Final Report

Capstone Project | INFM482

Mercer University | Fall 2023

Lalita Crews

DECEMBER 14, 2023

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Project Title: Personal Assistant Software for Busy Moms

Executive Summary

Overview:

The goal of this project, is to develop a user-friendly personal assistant software, tailored specifically to meet the needs of busy moms. The software will provide valuable support in managing daily tasks, organizing schedules, and enhancing overall productivity, thus alleviating the challenges faced by this demographic.

Goals:

- To create a comprehensive personal assistant software that addresses the unique demands of busy moms.
- To facilitate better task management, time optimization, and a more organized daily life for users.
- To gather user feedback through research and iterative testing, leading to software enhancements and improved user satisfaction.

Significance:

Busy moms play a vital role in managing households, careers, and family life. However, the juggling act can be overwhelming. This project recognizes the significance of offering a digital solution to streamline daily tasks, reduce stress, and empower busy moms to achieve greater work-life balance.

Acknowledgments

I would like to thank everyone that provided feedback, encouragement, and suggestions that allowed me to complete this project. I've learned a lot and it has help shape me as a software developer.

Introduction

In today's fast-paced world, the role of a mother often extends beyond the traditional boundaries of nurturing and caregiving. Many moms find themselves juggling the complexities of parenthood, household management, careers, and personal well-being. The demands on their time, energy, and organizational skills are unparalleled, making every day a whirlwind of tasks and responsibilities. It is within this context that we introduce a transformative project aimed at simplifying the lives of busy moms: the creation of a user-friendly personal assistant software, meticulously designed to cater to their unique needs.

I.   Background

Importance

In a world increasingly reliant on technology, personal assistant software has become a lifeline for many. However, generic solutions often fall short when it comes to addressing the distinct challenges faced by busy moms. As such, the development of a specialized personal assistant software tailored to this demographic is not merely an innovative venture; it is a necessary response to a modern-day dilemma.

The significance of developing a personal assistant software for busy moms cannot be overstated. For the busy mom, every moment saved, every task streamlined, and every schedule optimized translates into more precious time to spend with loved ones, opportunities for self-

care, and the capacity to excel in both family and professional spheres. This software has the potential to be a game-changer, offering a multifaceted solution to enhance task management, time allocation, and overall efficiency.

Research Question

How can the development of a user-friendly personal assistant software, tailored to the unique needs of busy moms, enhance their daily lives and contribute to improved task management, time optimization, and overall work-life balance?

Relevance and Significance

The research question at the heart of this project is of paramount relevance and significance in addressing the intricate challenges faced by busy moms. In today's dynamic world, where mothers often juggle multiple roles, from managing households to pursuing careers, the need for efficient, user-focused digital solutions is pronounced. The proposed personal assistant software aims to meet this need, catering specifically to busy moms, who navigate a complex landscape of responsibilities.

The significance of this research question lies in its potential to offer a comprehensive and innovative solution that empowers busy moms to streamline their daily tasks, optimize their time, and achieve a harmonious work-life balance. With this software, we aim to make a substantial impact on the lives of busy moms, allowing them to seize more precious moments with their families and dedicate more time to personal pursuits, ultimately enhancing their overall well-being.

II. Project Planning and Management

Project Timeline: August through December

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**Complete**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**Complete**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**Complete**
Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**Complete**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**Complete**
Create Database Design and Site Structure	10/05/23	11/20/23	**Complete**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Complete**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**Complete**

Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**Complete**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**Complete**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Complete**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**

Project Timeline

This project plan is designed to ensure a seamless, user-focused journey from initial research to a successful project release. The timeline referenced above is the combination of 14 weekly timelines, but the individual timelines will be shared in the appendix. The project started in August and has a completion date of December 14, 2023. However, the idea of this project started in the Spring during my client server development course. Revisions were made to the timeline on several occasions since I got behind on my deadlines due to illