing, valuable feedback was received from the participants, and various issues were identified in certain areas that may arise during the design testing phase with users. Consequently, the identified issues and feedback were documented in Table 4.1, along with their corresponding solutions.

Table 4.1 Result of Pilot Testing for First Iteration

No.	Section	Problem	Solution
1.	Single Ease Question	The word "Aksi"	Change the word "Aksi" to "Misi"
2.	Task	Need to add 2 new tasks for the survey	Add start work plan and completing work plan tasks
3.	The rules for the survey	The rules are still not specific to what the respondent have to do.	Change the rules
4.	Dashboard Page	The weekly statistics for Covid-19 is already not relevant	Delete the weekly statistics interface

As a result of the pilot testing conducted, the author has included screenshots for the user interface design improvements. Here is the design layout before and after being evaluated based on the points mentioned in Table 4.1.

1. Changing the term "Aksi" in the Single Ease Question to "Misi" because the term used in Maze is "Mission", which means *Misi* in Indonesian.



Figure 4.1 Improvement of Wording in the Single Ease Question

- Adding two additional "mission" that are part of the main features in myITS Worktime, namely the "memulai rencana kerja" (start work plan) and "menyelesaikan rencana kerja" (complete work plan) features.

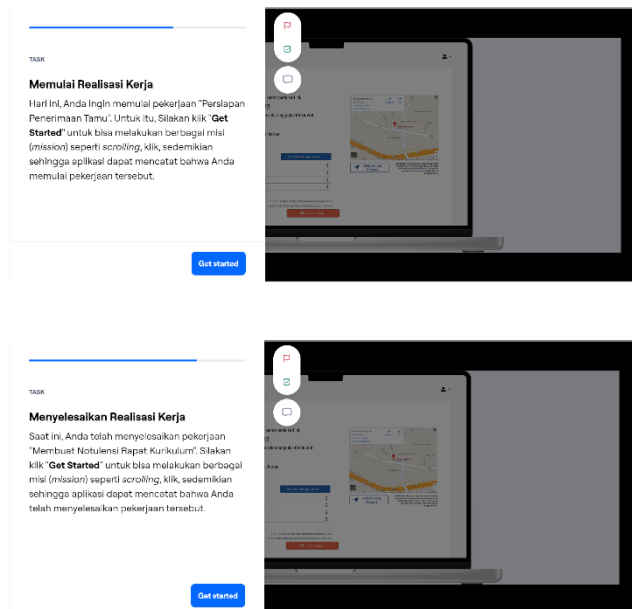


Figure 4.2 Add Two New Tasks to the Maze

- Modifying the initial instructions when opening Maze to provide more specific guidelines on what respondents will do, thus assisting them in navigating through Maze.



Figure 4.3 Improve of Rules for Maze Survey

4. In the latest version of myITS Worktime, the weekly statistics for Covid-19 are no longer available. Therefore, the display of weekly statistics is removed from the myITS Worktime prototype before testing it with users.

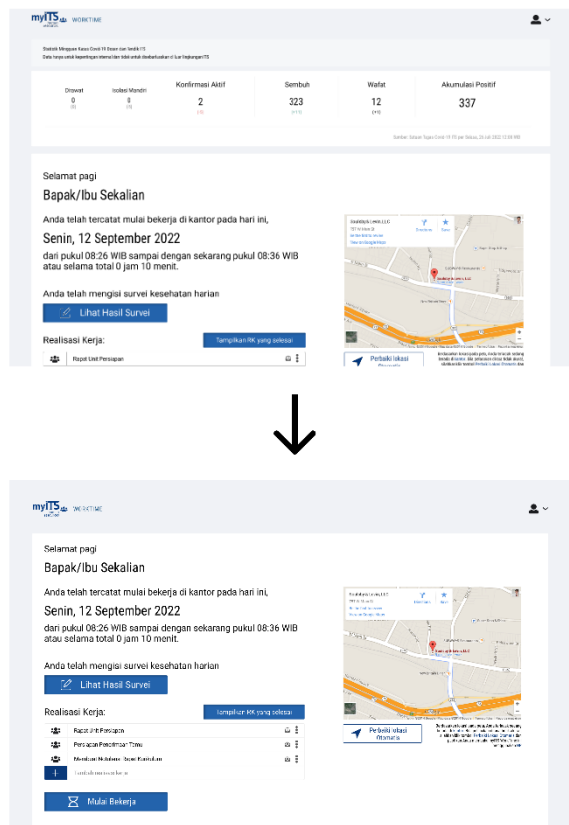


Figure 4.4 Improve of Dashboard

4.1.2 Number of Participants in the First Iteration Design Evaluation

The design evaluation for the first iteration had a total of 286 participants, consisting of 84 participants who were lecturers and 202 participants who were academic staffs.

Table 4.2 Details of the Number of Participants in the First Iteration Design Evaluation

User	Persona	Number of Participants
Lecturer	Who often use myITS Worktime	5
	Who rarely use myITS Worktime	79
Academic Staff	Who often use myITS Worktime	19
	Who rarely use myITS Worktime	183

4.1.3 Affinity Diagram

The affinity diagram is used to group user responses during user surveys. This is done to gain a clearer understanding of the detailed needs and issues experienced by users. The author created an affinity diagram to evaluate the usability of myITS Worktime. It spread into four parts that are design, information, feature, and flow. Each part represents the respondent or user comment for current myITS Worktime. The affinity diagram can be seen in Figure 4.5, Figure 4.6, Figure 4.7, and Figure 4.8 are the affinity diagram for myITS Worktime.

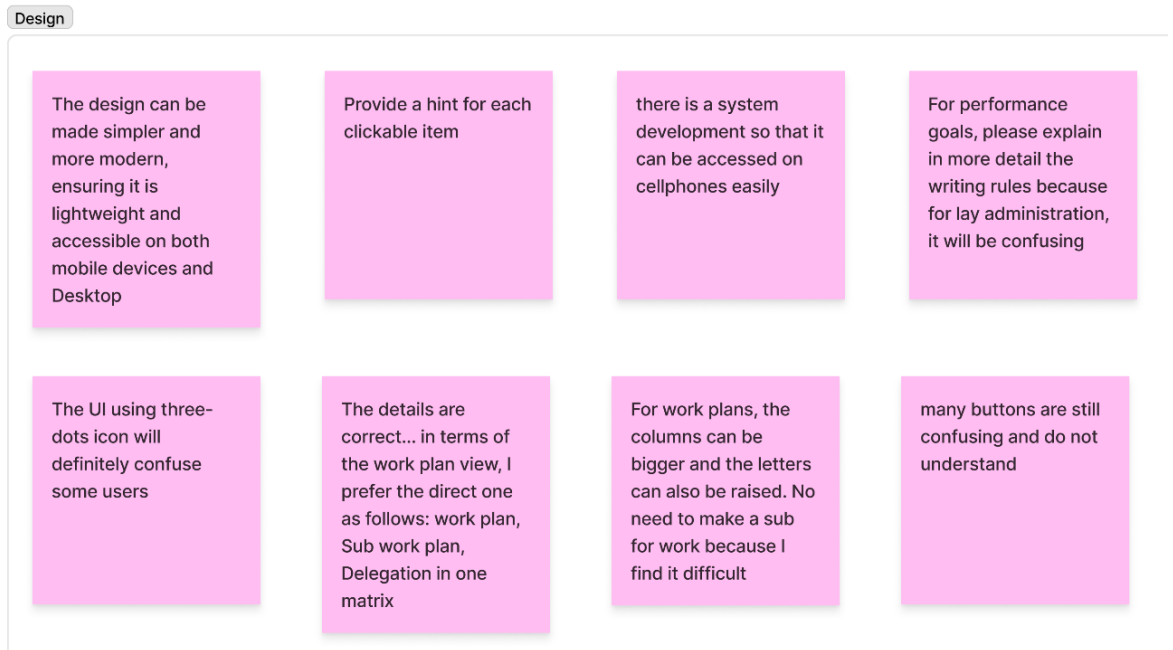


Figure 4.5 Affinity Diagram for myITS Worktime Design Part

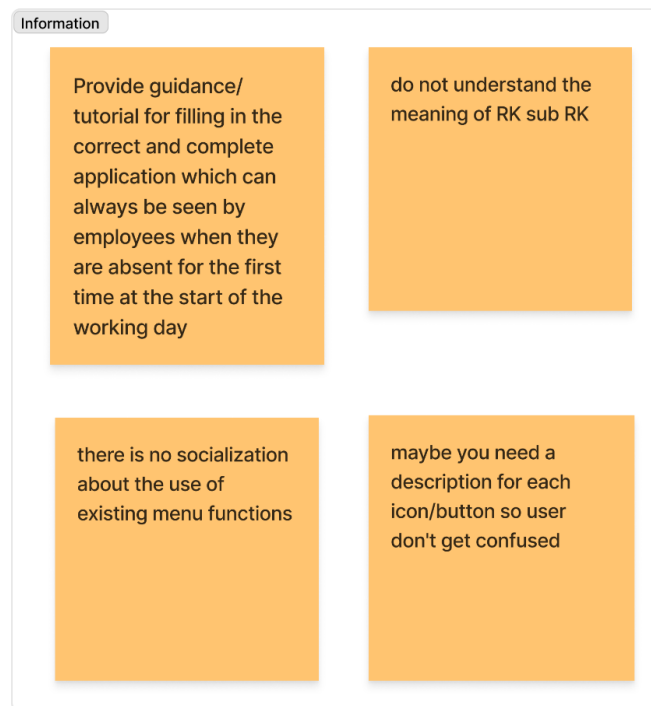


Figure 4.6 Affinity Diagram for myITS Worktime Information Part



Figure 4.7 Affinity Diagram for myITS Worktime Feature Part

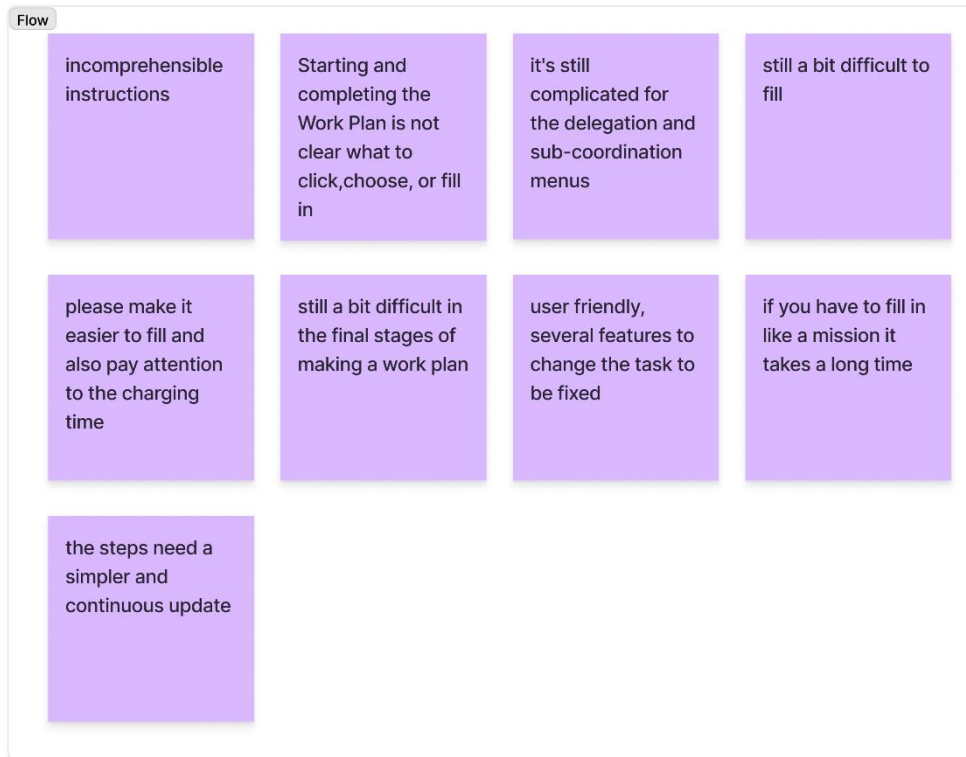


Figure 4.8 Affinity Diagram for myITS Worktime Flow Part

4.1.4 Persona

Based on the created affinity diagram, the author can detail the personas for each user role. There are two personas for each user role. For lecturer users, there are lecturers who frequently use myITS Worktime and lecturers who rarely use myITS Worktime. Similarly, for academic staff users, there are academic staff members who frequently use myITS Worktime and academic staff members who rarely use myITS Worktime. Figure 4.9, Figure 4.10, Figure 4.11, and Figure 4.12 below represent the personas for lecturer and academic staff users.

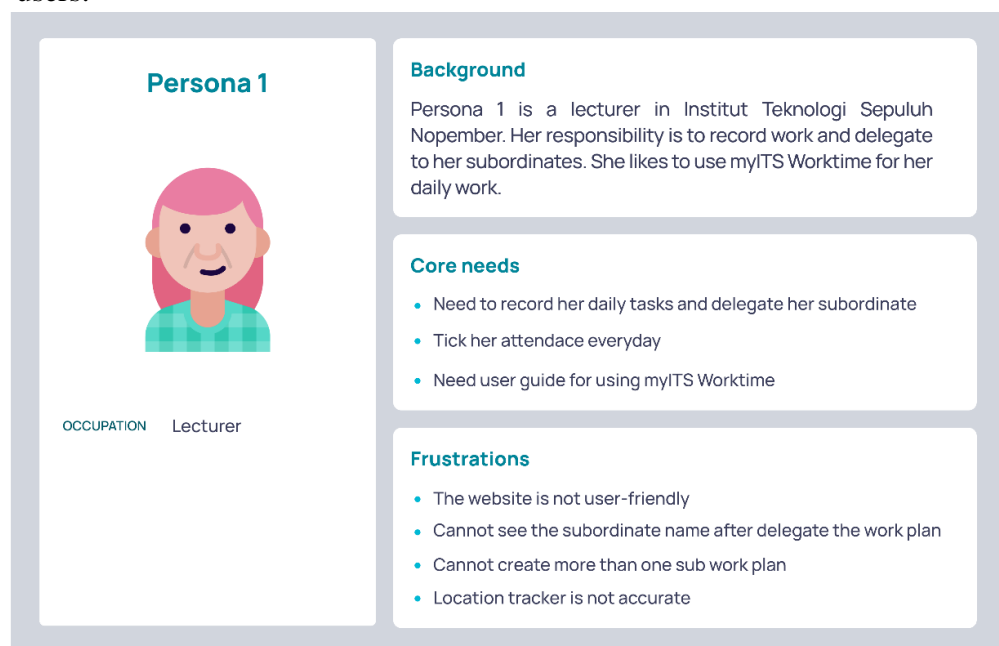


Figure 4.9 First Persona for Lecturer Use

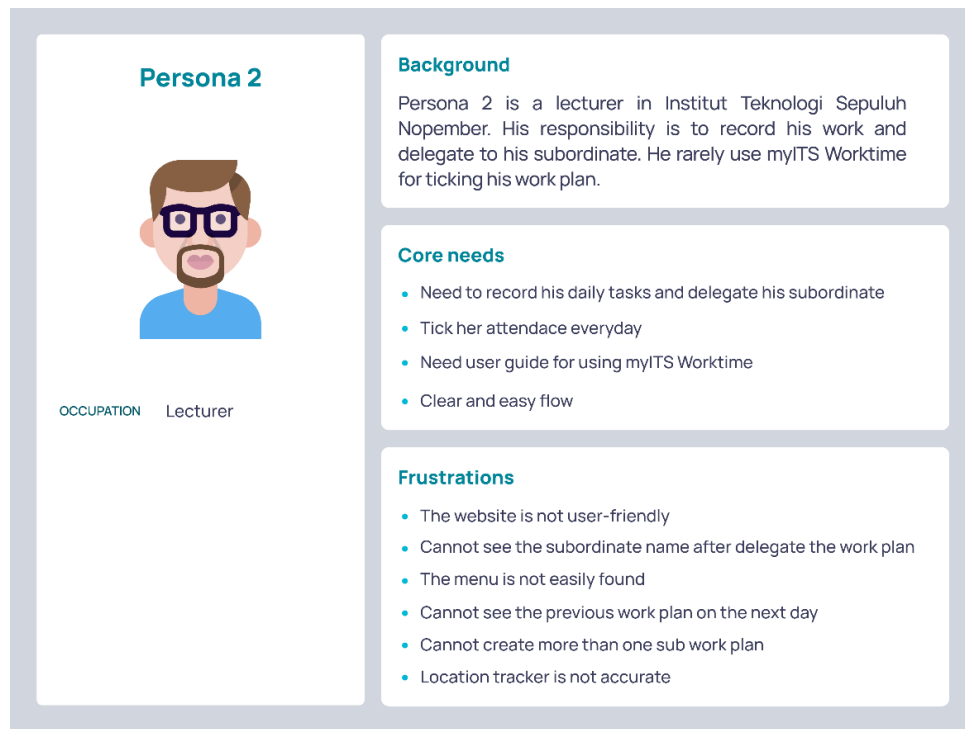


Figure 4.10 Second Persona for Lecturer User

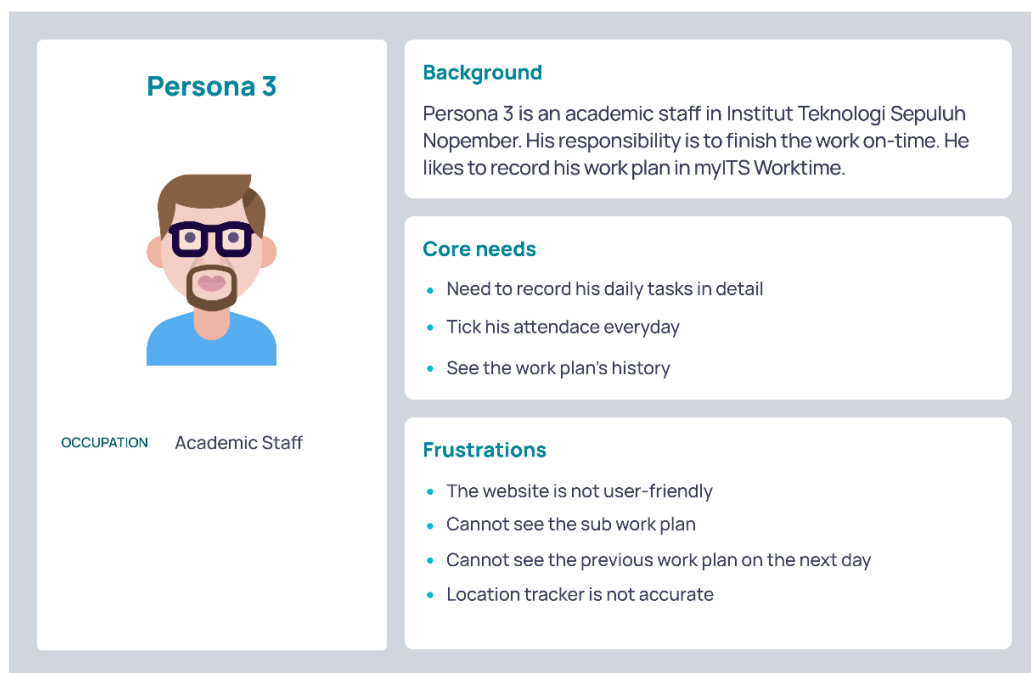


Figure 4.11 Third Persona for Academic Staff User

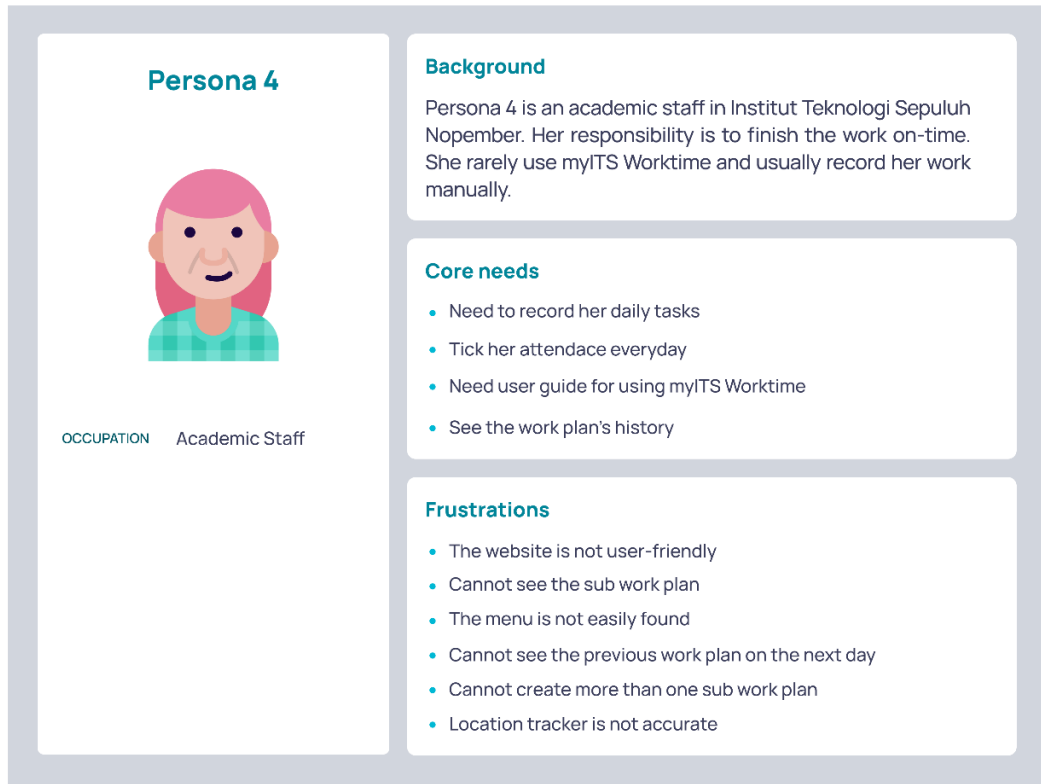


Figure 4.12 Fourth Persona for Academic Staff User

4.1.5 Analysis of User Needs

The author analyzed the outcomes of meetings with Direktorat Sumber Daya Manusia dan Organisasi (SDMO) and Direktorat Pengembangan Teknologi dan Sistem Informasi (DPTSI), as well as the results of the maze conducted among users of myITS Worktime, to identify the user requirements for the myITS Worktime application. This analysis serves as the foundation for designing the user interface solution. Furthermore, the author was able to determine the roles of myITS Worktime users that can be implemented within the application. To achieve this, a survey was distributed to two user personas of myITS Worktime: academic staff and lecturers at ITS. Several deliverables were obtained from the user research analysis conducted.

4.1.5.1 List of User Needs

The myITS Worktime requirement list is created after reviewing user survey results. This is done to align the menu and feature design needed in myITS Worktime with the functionality of each menu and feature.

Table 4.3 List of user needs

Menu	Functionality
Dashboard	Lecturers and academic staff can view individual work plans
	Lecturers and academic staff can create a work plan
	Lecturers and academic staff can start work that day
	Lecturers and academic staff can view status of each existing work plan

	Lecturers and academic staff can view the target date of completion of each existing work plan
	Lecturers and academic staff can edit any existing work plans
	Lecturers and academic staff can change the work plan status
Work Plan (<i>Rencana Kerja</i>)	Lecturers and academic staff can add a work plan according to work
	Lecturers and academic staff can add the target completion date of each work plan
	Lecturers and academic staff can edit any existing work plans
Sub Work-plan(<i>Rencana Kerja Sub</i>)	Lecturers and academic staff can view sub work plan of each existing work plan
	Lecturers and academic staff can assign work plans to sub work plans
Delegate a Work Plan(<i>Delegasi Rencana Kerja</i>)	Lecturers and academic staff can delegate work plans to subordinates
	Lecturers and academic staff can view delegate name of each work plan
Attendance Recap (<i>Rekap Absen</i>)	Lecturers and academic staff can view recap of each absence
Application Guidance (<i>Panduan Penggunaan Aplikasi</i>)	Lecturers and academic staff can view the user guide for each feature of the application
	Lecturers and academic staff can search for what they want

4.1.6 Architecture Planning for User Interface Navigation

The user interface navigation architecture aims to depict the flow of the myITS Worktime website currently used by users. This architecture is created in the form of a sitemap to understand user needs and the relationships between available features. The following is the sitemap for the myITS Worktime website.

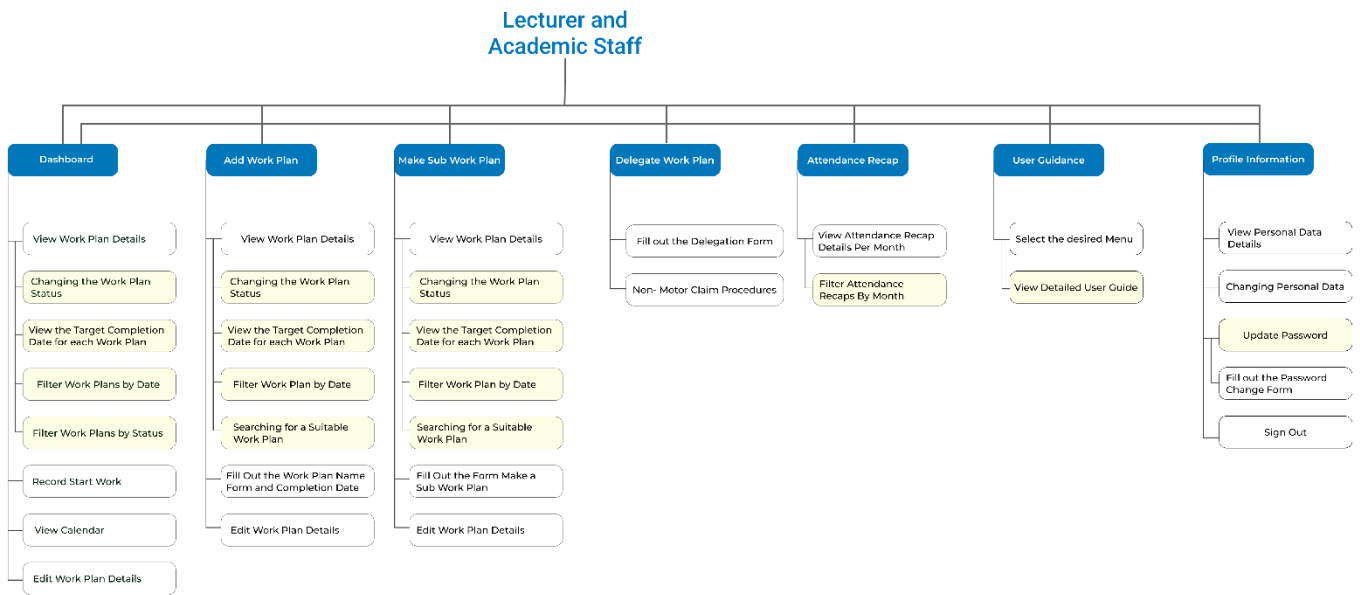


Figure 4.13 Architecture Planning for myITS Worktime

4.1.7 Results of the First Iteration Summative Evaluation

The design of the user interface navigation architecture aims to illustrate the flow of the myITS Worktime website that will be used by users. The architecture design is created in the form of a sitemap to identify the needs of each user and the relationships between available features. Here is the sitemap for the myITS Worktime website.

Table 4.4 Result of the Summative Evaluation for First Iteration

Success Rate	Misclick	Completing Time	Information
Mission 1: Starting Work			
57.2%	66.7%	38.8s	Many participants had difficulty adjusting locations for absences so many were stuck there
Mission 2: Add a Work Plan			
24.7%	77.8%	17.8s	The button to add is not very visible so many look for the button after writing the name of the work plan
Mission 3: Delegate Work Plan			
52.4%	68.1%	64.3s	Many have difficulty finding the delegate menu which is in the three dots icon in each work plan.
Mission 4: Make Sub Work Plan			
37.3%	33.7%	61.5s	The majority of the participants had difficulty finding the deletion menu which is within the three dots icon in each work plan.
Mission 5: Starting a Work Plan			
14%	48.9%	19.2s	Lots of misclicks and don't understand which icon to click. The icons are also too close together so many don't click right.
Mission 6: Completing a Work Plan			

52.9%	32.3%	9.8s	Same with mission 5, in this mission the participants are also confused about which one to click.
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Based on the results of the first iteration's summative evaluation for student participants in Table 4.4, the author calculated the completion rate for each given task among the participants. Table 4.5 below presents the average completion time for each task and the issues encountered while working on those tasks.

Table 4.5 First Iteration Task Completion Rate for All Participants

Mission	Status			Information
	Success	Indirect Success	Unfinished	
Mission 1	147	68	42	Participants explore the app first and then do the mission.
Mission 2	53	125	37	Participant do not click “Tambah” button to add the work plan to the table.
Mission 3	98	53	36	Participant do not know where to add work plan, make a sub work plan, and delegate work plan.
Mission 4	63	63	43	
Mission 5	21	13	116	
Mission 6	74	5	61	Participants do not pick the work plan as the question asked, beside they success in other work plan.

Based on Table 4.5, a total of 1118 tasks were completed, including 456 successful tasks, 327 tasks with notes, and 335 unfinished missions. The completion notes indicate a satisfactory but improvable outcome for the first iteration. SEQ assessments were conducted to measure user perception of task usability. Table 4.6 shows mission ratings and average SEQ ratings for each task, ranging from 6.5 to 8.5 for the first iteration.

Table 4.6 First Iteration SEQ Assessment

Mission	SEQ Score
Mission 1	8.1
Mission 2	8.5
Mission 3	7.7
Mission 4	7.4
Mission 5	6.5
Mission 6	7.5

4.1.8 Results of the First Iteration Formative Evaluation

Based on the conducted Maze survey, the author was able to identify issues experienced by users in the prototype user interface. Therefore, the author created an empathy map to visualize the user's perspective and behavior. The empathy map was created based on each user role persona described in the previous chapter. Figure 4.14 and Figure 4.15 depict the empathy map of the lecturer user, consisting of the first persona and the second persona.

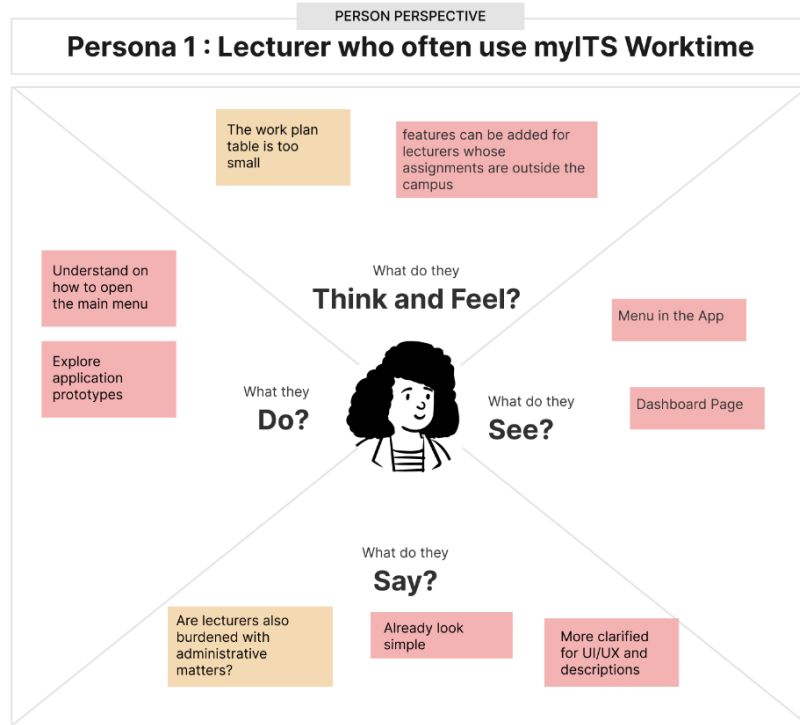


Figure 4.14 Empathy Map First Persona for Lecturer User

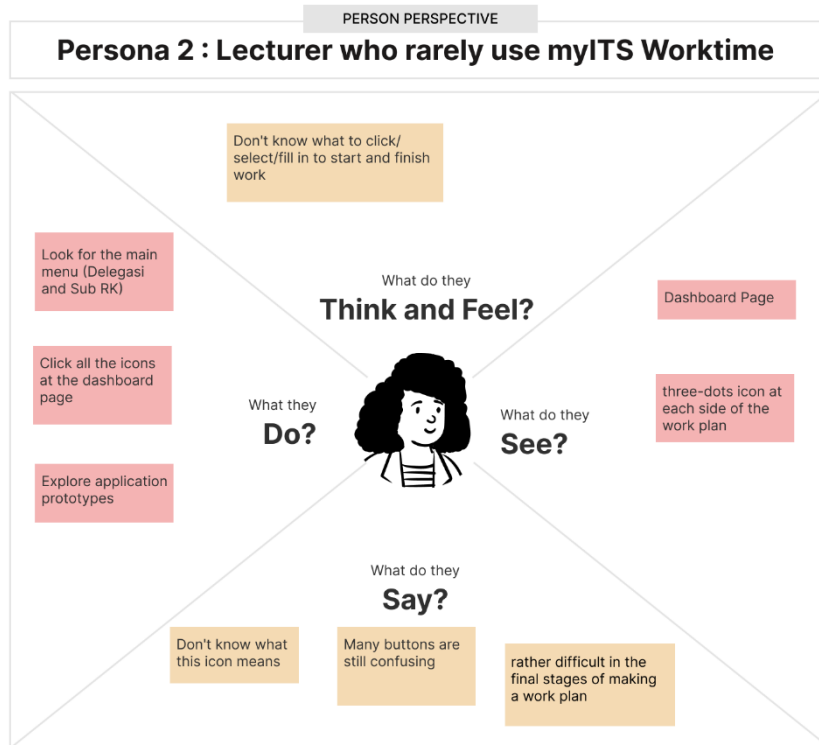


Figure 4.15 Empathy Map Second Persona for Lecturer User

Figure 4.16 and Figure 4.17 display the empathy map for the academic staff user. The academic staff user consists of two personas.

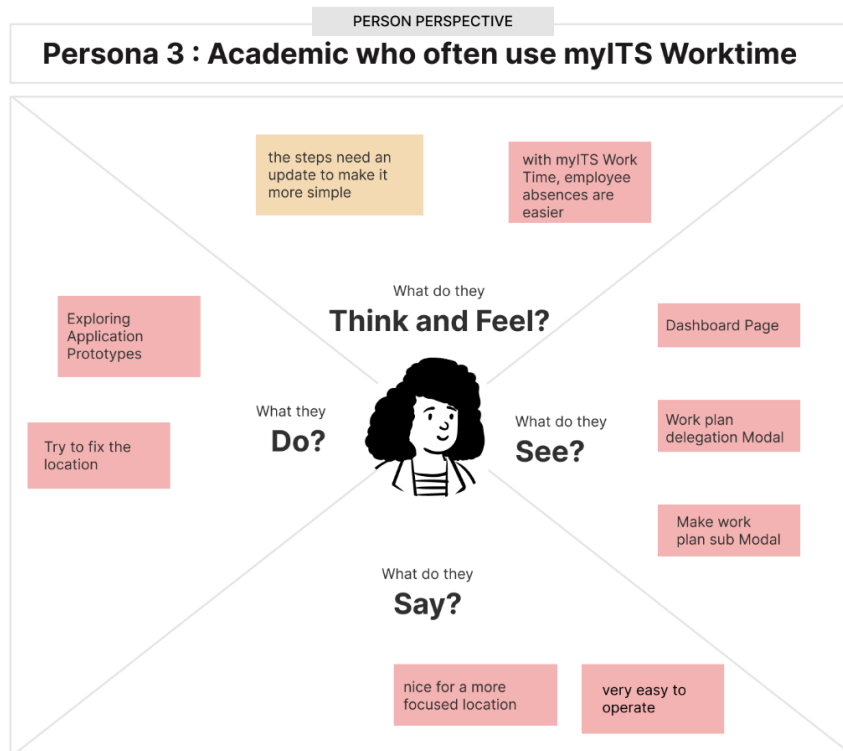


Figure 4.16 Empathy Map Third Persona for Academic Staff User

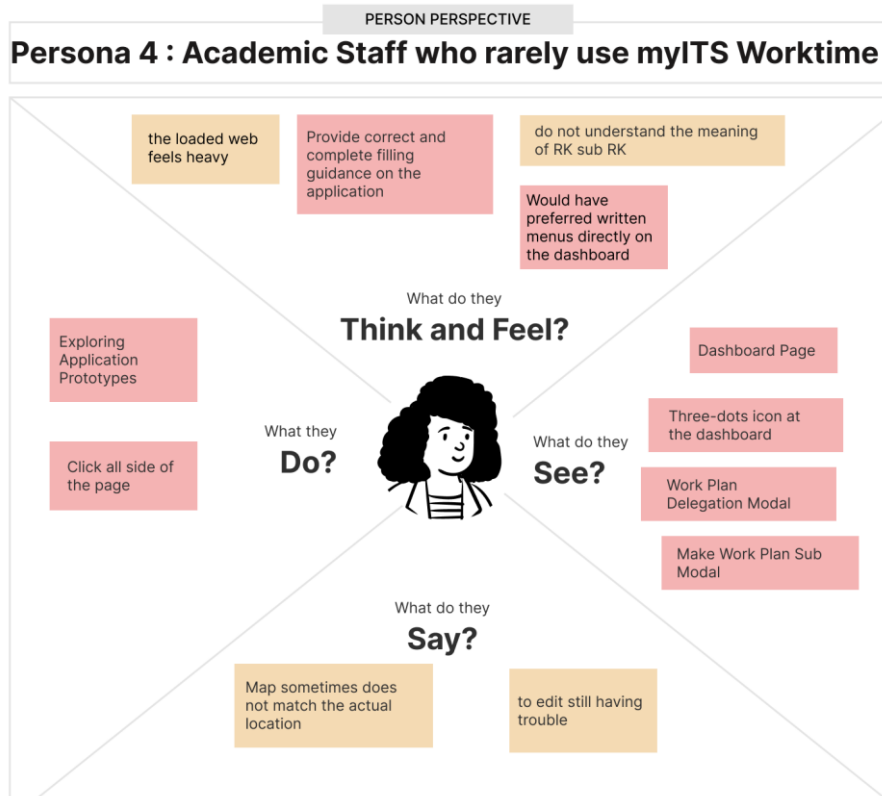


Figure 4.17 Empathy Map Fourth Persona for Academic Staff User

Based on the empathy map, the author created an artifact model to highlight the parts of the user interface that require improvement. The artifact model includes lightning bolt icons to indicate problematic areas and corresponding descriptions of the issues. Here is the artifact model for both lecturers and academic staff users.

Figure 4.18 myITS Worktime Artifact Model Part 1



Figure 4.19 myITS Worktime Artifact Model Part 2

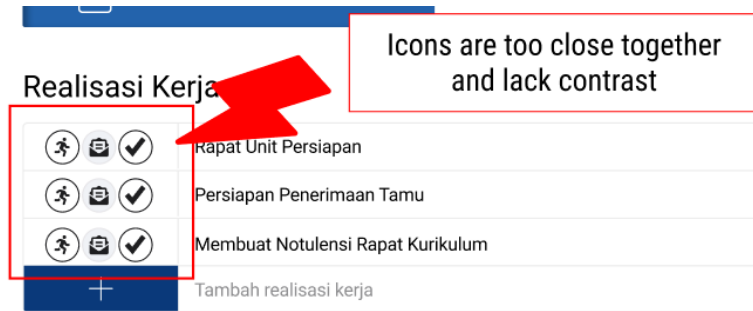


Figure 4.20 myITS Worktime Artifact Model Part 3



Figure 4.21 myITS Worktime Artifact Model Part 4

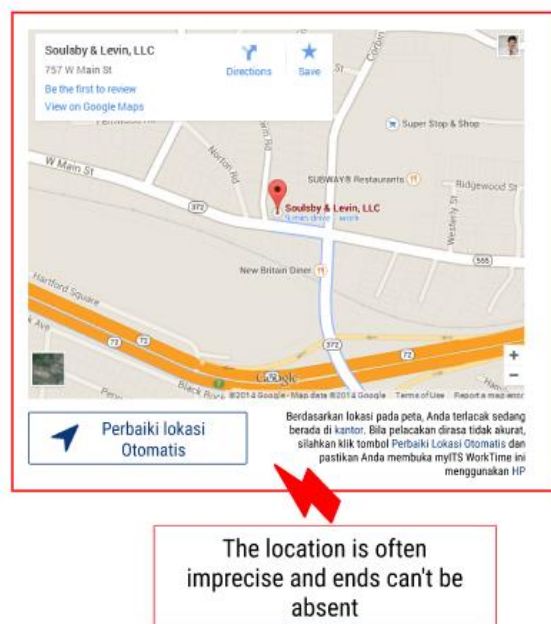


Figure 4.22 myITS Worktime Artifact Model Part 5

4.1.9 Improved Prototype Based on the First Evaluation

After detailing the issues identified in the user interface during the first design iteration using the artifact model, the author compiled these issues into a problem list along with their corresponding solutions. This was done to facilitate the author in making improvements to the user interface design of myITS Worktime. By having this problem list, the author can focus on each identified issue and find the appropriate solutions. The purpose of these design improvements based on the problem list is to enhance the user experience and quality of the myITS Worktime application.

Table 4.7 List of First Iteration Design Problems and Solutions

No.	Section	Problem	Solution
1.	Menu	Hard to find the menu to delegate, make sub work plan, edit, and delete because it is hidden in three-dots icon	Make new navigation bar/side bar with all the menus there so it's easy to find
2.	All section	The text and icon are all too small	Use bigger fontsize and icons
3.	Icon for Status	The icons for work plan's status are too close together and lack contrast of color	Use one icon with different color than other icon status and click the icon to change the status
4.	Location	Very hard to fix the location and cannot tick the attendance if the location is not right in ITS area	Delete the location feature
5.	Sub Work Plan	Cannot see the sub work plan after filling out the form	Make sub work plan page with a table that shows the detail
6.	Delegate Work Plan	Cannot see the subordinate's name after filling out the form	Make delegate work plan page with a table that shows the detail
7.	Website Usage	Do not have a guidance for using the website	Make a user guide page so user can always open it easily
8.	Add Work Plan	Do not have a target completion date for the work plan	Add target completion date in add work plan form

As a result of the first iteration conducted, the author includes screenshots for user interface improvements. Here is a description of the design concepts before and after evaluation.

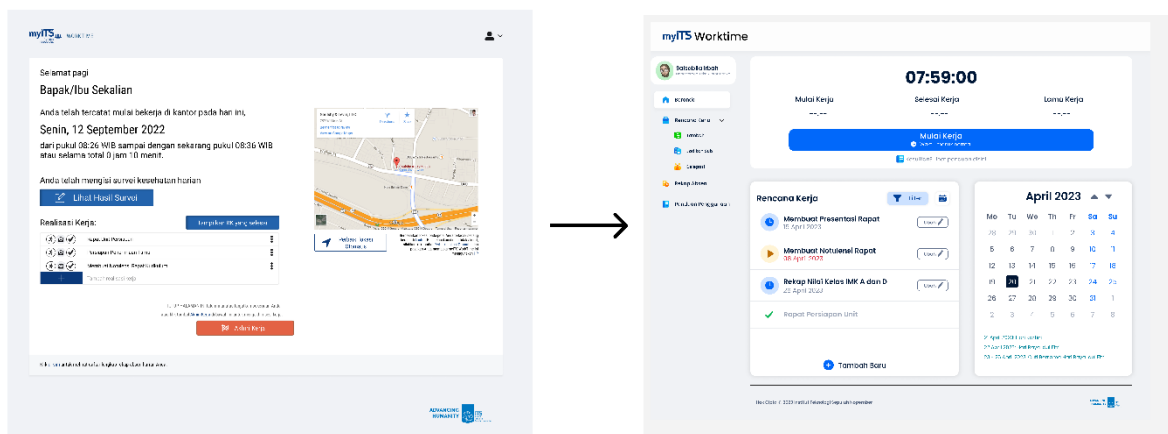


Figure 4.23 User Interface Improvements from the First Iteration Results of Dashboard Page

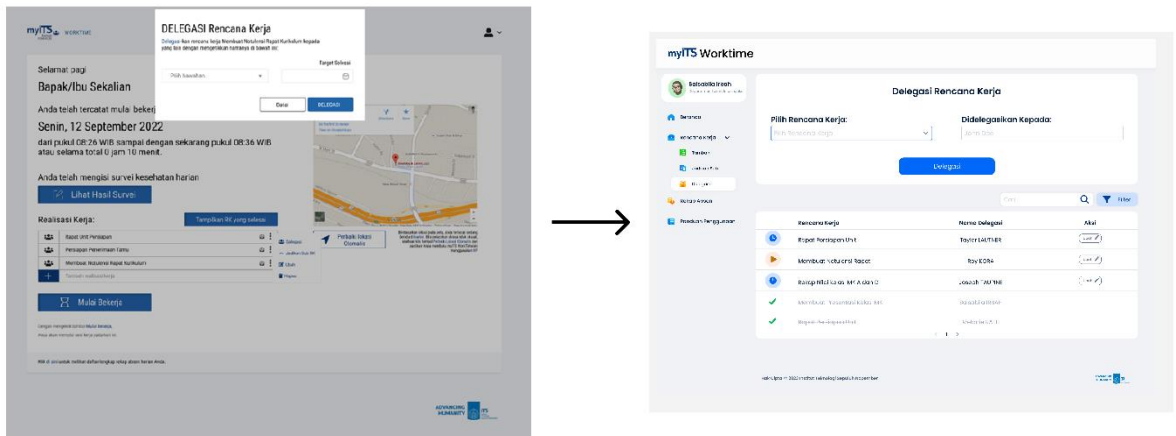


Figure 4.24 User Interface Improvements from the First Iteration Results of Delegation Page

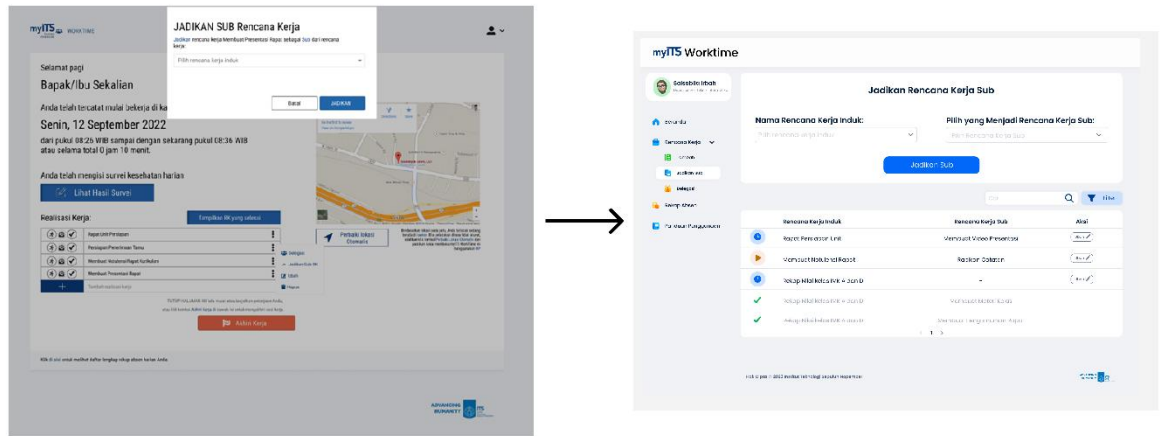


Figure 4.25 User Interface Improvements from the First Iteration Results of Sub Work Plan Page

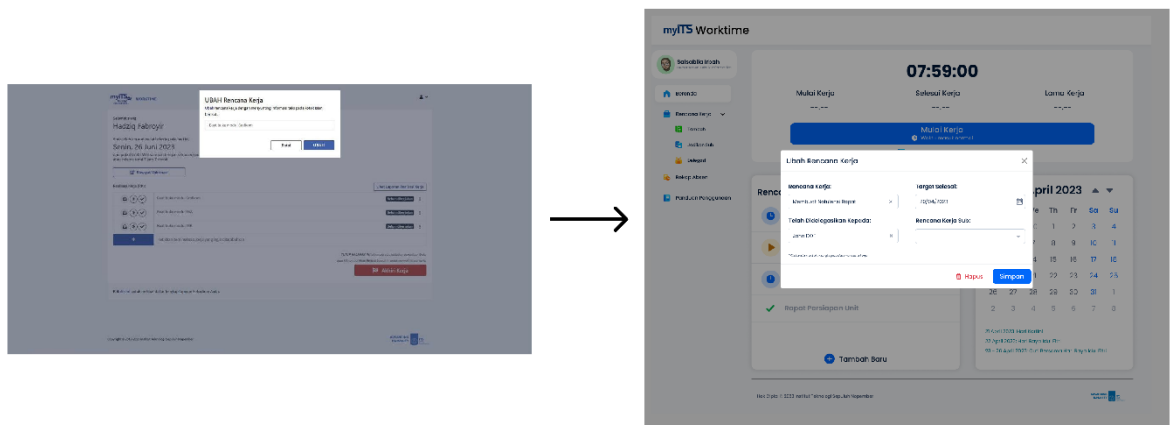


Figure 4.26 User Interface Improvements from the First Iteration Results of Edit Part

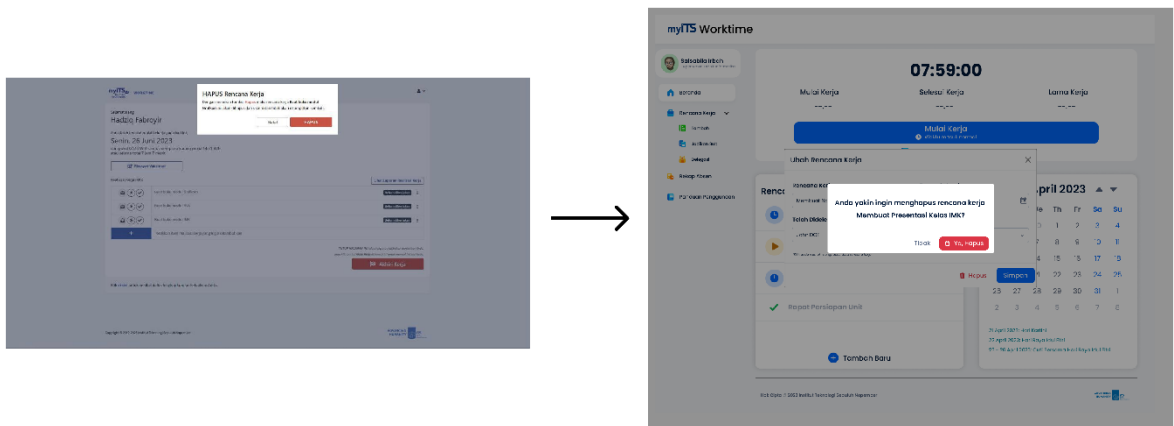


Figure 4.27 User Interface Improvements from the First Iteration Results of Delete Part

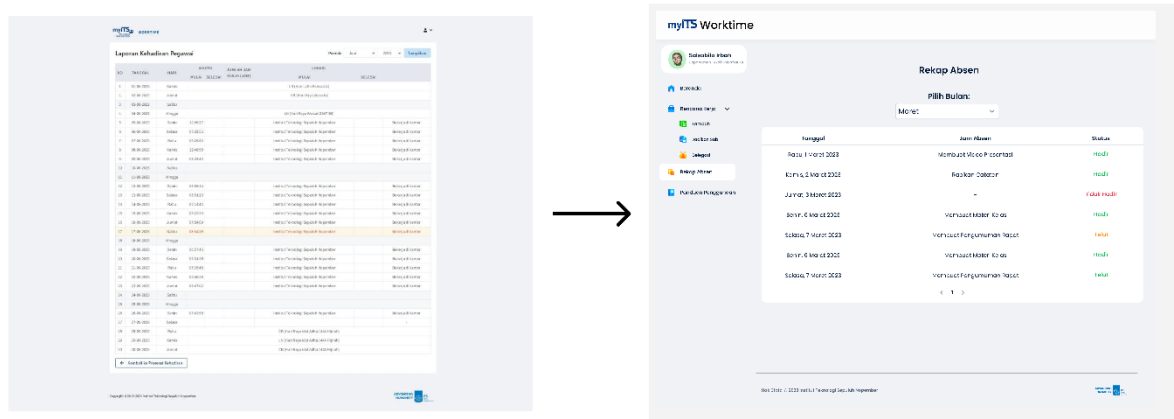


Figure 4.28 User Interface Improvements from the First Iteration Results of Attendance Recap Page

4.2 Prototype Design for Second Iteration Results

The second iteration prototype design was created using a mid-fidelity prototype. The purpose of using this type of prototype was to facilitate the second iteration design process of myITS Worktime by using the user interface design of the mid-fidelity prototype as the responsive web user interface for myITS Worktime. The evaluation and testing process of the design was conducted with two user roles, namely lecturers and academic staff members. This aimed to introduce the myITS Worktime user interface and its features to the users.

There are six menus for lecturers and academic staff members, which are Dashboard (*Beranda*), Add Work Plan (*Tambah Rencana Kerja*), Make Work Plan Subordinate (*Jadikan Rencana Kerja Sub*), Delegate Work Plan (*Delegasi Rencana Kerja*), Attendance Recap (*Rekap Absen*), and User Guidance (*Panduan Penggunaan Aplikasi*). The Dashboard page serves as the initial page displayed after users log into their myITS account through myITS SSO as faculty members or staff members. This page consists of the "Mulai Kerja" (Start Work) box with time countdown, work plan table, and calendar (for desktop).

The mid-fidelity prototype design and its associated menus provide a glimpse of the myITS Worktime user interface, allowing users to familiarize themselves with its features and functionalities.

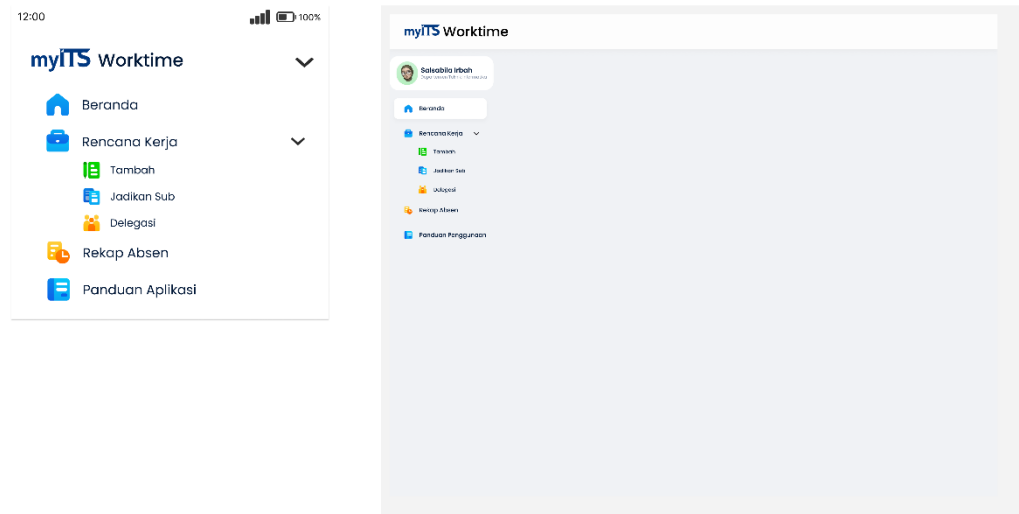


Figure 4.29 Mid-fidelity Prototype Design for navigation and Sidebar In Second Iteration

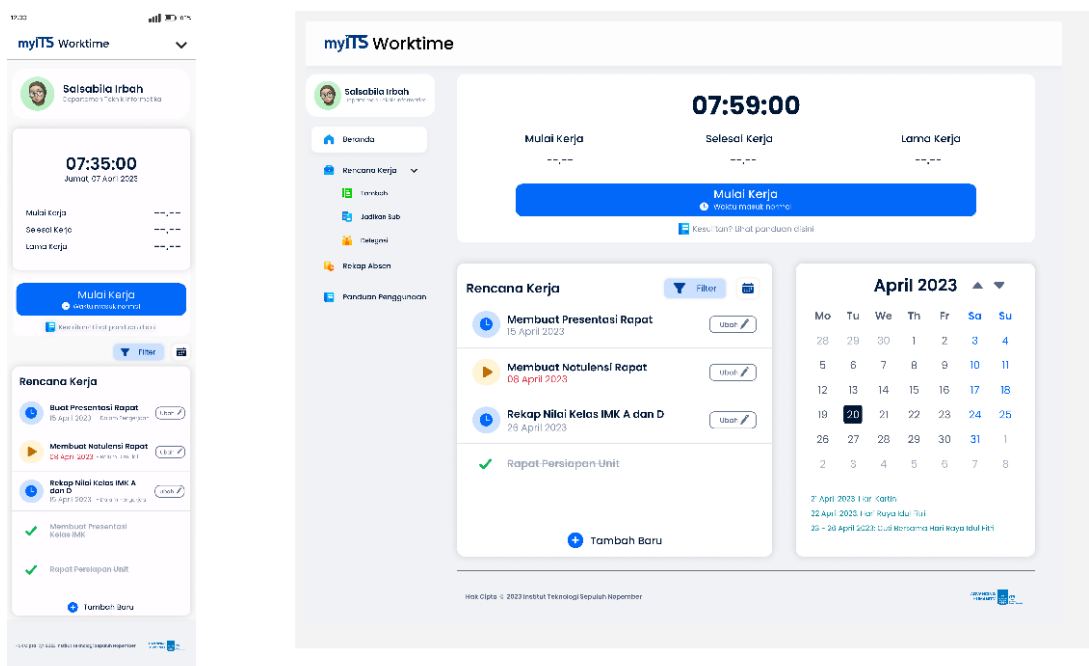


Figure 4.30 Mid-fidelity Prototype Design for Dashboard Page In Second Iteration

The "Tambah" (Add), "Jadikan Sub" (Make Sub Work Plan), and "Delegasi" (Delegation) menus are interconnected as they serve the purpose of adding details to existing work plans. On the "Tambah" page, lecturers and academic staff can create new work plans and view the work plans they have created. On the "Jadikan Sub" page, lecturers and academic staff can convert an existing work plan into a sub-work plan of another. Additionally, they can also view the parent work plans and current sub-work plans. On the "Delegasi" page, lecturers and academic staff can delegate a task/work plan to their subordinates (if any) and view which work plans have been delegated. In the attendance recap menu, lecturers and academic staff can view their daily attendance. There is also other page for attendance recap menu, lecturers and academic staff can view their daily attendance.

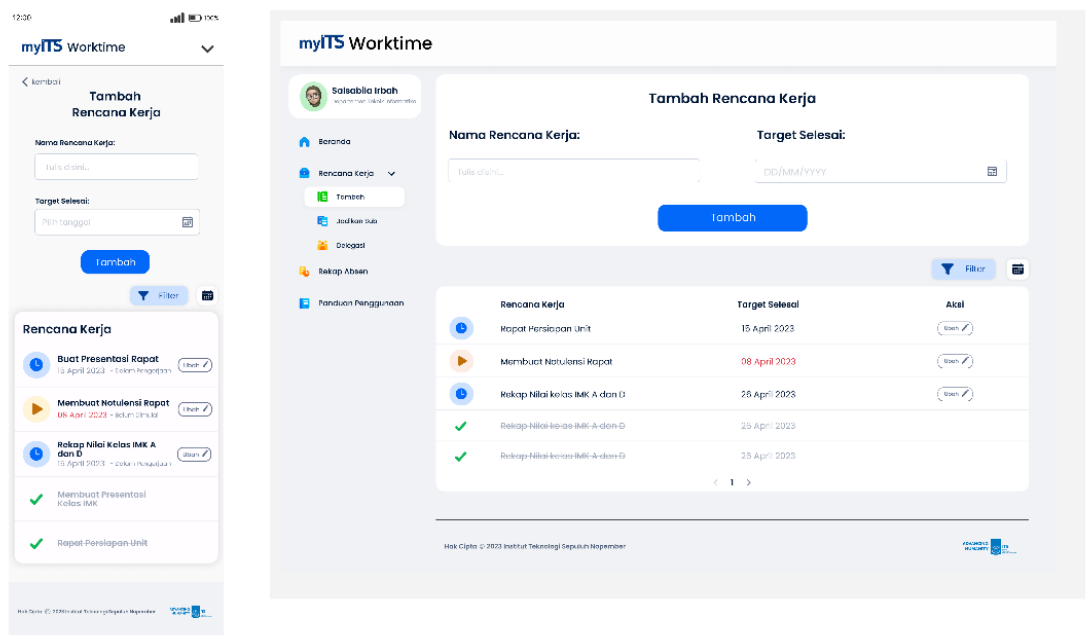


Figure 4.31 Mid-fidelity Prototype Design for Add Work Plan Page In Second Iteration

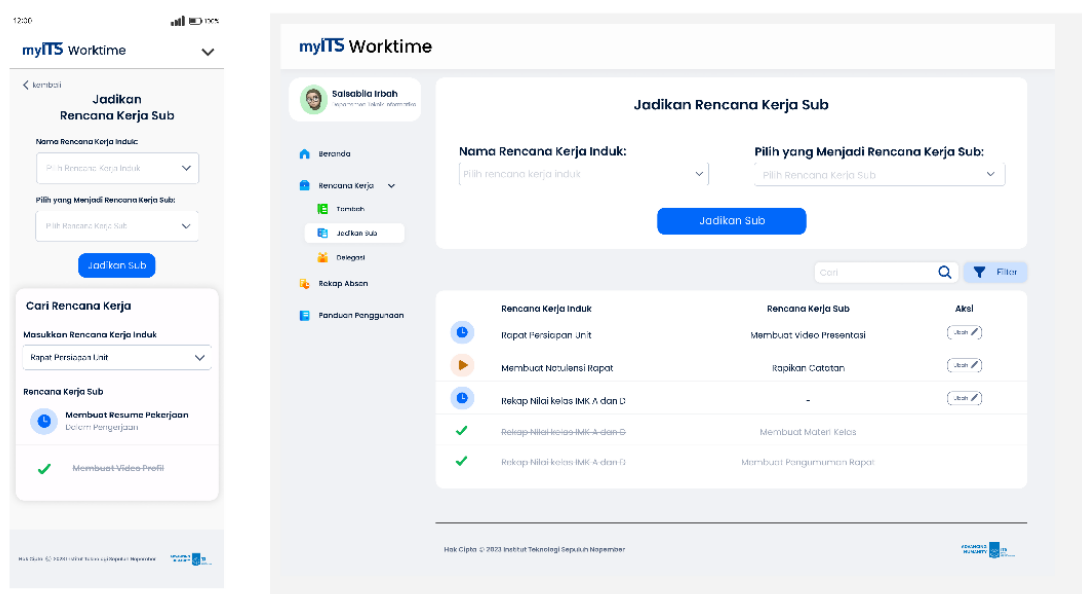


Figure 4.32 Mid-fidelity Prototype Design for Make Sub Work Plan Page In Second Iteration

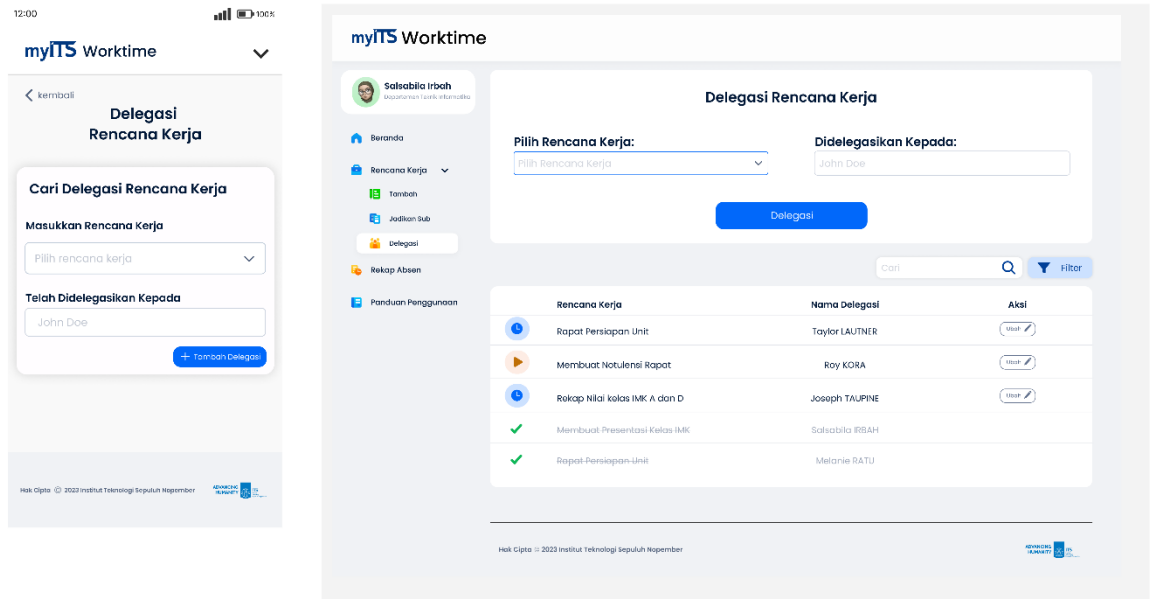


Figure 4.33 Mid-fidelity Prototype Design for Delegate Work Plan Page In Second Iteration

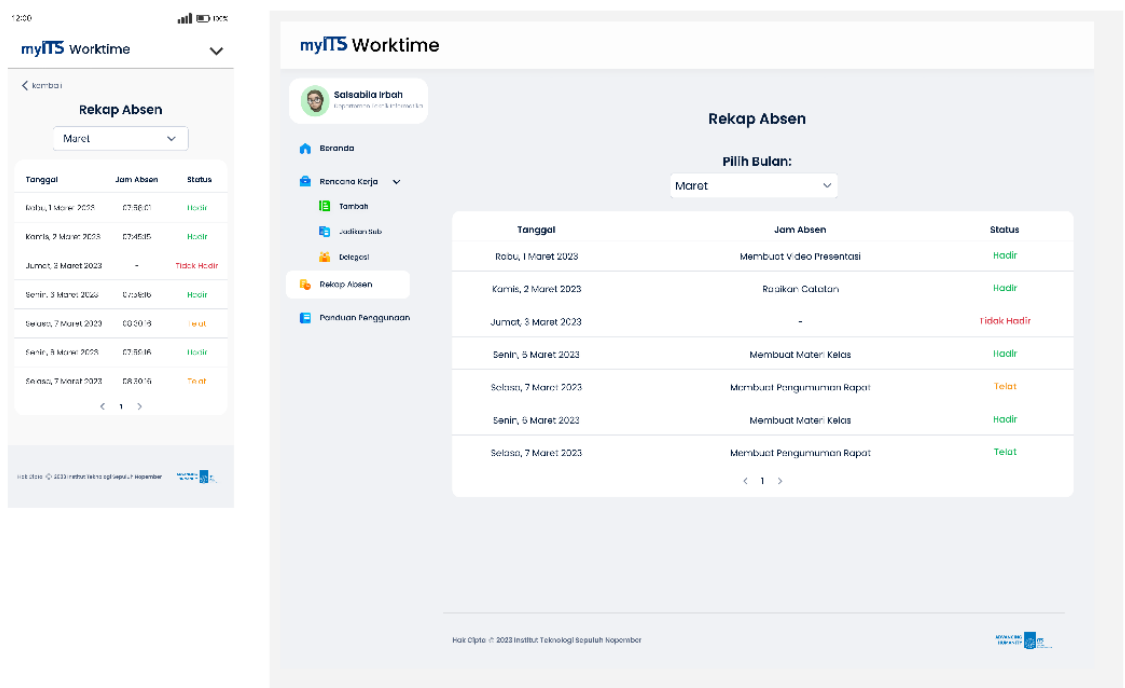


Figure 4.34 Mid-fidelity Prototype Design for Attendance Recap Page In Second Iteration

There are an additional menus created to facilitate users in using myITS Worktime. Thes menu is "panduan penggunaan aplikasi" (application user guide). As for the application user guide menu, lecturers and academic staff can access the instructions on how to use the application, so if they encounter any difficulties, they can find the solutions directly.

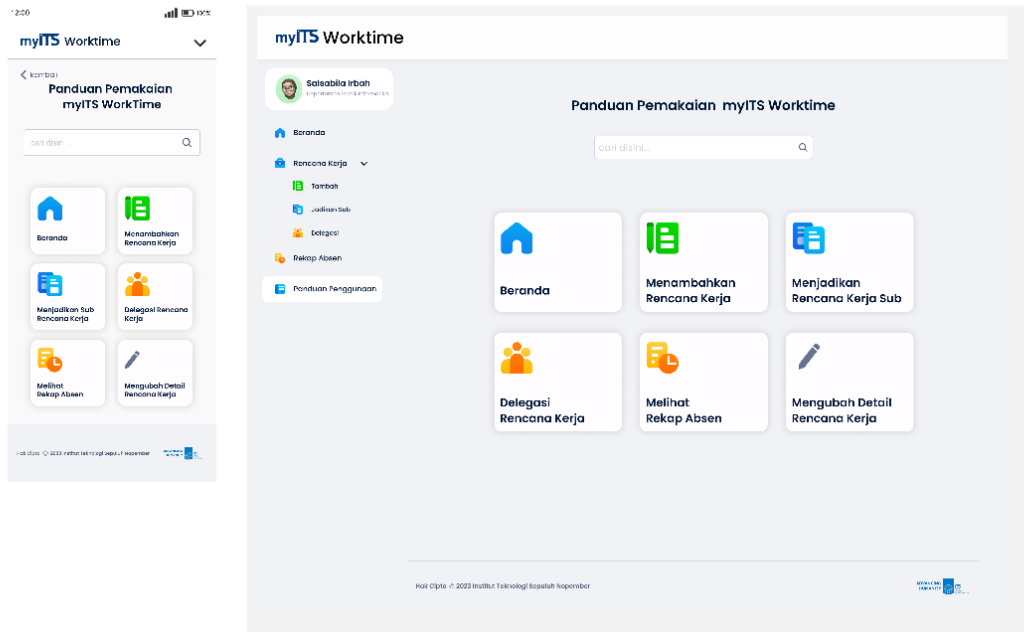


Figure 4.35 Mid-fidelity Prototype Design for User Guide Page In Second Iteration

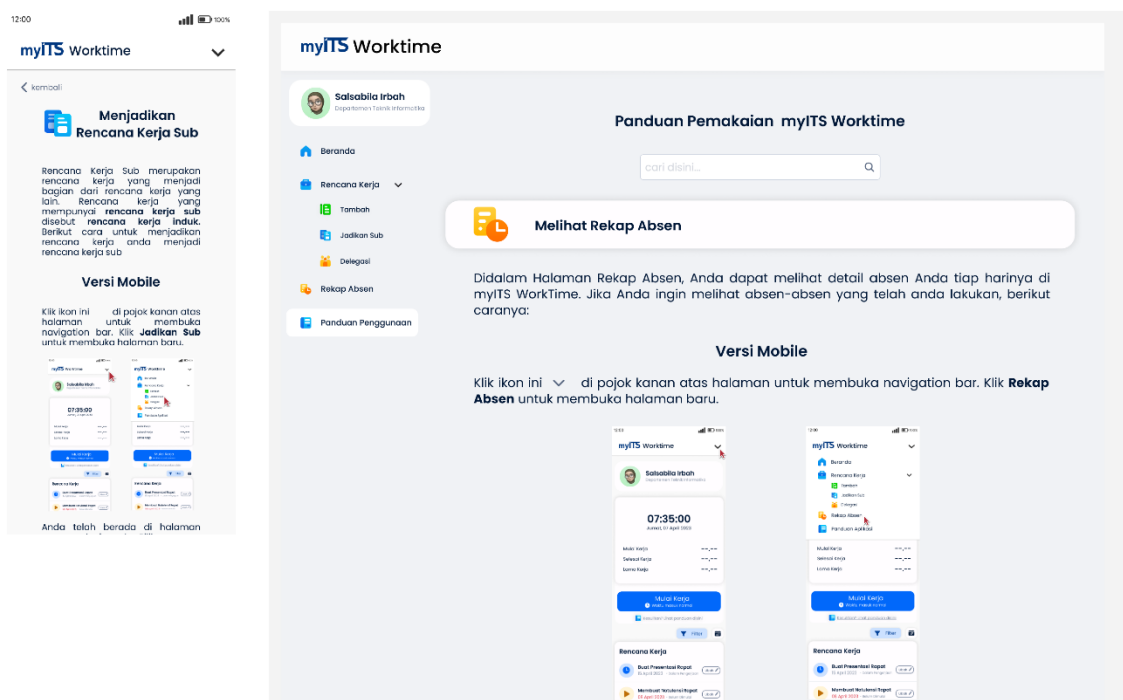


Figure 4.36 Mid-fidelity Prototype Design for App User Guide Page In Second Iteration

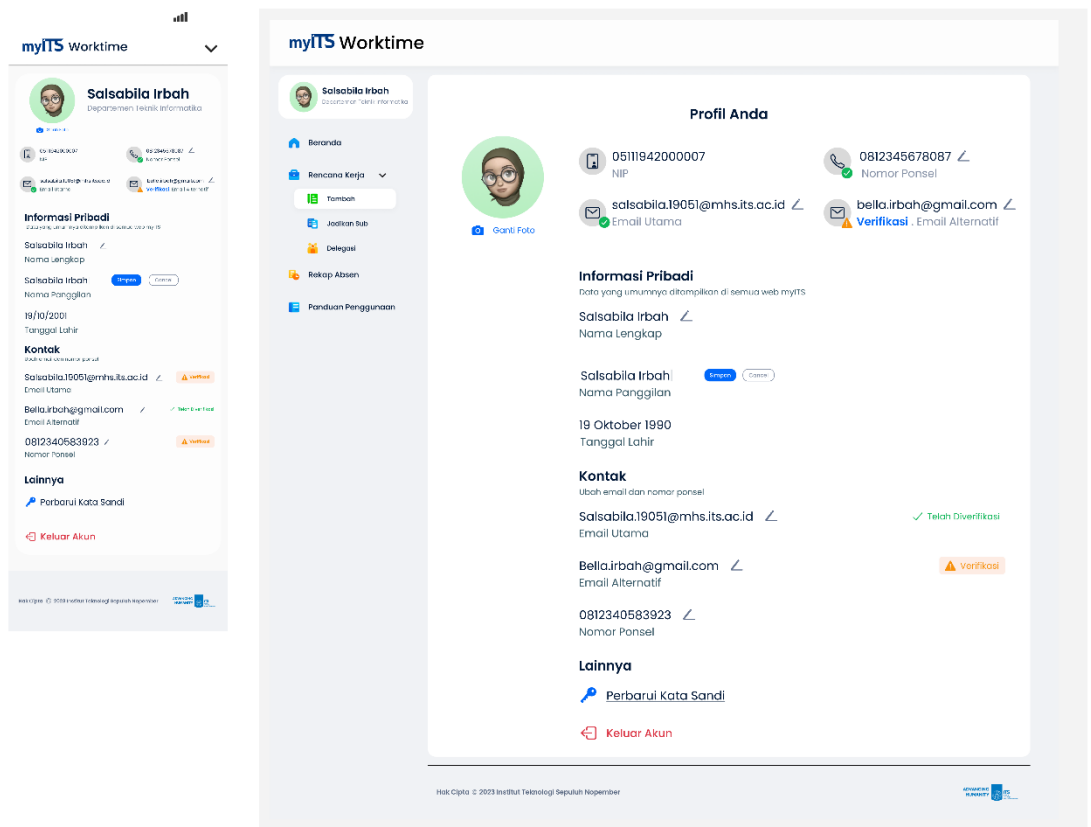


Figure 4.37 Mid-fidelity Prototype Design for Profile Information Page In Second Iteration

In this subsection, the author includes screenshots of the user interface that underwent changes after the first iteration. These changes serve as solutions to the issues identified during the design evaluation with users.

4.2.1 Number of Participants in the Second Iteration Design Evaluation

The design evaluation for the second iteration had a total of 26 participants, consisting of 6 participants who were lecturers and 20 participants who were academic staff.

Table 4.8 Details of the Number of Participants in the Second Iteration Design Evaluation

User	Persona	Number of Participants
Mobile		
Lecturer	Who often use myITS Worktime	1
	Who rarely use myITS Worktime	2
Academic Staff	Who often use myITS Worktime	2
	Who rarely use myITS Worktime	1
Desktop		
Lecturer	Who often use myITS Worktime	1
	Who rarely use myITS Worktime	3
Academic Staff	Who often use myITS Worktime	5
	Who rarely use myITS Worktime	11

4.2.2 Results of the Second Summative Iteration Evaluation

Based on the results of the testing of the design prototype, there were several variables evaluated, including task completion time, click errors, and status indicating task completion by each participant. The following Table 4.9 shows the results of the summative evaluation for lecturers and academic staff members participants.

Table 4.9 Results of the Second Iteration Summative Evaluation for All Participants

Prototype	Success Rate	Misclick	Completing Time	Information
Mission 1: Starting Work				
Mobile	100%	0%	6.9s	For the desktop version, a lot of participants are still figuring out about the new design and try to explore the app. But at the second try using the mobile version, they can easily do the mission.
Desktop	89.5%	48.7%	64.8s	
Mission 2: Add a Work Plan				
Mobile	60%	63.6%	25s	Still try the previous mission and also still stuck on the old design to add a work plan so they click the right side of the work plan and try to add from there.
Desktop	47.4%	60.9%	47.7s	
Mission 3: Delegate Work Plan				
Mobile	66.7%	46.7%	12.4s	Many participants still try to do the previous mission which is the "Add a work plan"
Desktop	17.6%	66%	61.7s	
Mission 4: Make Sub Work Plan				
Mobile	66.7%	26.1%	18.8s	Majority of the participants try to explore the app first by clicking, scrolling, and end up not completing the mission.
Desktop	14.3%	63.3%	76.8s	
Mission 5: Starting a Work Plan				
Mobile	100%	0%	4.7s	Because many participants try the desktop version first, they still want to explore the app and click randomly. But at the second try using the mobile version, they can easily do the mission.
Desktop	21.4%	74.1%	47.3s	
Mission 6: Completing a Work Plan				
Mobile	75%	37.5%	2.4s	Similar to Mission 5 but some of the participants do not click the work plan as the question asked.
Desktop	71.4%	25%	5.4s	

Based on the results of the first iteration summative evaluation for participating lecturers and academic staff in Table 4.9, the authors calculated the level of completion of each mission given to the participants. Table 4.10 below shows the average completion time for each mission and the problems found when carrying out the mission.

Table 4.10 Second Iteration Task Completion Rate for All Participants

According to Table 4.10, the total number of tasks performed is 45, consisting of 86 completed tasks, 19 completed tasks with notes, and 44 unfinished missions. The completion notes for each task indicate that the results of the first iteration are satisfactory but still require improvement. In addition to

Mission	Prototype	Avg. Completing Time	Status			Information
			Success	Indirect Success	Unfinished	
Mission 1	Mobile	6.9s	10	0	0	Participants explore the app first and then do the mission.
	Desktop	64.8s	17	1	1	
Mission 2	Mobile	25s	6	2	2	Participant do not click “Tambah” button to add the work plan to the table.
	Desktop	47.7s	9	1	9	
Mission 3	Mobile	12.4s	6	0	2	Participants still try the previous mission and end up failing the current mission.
	Desktop	61.7s	3	2	12	
Mission 4	Mobile	18.8s	6	0	2	
	Desktop	76.8s	2	6	6	
Mission 5	Mobile	4.7s	8	0	0	Because majority of participants do the desktop version first, they still explore the app but at the second attempt on mobile, participant can easily do the mission.
	Desktop	47.3s	3	6	5	
Mission 6	Mobile	2.4s	6	0	2	Participants do not pick the work plan as the question asked, beside they success in other work plan.
	Desktop	5.4s	10	1	3	

evaluating the prototype design by testing various tasks with participants, the author also conducted SEQ assessments to measure users' perception of the usability of the tasks performed. Table 4.11 presents the participants' ratings for each task and the average SEQ ratings for each task. Based on Table 4.11, it is known that the SEQ ratings for the first iteration range from 7.25 to 9.7.

Table 4.11 Second Iteration SEQ Assessment

Mission	Prototype	SEQ Score	Average Score
Mission 1	Mobile	9.8	9.7
	Desktop	9.6	
Mission 2	Mobile	9.8	8.65
	Desktop	7.5	
Mission 3	Mobile	8	7.25
	Desktop	6.5	
Mission 4	Mobile	8.8	8

	Desktop	7.2	
Mission 5	Mobile	9.8	8.6
	Desktop	7.4	
Mission 6	Mobile	9.3	8.7
	Desktop	8.1	

4.2.3 Results of the Second Iteration Formative Evaluation

Based on the evaluation results of the second design iteration, the author also created empathy maps to illustrate the perspective and behavior of users towards the improved user interface. These empathy maps were created based on the personas described in the previous chapter. Figure 4.38 and Figure 4.39 depict the empathy maps for the academic staff user, consisting of the first persona and the second persona.

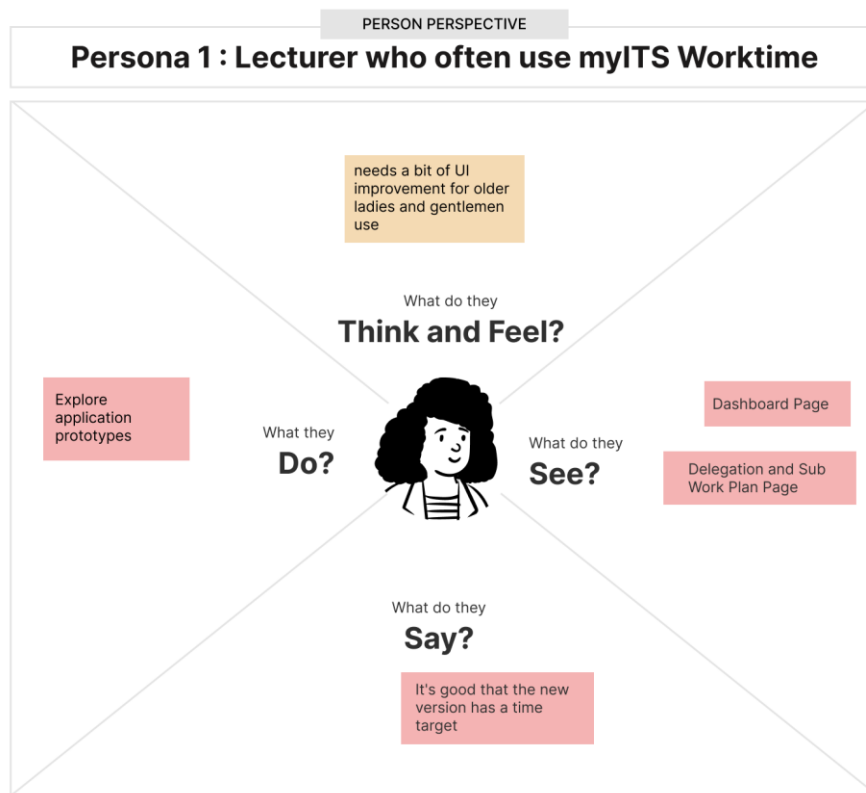


Figure 4.38 Second Iteration Empathy Map First Persona for Lecturer User

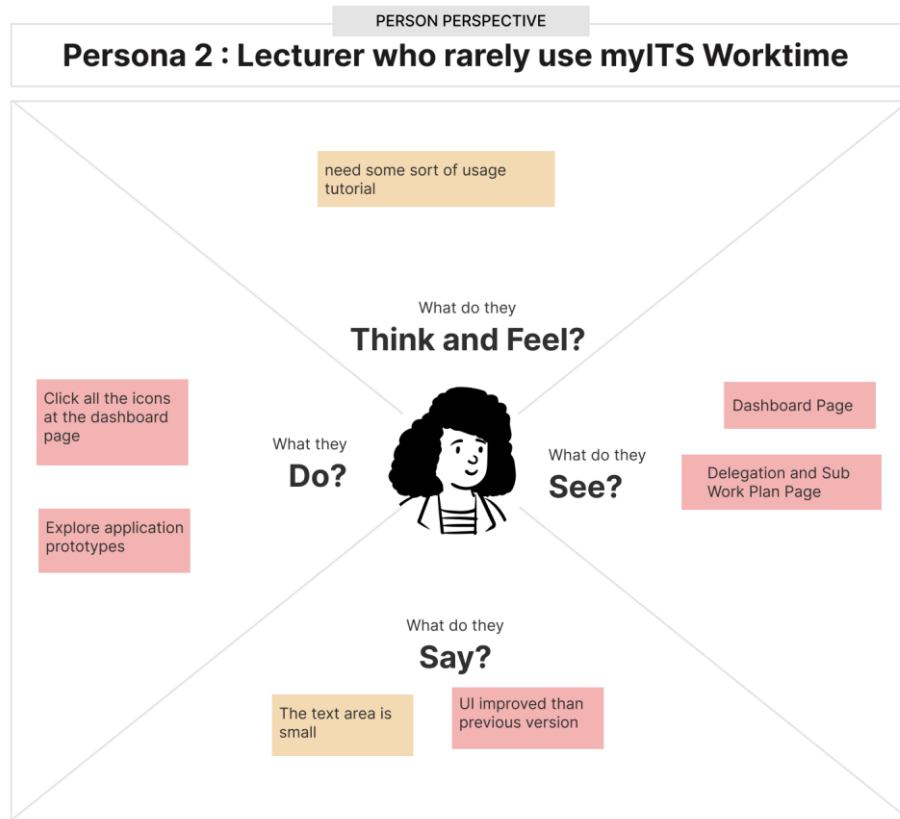


Figure 4.39 Second Iteration Empathy Map Second Persona for Lecturer User

Figure 4.40 and Figure 4.41 display the empathy map for the academic staff user. The academic staff user consists of two personas.

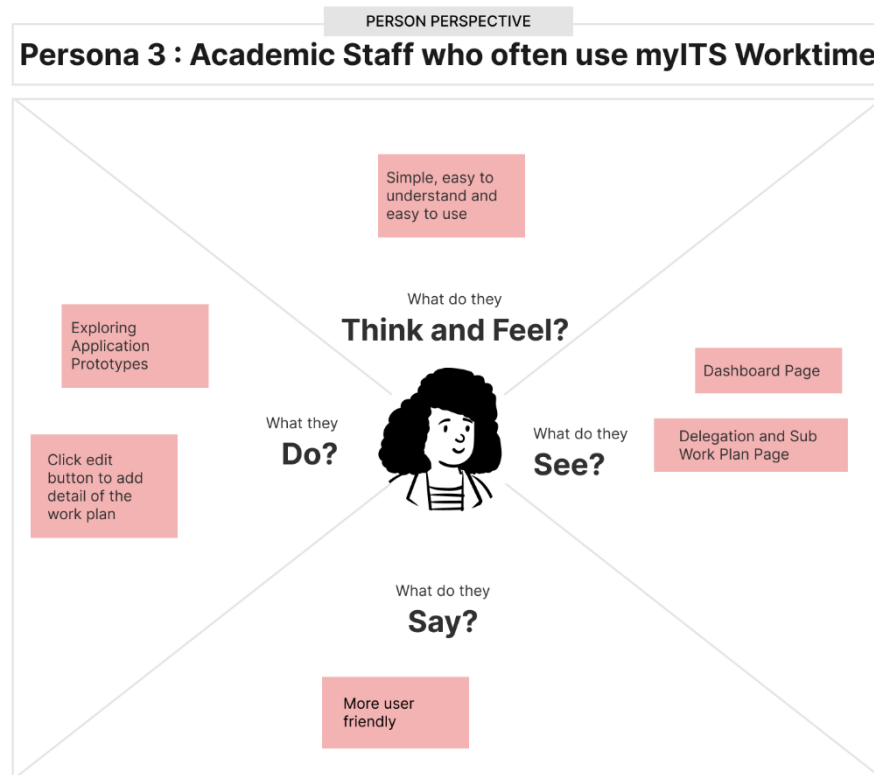


Figure 4.40 Second Iteration Empathy Map Third Persona for Academic Staff User

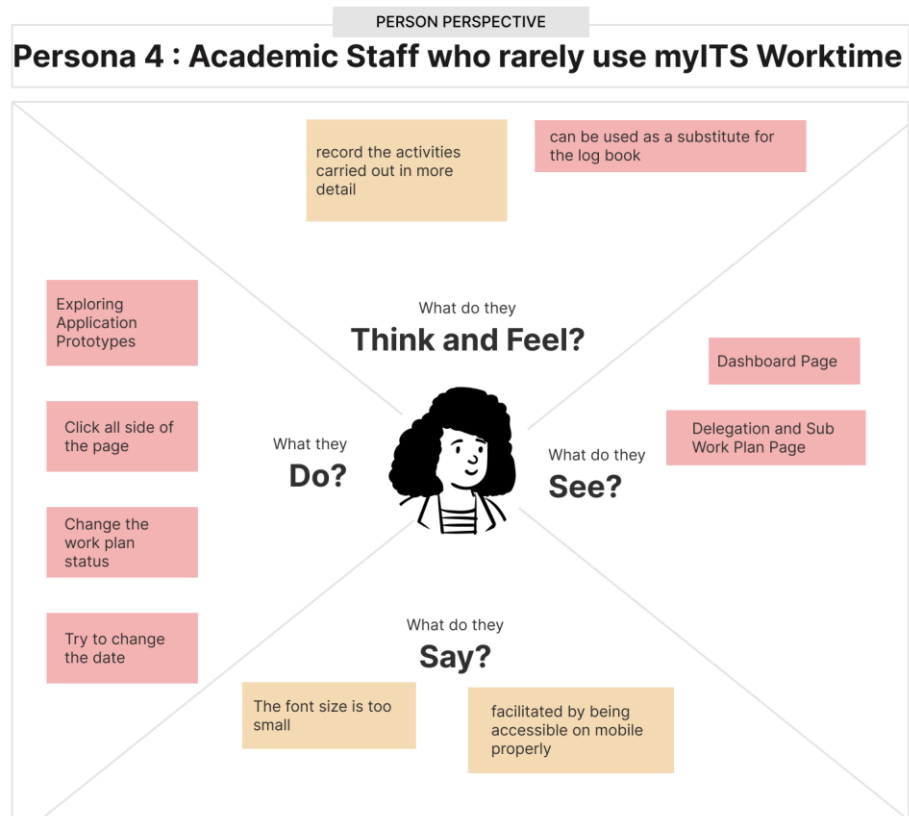


Figure 4.41 Second Iteration Empathy Map Fourth Persona for Academic Staff User

Based on the empathy map, the author created an artifact model to highlight the parts of the user interface that require improvement. The artifact model includes lightning bolt icons to indicate problematic areas and corresponding descriptions of the issues. Here is the artifact model for both lecturers and academic staff users.



Figure 4.42 myITS Worktime Artifact Model Second Iteration Part 1

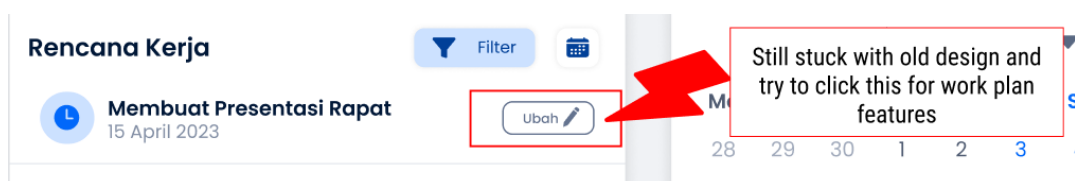


Figure 4.43 myITS Worktime Artifact Model Second Iteration Part 2

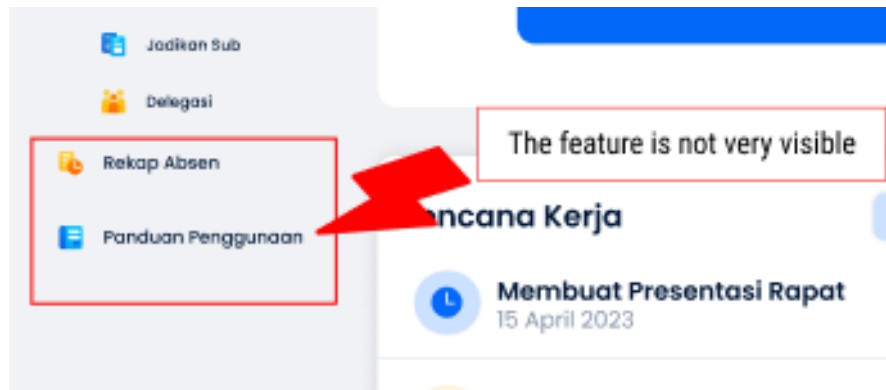


Figure 4.44 myITS Worktime Artifact Model Second Iteration Part 3

4.2.4 Improved Prototype Based on the Second Evaluation

After detailing the issues found in the user interface during the second design iteration using the artifact model, the author compiled these problems along with their respective solutions into a problem list. This was done to facilitate the author in improving the user interface design of myITS Worktime before conducting the Heuristic Evaluation.

Table 4.12 List of Second Iteration Design Problems and Solutions

No.	Section	Problem	Solution
1.	Text	The text is too small	Use bigger fontsize (increase 2 size)
2.	User Guide Menu	Do not know that there is a user guide menu to help navigate the website	Make a shortcut in the dashboard page so it is easily noticeable
3.	Edit Work Plan	Cannot add delegation and make sub work plan in the edit section	Make the edit section also can add sub work plans and delegate subordinate
4.	Sidebar	Do not know the feature for the work plan	Make the sidebar in work plan part open by default so the subsection is noticeable to the user.

In addition to the list of issues, the author included screenshots for the user interface design improvements. Here is a description of the design layout before and after being evaluated based on the points mentioned in Table 4.12.

1. The user guide feature on the left sidebar is not very noticeable because users are also not familiar with the new design. The solution to this is to add a shortcut on the dashboard that directs users to the User Guide page of the myITS Worktime application.

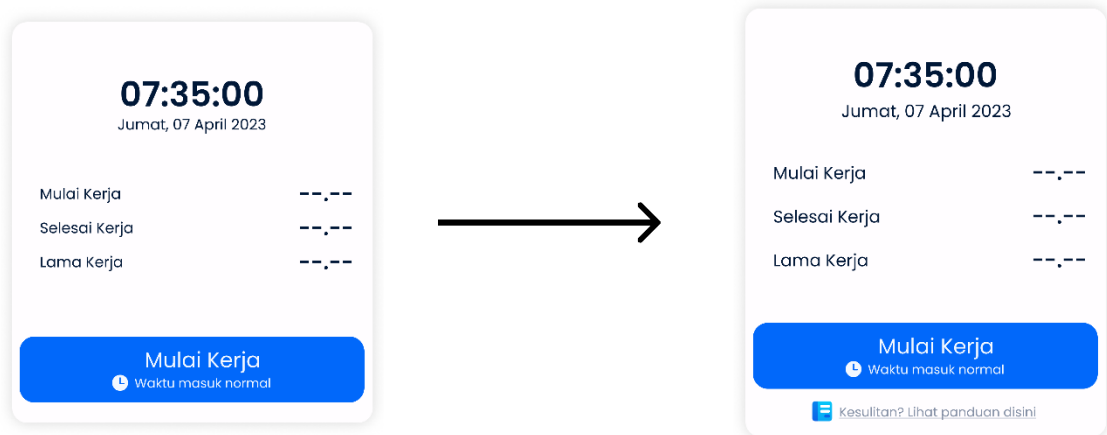


Figure 4.45 User Interface Improvements from the Second Iteration Results for Number 1 and 2

2. The sidebar on the left side of the page is already visible, but the main feature for the work plan is not clearly visible because users have to click the dropdown icon first, which means they cannot directly see the menu. The solution to this problem is to open the dropdown menu by default, and the dropdown can be closed later if the myITS Worktime application is integrated with other myITS applications.

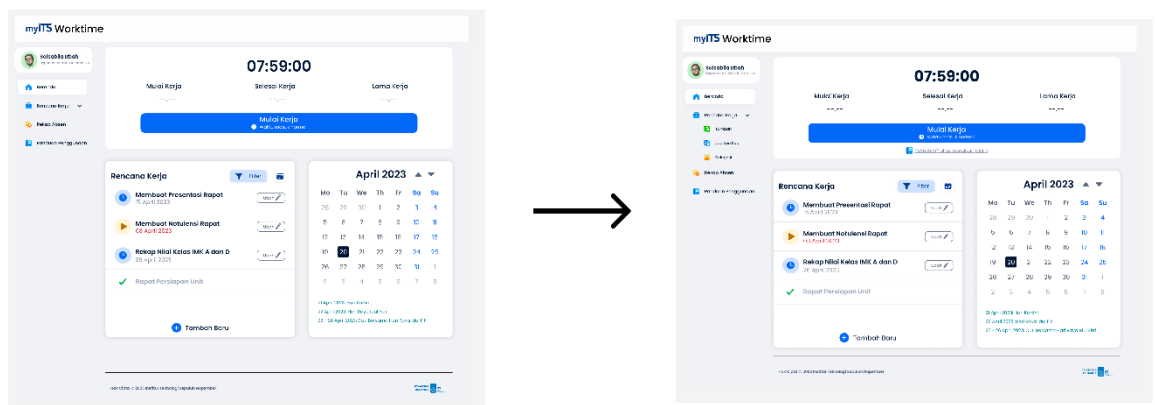


Figure 4.46 User Interface Improvements from the Second Iteration Results for Number 4

3. Due to many users being accustomed to the old user interface, they often click the "Edit" button to delegate a work plan and make it a sub-plan. The solution to this problem is to include the delegation and sub-plan options in the "Edit" section, allowing users to delegate a work plan and add a sub-plan within the edit feature.

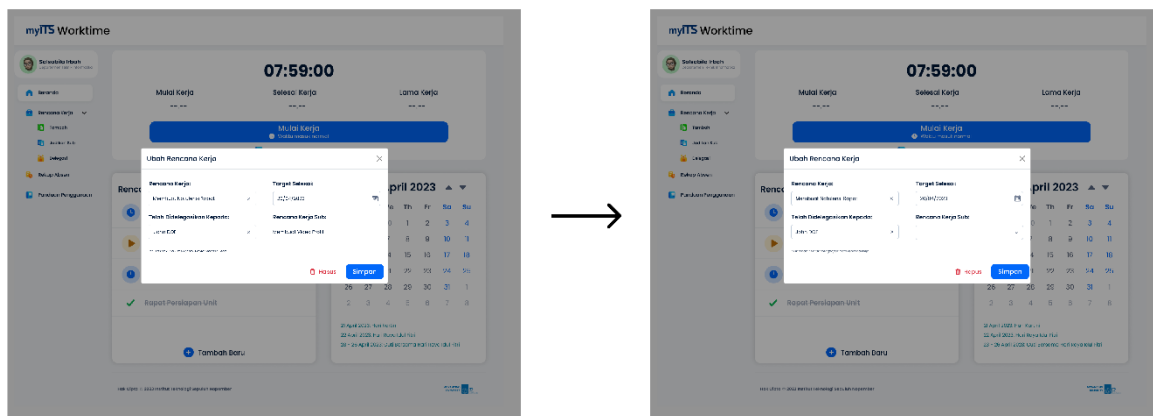


Figure 4.47 User Interface Improvements from the Second Iteration Results for Number 3

Heuristic evaluation was conducted after two design iteration stages by analyzing the user interface of the myITS Worktime application based on 10 (ten) heuristic evaluation principles. The evaluation was performed by five experts in user interface design and user experience design to assess the compliance of the user interface design with the 10 (ten) heuristic evaluation principles by Jacob Nielsen.

4.3 Result of Heuristic Evaluation

The following table presents the results of the heuristic evaluation testing along with notes as explanations regarding the fulfillment of each principle.

Table 4.13 Analysis of Heuristic Evaluation Results

No.	Principle	Version	Evaluator	Issue	Status
1.	Visibility of System Status	Mobile and Desktop	Arvel Gavrilla	There is no confirmation modal for the add work plan section	unfulfilled
		Mobile and Desktop	Zelda Sibuea	There is a notification or dialog when you have successfully performed a task, for example deleting or saving	fulfilled
		Desktop	Hanifa Fauziah	may need confirmation when you want to end work, afraid of accidentally being pressured to end	unfulfilled
		Mobile	Arvel Gavrilla	The form looks awkward because there are no containers	unfulfilled
		Mobile		“Lihat Panduan” on the dashboard it is not visible if it can be clicked	unfulfilled
Mobile	Julietta Anastasya	Forget password is not visible if you can click it	unfulfilled		
2.	Match Between the Real System and Real World	Mobile	Ayu Zhafarina Nur Hanna	The add work plan button at the bottom of the table is less visible if there are already many work plans	unfulfilled
		Mobile	Arvel	the status is less visible than the	unfulfilled

			Gavrilla	color if the status is complete so it is difficult for the user to distinguish	
3.	User Control and Freedom	Desktop	Zelda Sibuea	There is no button to cancel if the user is cancel the input	unfulfilled
4.	Consistency and Standards	Mobile	Zelda Sibuea	In the view of the completed work plan, there is not enough information to explain whether the activity has been completed, even though the activity above has a status	unfulfilled
		Mobile	Arvel Gavrilla	The delegate button is too small	unfulfilled
		Desktop	Hanifa Fauziah	the shape of the button changes, for example, at the login the shape of a sharp box, when on the dashboard, is a bit blunt	unfulfilled
5.	Error Prevention	Mobile	Zelda Sibuea	There is no condition indicating that the password or username entered is incorrect	unfulfilled
6.	Recognition Rather Than Recall	Mobile dan Desktop	Ayu Zhafarina Nur Hanna	The design is simple and there is a User Guide so that inexperienced users can still use it.	fulfilled
7.	Flexibility and efficiency of use	Desktop	Julietta Anastasya	The search in the detail guide is not very useful	unfulfilled
		Mobile	Ayu Zhafarina Nur Hanna	The system gives access to the user to return to the previous page.	fulfilled
8.	Aesthetic and Minimalist Design	Mobile	Julietta Anastasya	username and password font on login page is too big	unfulfilled
		Mobile	Julietta Anastasya	distance between content information and contacts too close	unfulfilled
		Mobile	Arvel Gavrilla	Button change too close to the work plan detail	unfulfilled
		Mobile	Arvel Gavrilla	The text on the button is too thin	unfulfilled
		Desktop	Arvel Gavrilla	Guidance is too plain if you scroll down	unfulfilled
		Desktop	Zelda Sibuea	The fontsize in the modal are too small, making it difficult to read	unfulfilled
		Desktop	Hani Fauziah	The design for the Add, Make sub, and delegate pages is minimalistic and simple	fulfilled
9.	Help users recognize,	Mobile and	Ayu Zhafarina	The system can assist users in handling errors by displaying a	fulfilled

	diagnose, and recover from errors	Desktop	Nur Hanna	dialog when the user wants to delete something	
10.	Help and Documentation	Mobile and Desktop	Arvel Gavrilla	There is a User guide that can be viewed anytime and also a shortcut on the dashboard that leads directly to the guide page	fulfilled

4.3.1 Addressing Unfulfilled Heuristic Principles

The results of the heuristic evaluation in Table 4.13 indicate that there are several heuristic evaluation principles that have not been met. These principles include:

1. Visibility of system status
2. Match between the system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Flexibility and efficiency of use
7. Aesthetic and minimalist design

Based on these eight principles, the author has included visual representations of the user interface improvements addressing the identified issues, as follows:

1. Forms that are not given a container create a sense of emptiness and may Confuse users. Therefore, the solution to this issue is to place the form inside a container, making it clear to users that it is a cohesive unit.

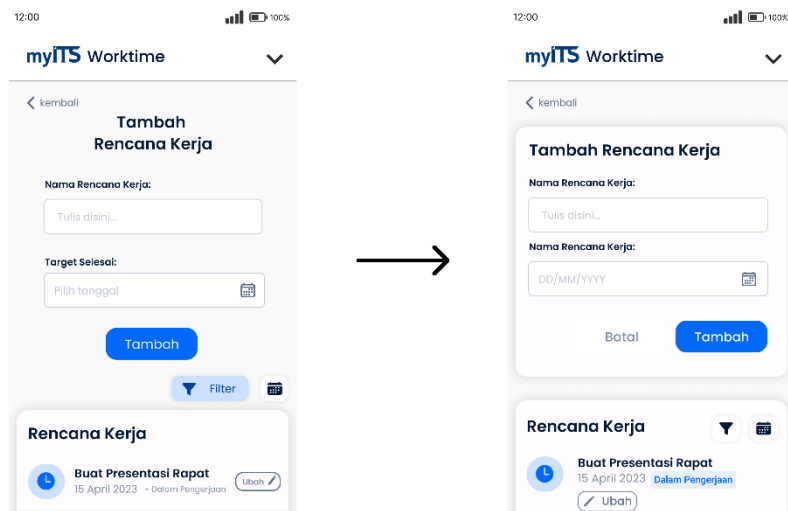


Figure 4.48 Improving the Display for Visibility of System Status

2. When users want to end their current work, there is no confirmation Modal. To ensure what the user is doing and considering its crucial nature, it is necessary to implement a modal that contains a confirmation

message to confirm whether the user truly wants to finish the task.

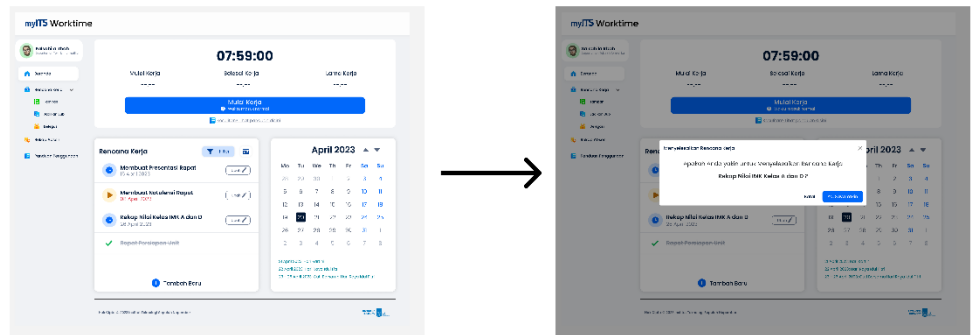


Figure 4.49 Improving the Display for Visibility of System Status

3. Inside the dashboard, there is a shortcut that leads to the user guide page. However, the gray color of the text confuses users and gives the impression that it is not clickable. The solution to this problem is to change the text color to the primary blue color, so that users understand that the text is clickable.
4. In the login page, when users enter an incorrect NIP or password, there is currently no warning or alert indicating that the user input is incorrect. This lack of feedback can lead to user confusion as they may not understand the specific error or how to resolve it. To address this issue and minimize user misunderstanding, it is essential to provide detailed error messages, such as the one shown in the Figure 4.51, that clearly explain the cause of the error. By offering specific error feedback, users will have a better understanding of the issue they are facing and be able to take appropriate steps to resolve it.

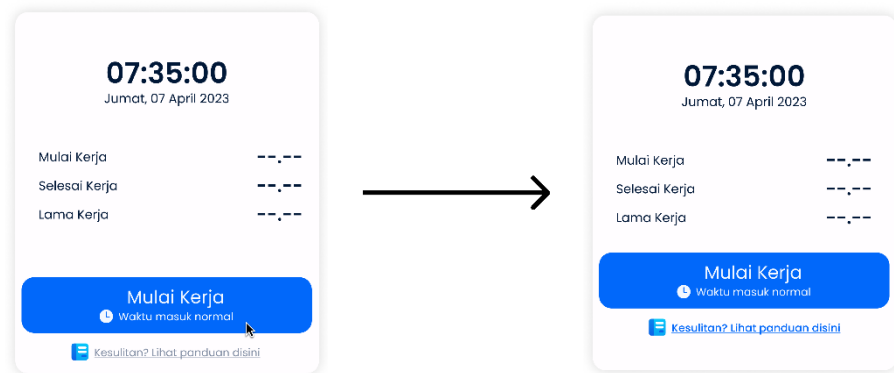


Figure 4.50 Improving the Display for Visibility of System Status

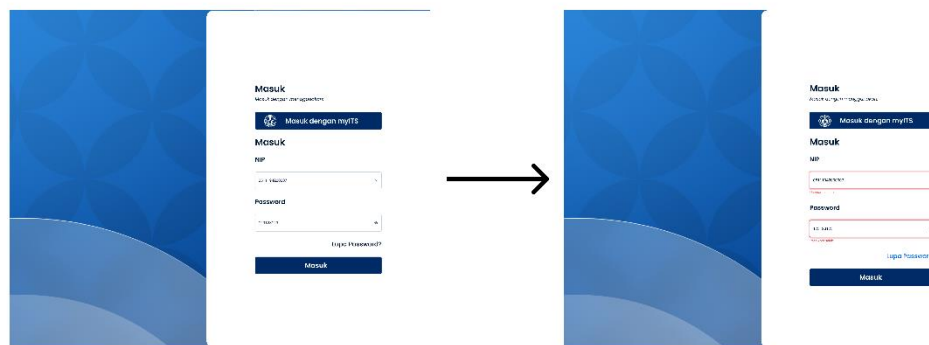


Figure 4.51 Improving the Display for Visibility of System Status and Error Prevention

5. In Figure 4.52, the section of the work plan table located in the dashboard becomes difficult to add a new work plan when there are already many plans because it is located at the bottom of the table. Therefore, it is recommended to move the "Add Work Plan" button to the top so that the number of work plans does not affect the position of the button.
6. In the mobile version, there is a status indicator for the work plans written next to the target completion date. However, the status indicator is not very visible because it uses the secondary color, which is the same as the target completion date. Additionally, the color is also the same as the completed work plans, resulting in a lack of significant differentiation and eye-catching element. The solution to this problem is to use badges for the work plan status with colors that correspond to their respective status icons. The improvement can be seen in Figure 4.52.
7. In the work plan table, when a work plan is marked as completed, only the icon and the name of the work plan are displayed. This inconsistency with the other statuses, "Dalam Pengerjaan" and "Belum Dimulai," can be addressed by adding a badge that is consistent with the other statuses and adjusting its color to match the icon as shown in Figure 4.52.

- In the work plan table, the edit button is located next to each work plan on the right side. However, the edit button appears to be too close to the centrally positioned work plan, and if a work plan has a long name, it may appear crowded and untidy. A solution to this issue is to move the edit button below each work plan, as shown in Figure 4.52, to create better spacing and ensure a more organized layout.

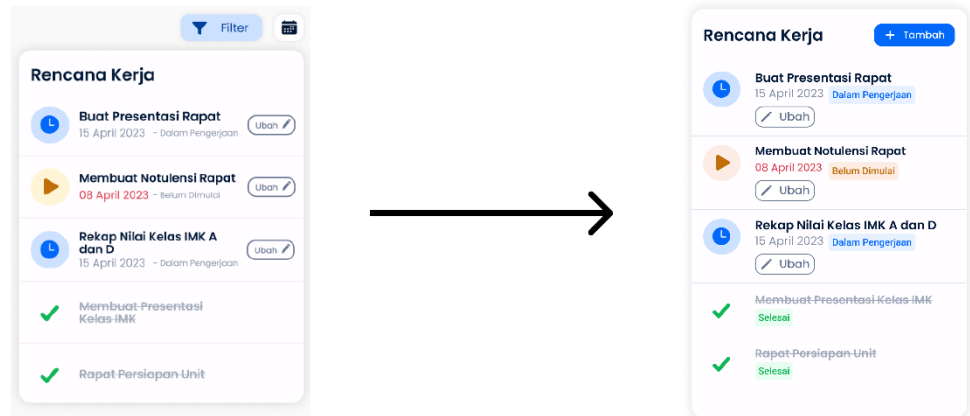


Figure 4.52 Improving the Display for Match Between the Real System and the Real World, Consistency and Standards, Aesthetic and Minimalist Design

- In the "Add Work Plan" page, users can fill out a form to add a work plan. However, there is no feature to cancel the action, which reduces user control in that area. A "Cancel" button can be added to the design so that users can cancel the action they intend to take at their discretion.

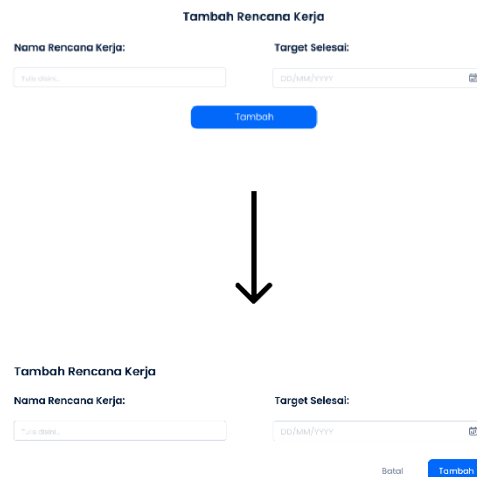


Figure 4.53 Improving the Display for User Control and Freedom

10. In the mobile version of the work plan delegation page, the button to add a delegation has a small size and is inconsistent with other buttons. To maintain design consistency, the button should be adjusted to match the size of the other buttons.

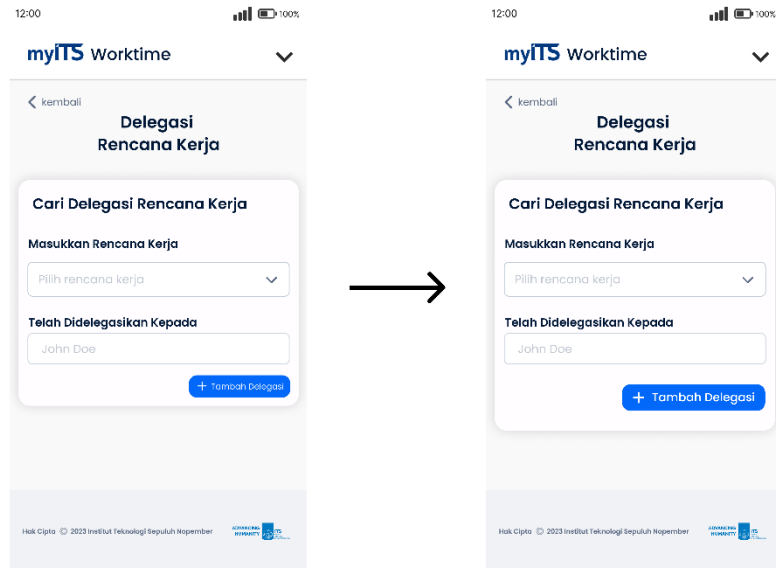


Figure 4.54 Improving the Interface for Consistency and Standards

11. There is inconsistency in the corner radius of the buttons on the login page. To maintain design consistency, the login button should be adjusted to have a corner radius of 14, similar to the other buttons. Additionally, the font size in the username and password fields is too large, making it disproportionate to the subtitles and titles. The solution is to decrease the font size to create a clearer distinction between subtitles, titles, and text.

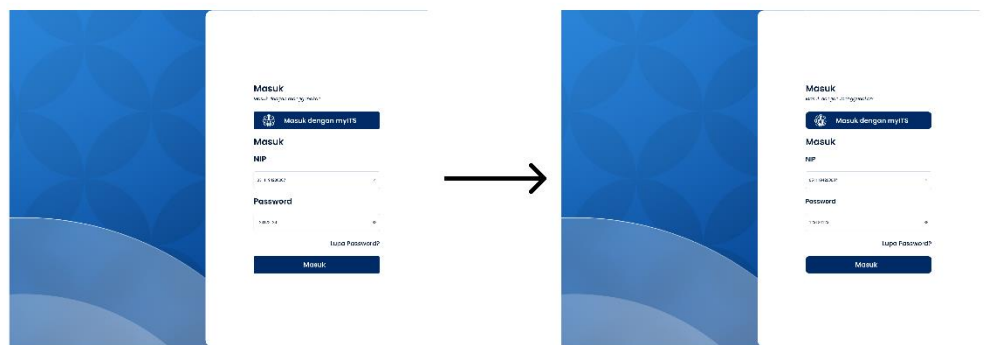


Figure 4.55 Improving the Interface for Consistency and Standards

12. Adding a work plan is an action that brings about significant changes, and therefore, it requires a double confirmation to ensure accuracy. Hence, a confirmation modal is needed after the user clicks "Tambah" to minimize errors in adding the work plan.

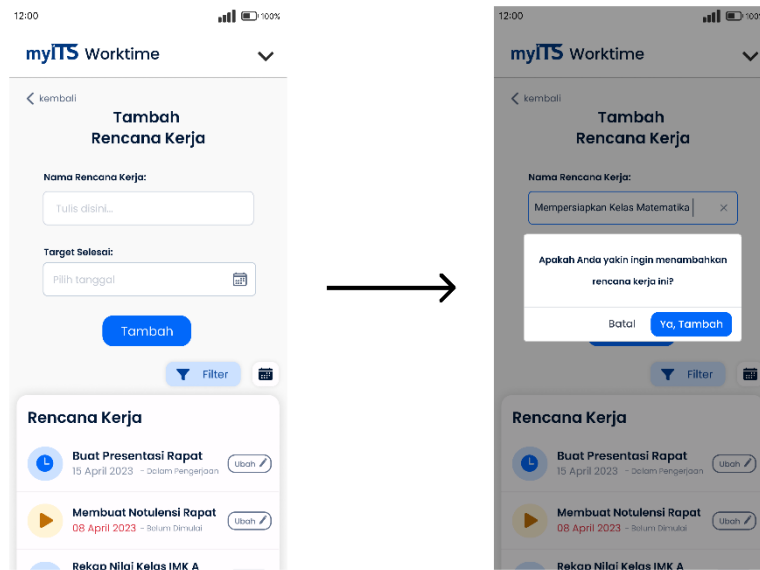


Figure 4.56 Improve of Interface for Visibility of System Status

13. In the user guide page, there is a search feature that allows users to search for menus in other sections of myITS Worktime. However, this feature can be considered redundant because there is also a "back" button that navigates to a page where users can select menus from other sections of myITS Worktime. Therefore, it would be more efficient to remove this feature to streamline its usage. Additionally, the user guide page appears empty and plain. To enhance its visual appeal, it is recommended to add a container similar to other sections, creating a well-framed content layout.

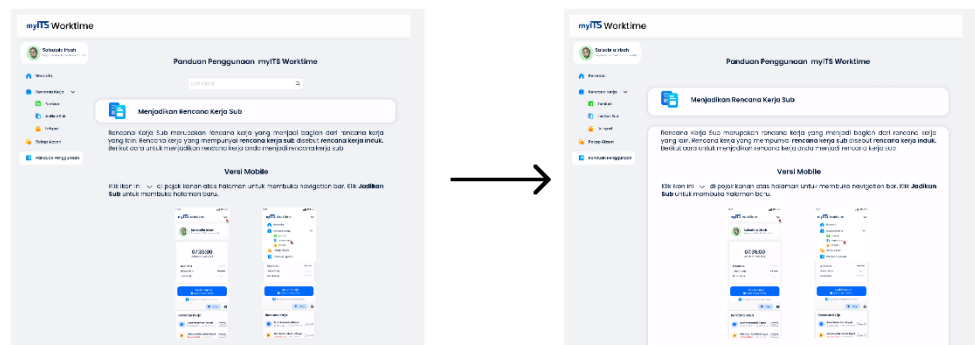


Figure 4.57 Improve of Interface for Flexibility and Efficiency of Use and Aesthetic and Minimalist Design

14. The spacing between the personal data fields and the contact data fields is too close, making it difficult for users to distinguish and view them. The solution to this issue is to slightly adjust the position of the contact data fields downwards to create more spacing, making it easier to differentiate and visually perceive them.

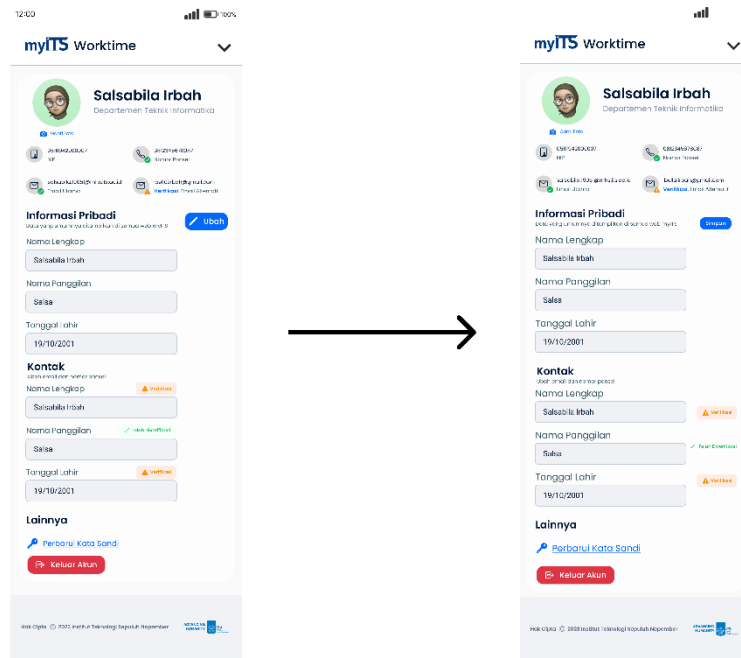


Figure 4.58 Improve of Interface for Aesthetic and Minimalist Design

15. In the modal, the text appears to be too small, which may make it difficult for users to read the information presented. To address this issue, the text within the modal can be enlarged to make it easier for users to read and understand the provided information. By increasing the font size, users will have a better reading experience and be able to comprehend the content more effectively.



Figure 4.59 Improve of Interface for Aesthetic and Minimalist Design

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CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Based on the design evaluation process conducted on the user interface of the myITS Worktime application, the author draws the following conclusions:

1. The development of the myITS Worktime application's user interface follows a user-centered design approach, focusing on two user roles. This method involves several stages, including understanding user needs through discussions and surveys, identifying user needs using affinity diagrams, determining user personas, creating a sitemap, and defining a list of user requirements. After finalizing the user requirements, the author creates a mid-fidelity prototype using Figma. The design and implementation process of the myITS Worktime application's user interface includes usability testing and heuristic evaluation. Both types of testing are performed to assess the usability of the user interface design created by the author before implementing it on a responsive website. The implementation of the responsive myITS Worktime website utilizes NextJS and Tailwind CSS technologies.
2. The evaluation of the myITS Worktime application's user interface design consists of two stages: usability testing and heuristic evaluation. Usability testing is conducted to assess the usability of the myITS Worktime application for four user roles in natural conditions using Maze. On the other hand, heuristic evaluation is performed to assess the adherence of the user interface design to heuristic principles.

5.2 Recommendation

Based on the design evaluation process conducted on the user interface of the myITS Worktime application, the author received the following suggestions and recommendations:

1. It is recommended to have five participants for usability testing for each person. This will ensure more optimal evaluation results and cover a wider range of potential issues.
2. Further consideration should be given to integrating myITS Worktime with other applications in myITS, aiming to create a one-stop service application. Once the integration is established, customization of myITS Worktime features can be done based on user preferences.
3. Using user stories as a substitute for the list of requirements in subsection 4.1.5.1 allows for visualizing user interactions with the system and the factors that can influence those interactions in a sequential manner. The advantage of user stories is that they enable the author to understand the features needed by a system by studying the user's perspective.

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APPENDIX

Questions asked to the participants in Bahasa Indonesia

Mission	Title	Question
	Respondent Information	Pilih yang sesuai dengan profil Anda
Mission 1	Starting Work	Sekarang Anda berada pada halaman awal myITS WorkTime. Silakan klik "Get Started" lalu klik "okay" untuk bisa melakukan berbagai misi (mission) seperti scrolling, klik, dsb agar Anda dapat tercatat mulai bekerja di myITS WorkTime.
	Asked each surveyor after carrying out the action	Seberapa MUDAH misi ini?
Mission 2	Added Work Realization	Saat ini, Anda telah memulai bekerja. Selanjutnya, silakan klik "Get Started" untuk bisa melakukan berbagai misi seperti scrolling dan klik, sedemikian sehingga realisasi kerja baru Anda dapat tercatat di aplikasi myITS WorkTime.
Mission 3	Delegating Work	Saat ini, realisasi kerja berhasil ditambahkan. Selanjutnya, silakan klik "Get Started" untuk bisa mendelegasikan pekerjaan "Membuat Notulensi Rapat Kurikulum" kepada rekan/bawahan Anda yang bernama Alex John untuk diselesaikan per tanggal 12 September 2022. Anda bisa melakukan berbagai misi (mission) seperti scrolling, klik, dan lainnya.
Mission 4	Make Sub-Work Plan	Selanjutnya, Anda ingin membuat sub rencana kerja. Silakan klik "Get Started" untuk bisa melakukan berbagai misi (mission) seperti scrolling, klik, sedemikian sehingga pekerjaan "Membuat Presentasi Rapat" menjadi SUB Rencana Kerja "Rapat Unit Persiapan"
Mission 5	Starting Work Realization	Hari ini, Anda ingin memulai pekerjaan "Persiapan Penerimaan Tamu". Untuk itu, Silakan klik "Get Started" untuk bisa melakukan berbagai misi (mission) seperti scrolling, klik, sedemikian sehingga aplikasi dapat mencatat bahwa Anda memulai pekerjaan tersebut.
Mission 6	Completing Work Realization	Saat ini, Anda telah menyelesaikan pekerjaan "Membuat Notulensi Rapat Kurikulum". Silakan klik "Get Started" untuk bisa melakukan berbagai misi (mission) seperti

		scrolling, klik, sedemikian sehingga aplikasi dapat mencatat bahwa Anda telah menyelesaikan pekerjaan tersebut.
	Suggestion	Silakan tuliskan saran atau masukan untuk myITS WorkTime
	Further Interview	Kami berencana untuk membuat versi myITS WorkTime yang baru. Apakah Anda bersedia menjadi responden wawancara untuk meningkatkan kualitas aplikasi myITS WorkTime? <i>Jika bersedia, silahkan isi nama dan nomor WA Anda (contoh: Salsabila Irbah (081230445795))</i>

Maze Heatmap for First Iteration

Mission 1: Starting Work



LOKASI sudah benar?

Apakah Anda yakin lokasi Anda di peta sudah benar?



Mission 2: Add a Work Plan

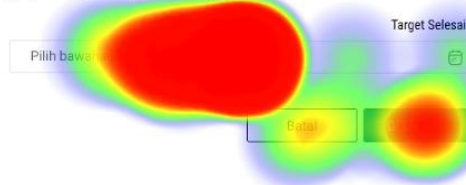


Mission 3: Delegate a Work Plan



DELEGASI Rencana Kerja

Delegasi-kan rencana kerja Membuat Notulensi Rapat Kurikulum kepada yang lain dengan mengetikkan namanya di bawah ini:



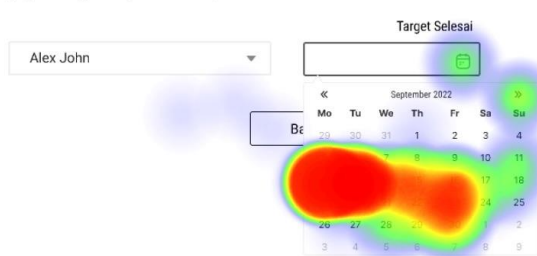
DELEGASI Rencana Kerja

Delegasi-kan rencana kerja Membuat Notulensi Rapat Kurikulum kepada yang lain dengan mengetikkan namanya di bawah ini:



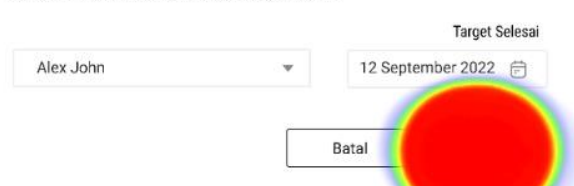
DELEGASI Rencana Kerja

Delegasi-kan rencana kerja Membuat Notulensi Rapat Kurikulum kepada yang lain dengan mengetikkan namanya di bawah ini:



DELEGASI Rencana Kerja

Delegasi-kan rencana kerja Membuat Notulensi Rapat Kurikulum kepada yang lain dengan mengetikkan namanya di bawah ini:



Mission 4: Make a Sub Work Plan



JADIKAN SUB Rencana Kerja

Jadikan rencana kerja Membuat Presentasi Rapat sebagai Sub dari rencana kerja:

Pilih rencana kerja induk

Pilih rencana kerja induk

Membuat Presentasi Rapat

Rapat

JADIKAN SUB Rencana Kerja

Jadikan rencana kerja Membuat Presentasi Rapat sebagai Sub dari rencana kerja:

Rapat Unit Persiapan

Batal

Mission 5 and 6: Start and Complete a Work Plan

Selamat pagi
Bapak/Ibu Sekalian

Anda telah tercatat mulai bekerja di kantor pada hari ini,
Senin, 12 September 2022
dari pukul 08:26 WIB sampai dengan sekarang pukul 08:36 WIB
atau selama total 0 jam 10 menit.

Anda telah mengisi survei kesehatan harian

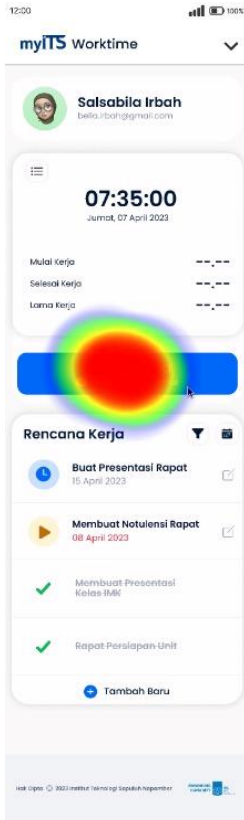
Lihat Hasil Survei

myITS WORKTIME

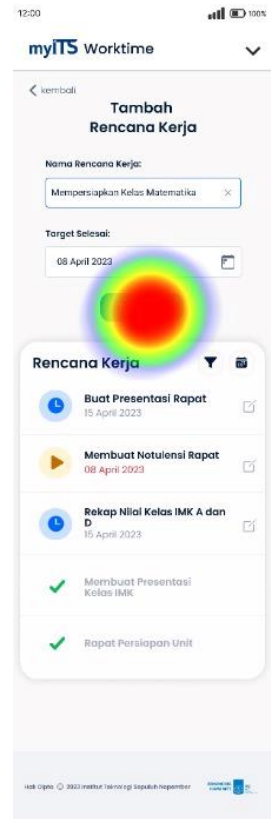
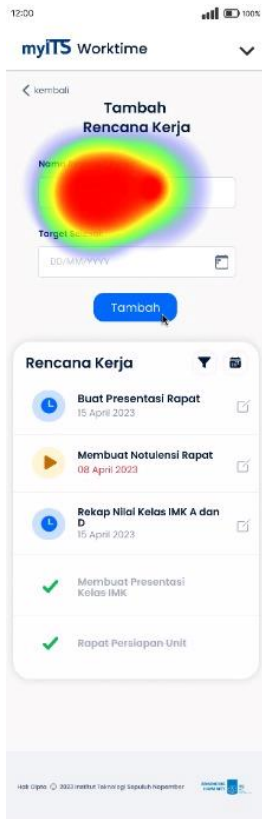
ADAMANCHE HUMANITY

Maze Heatmap for Mobile Version Testing

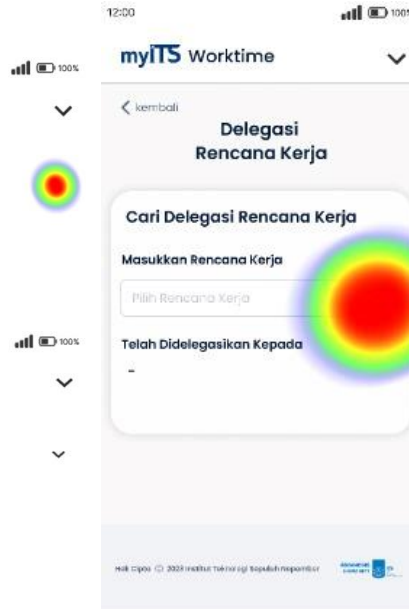
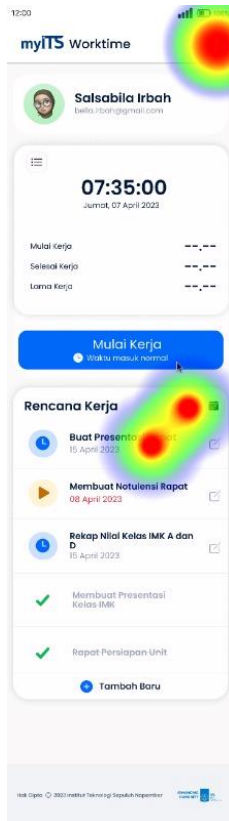
Mission 1: Starting Work



Mission 2: Add a Work Plan



Mission 3: Delegate a Work Plan



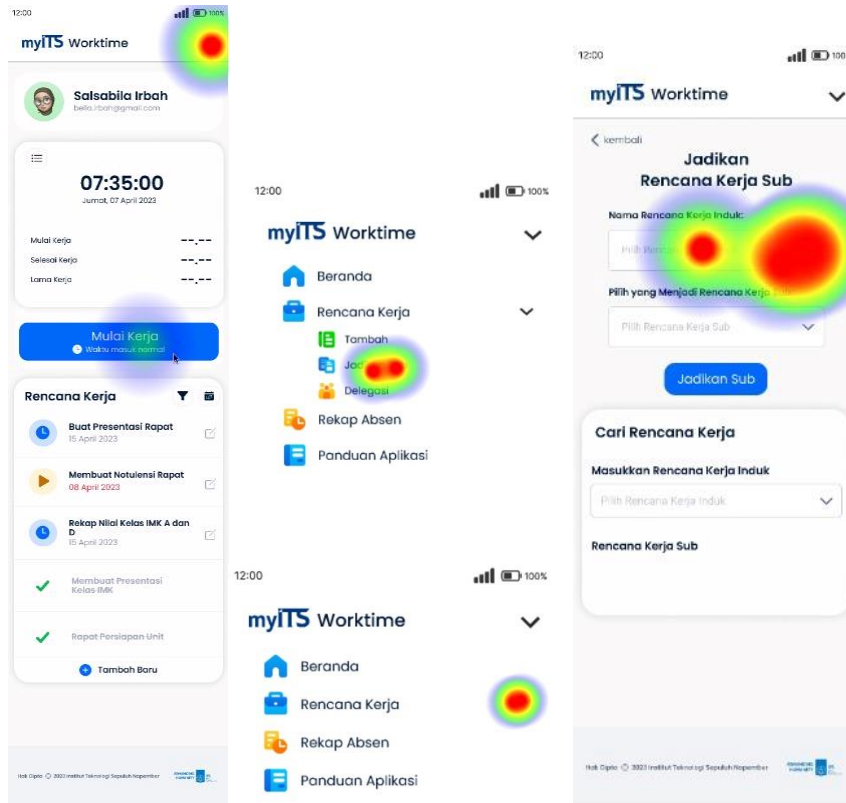
Buat Presentasi Rapat
Membuat Notulensi Rapat
Rekap Nilai Kelas IMK A dan D
Membuat Presentasi Kelas IMK
Rapat Persiapan Unit



Taylor Lautner

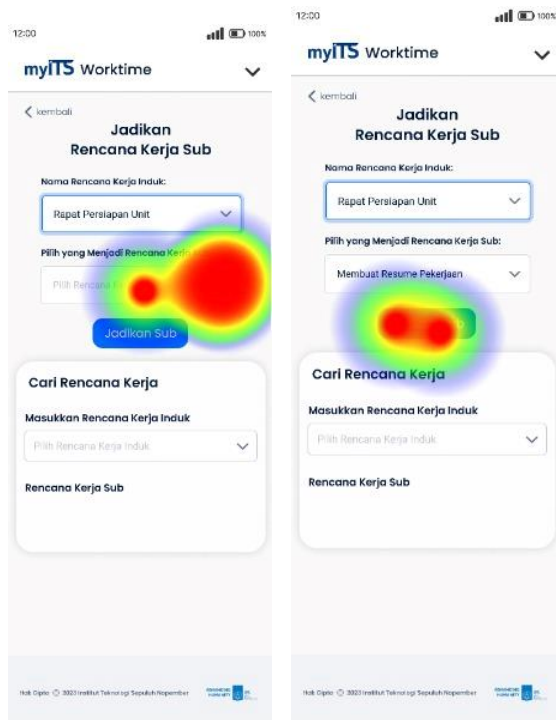
+ Tambah Delegasi

Mission 4: Make a Sub Work Plan

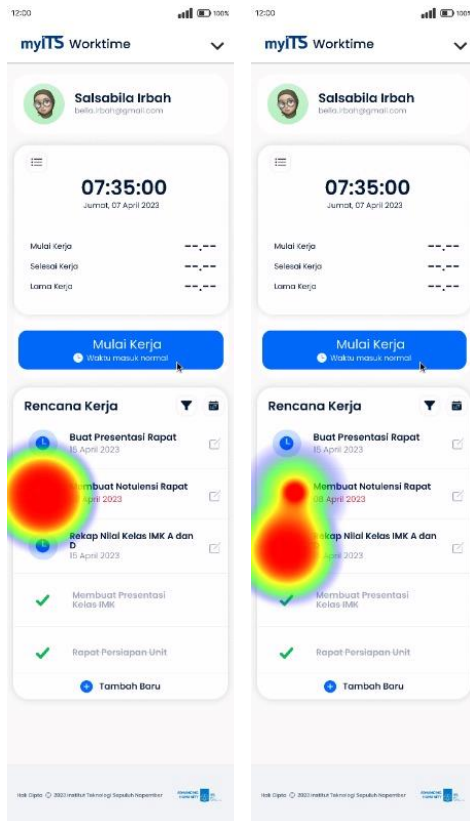


Buat Presentasi Rapat
 Membuat Notulensi Rapat
 Rekap Nilai Kelas IMK A dan D
 Membuat Presentasi Kelas IMK
 Rapat Persiapan Unit

Membuat Resume Pekerjaan
 Membuat Video Profil
 Rekap Nilai Kelas IMK A dan D
 Membuat Presentasi Kelas IMK
 Rapat Persiapan Unit

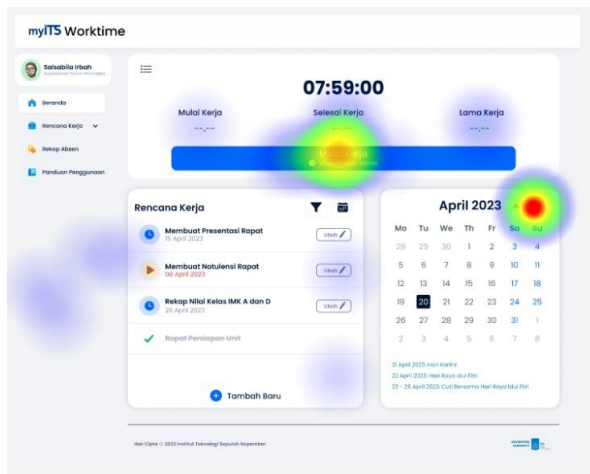


Mission 5 and 6: Start and Complete a Work Plan

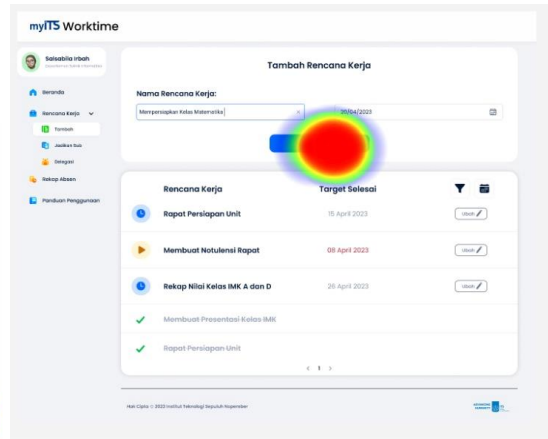
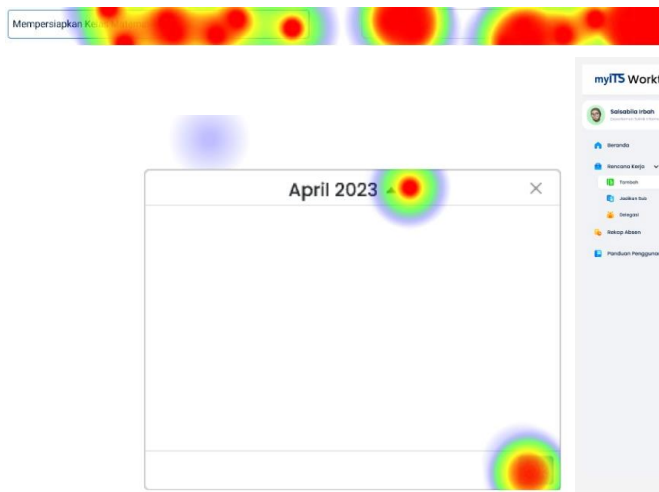
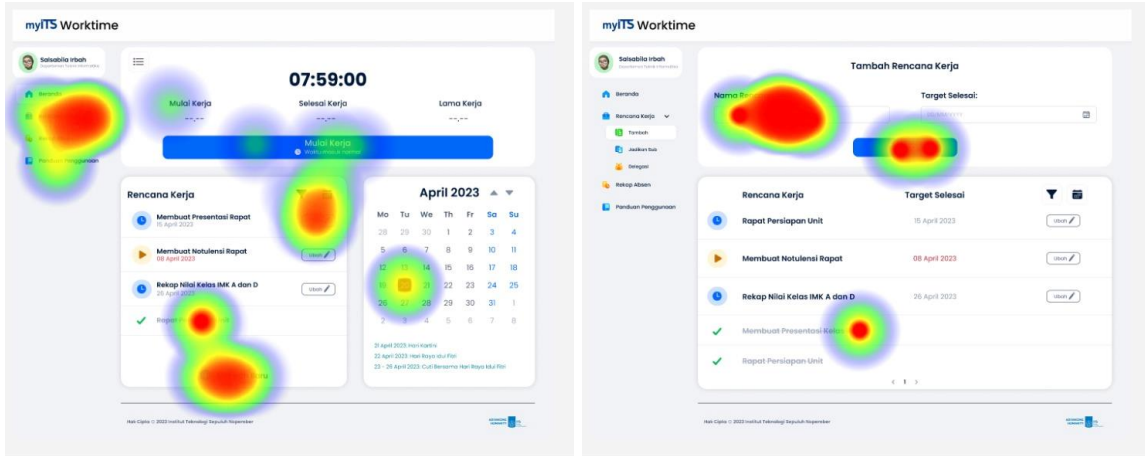


Maze Heatmap for Desktop Version Testing

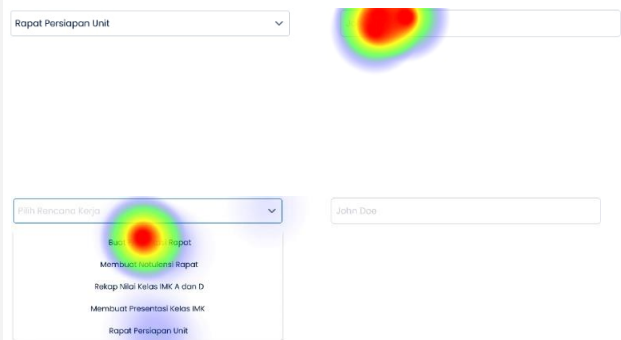
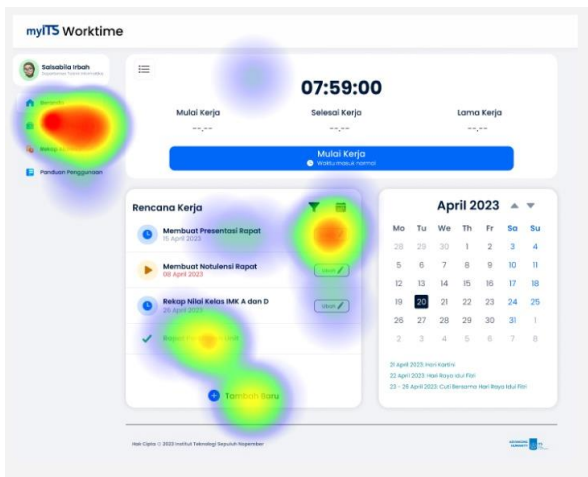
Mission 1: Starting Work

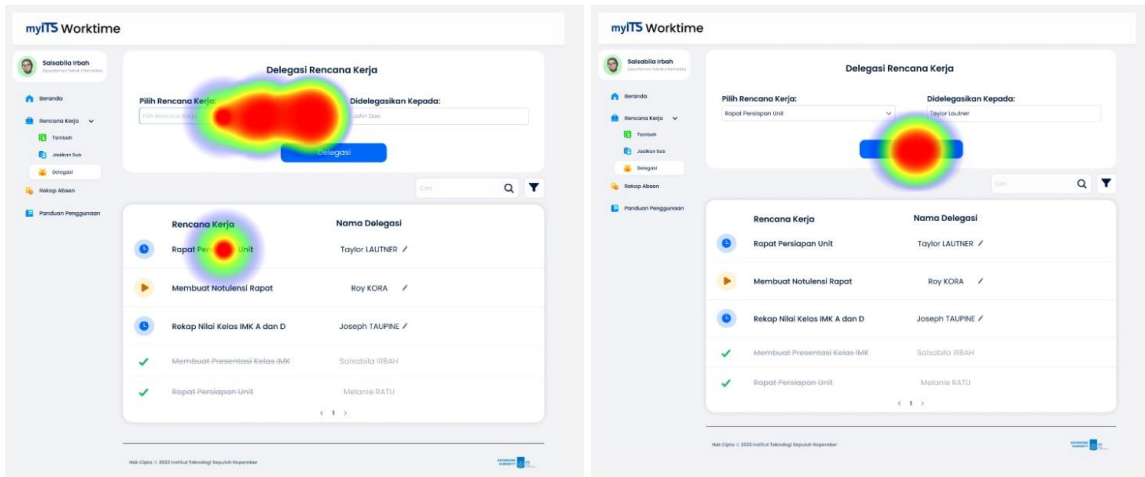


Mission 2: Add a Work Plan

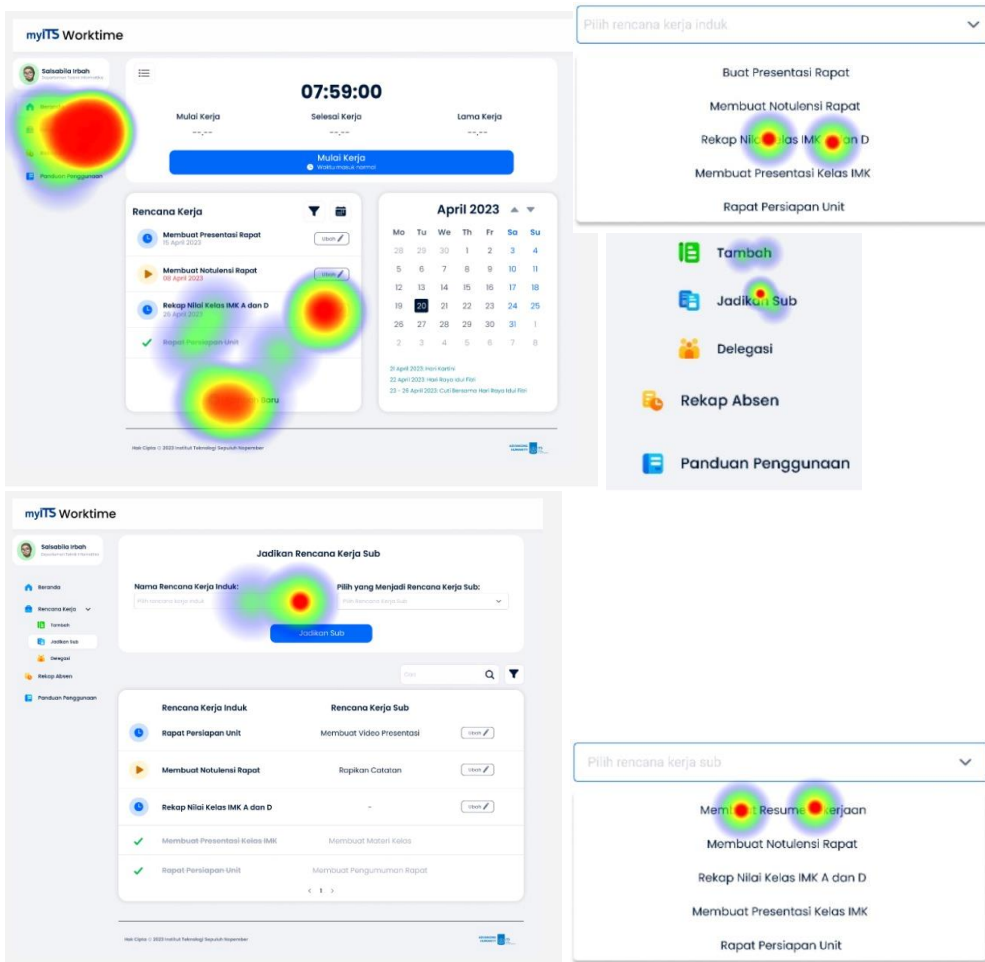


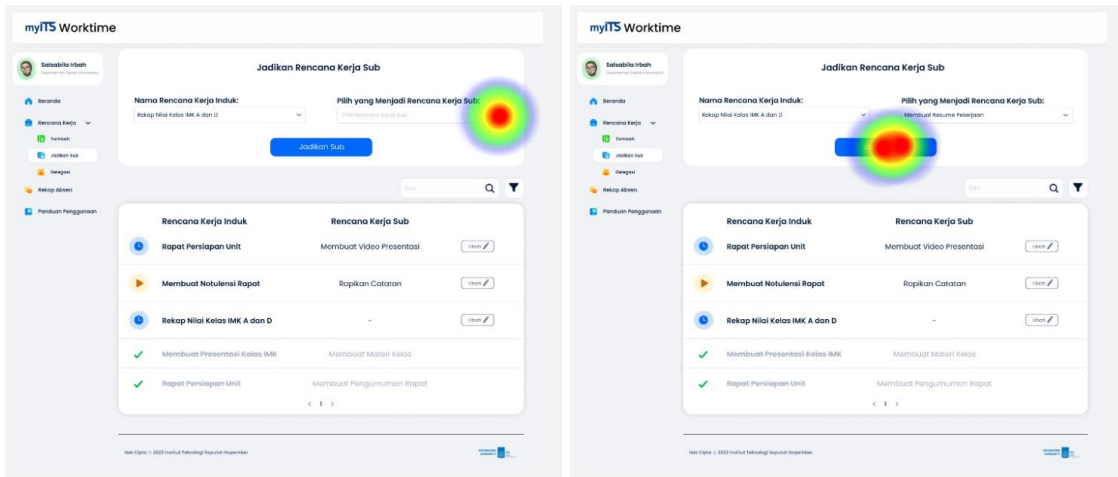
Mission 3: Delegate a Work Plan



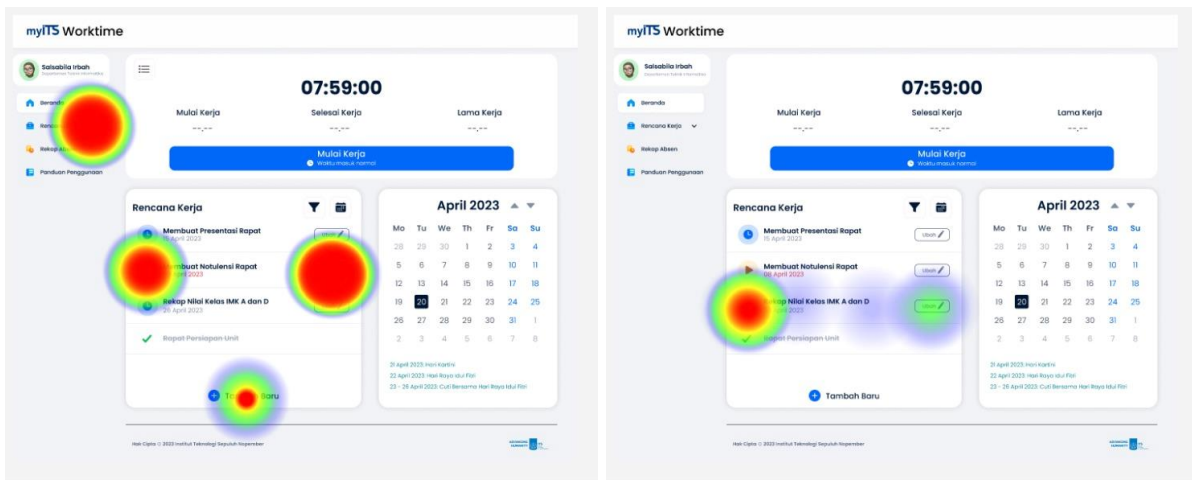


Mission 4: Make a Sub Work Plan





Mission 5 and 6: Start and Complete a Work Plan



AUTHOR BIODATA



The author was born in Surabaya, on October 19th, 2001. The author is the first child of 2 siblings. The author has taken formal education at Al-Hikmah Surabaya Kindergarten, Al-Hikmah Surabaya Elementary School, Surabaya Al-Hikmah Middle School, and Al-Hikmah Surabaya High School. After graduating from high school in 2019, the author took part in SMITS registration and was accepted at the IUP program ELECTICS Informatics Department - ITS in 2019 and registered with NRP 05111942000007. In the Department of Informatics, the author has been active in several UKM di ITS, Department events, participated in an exchange program to France, joined Informatics Student Association (HMTTC), and is also active as an assistant lecturer in Human-Computer Interaction and Cloud and Infrastructure Course KMMI.

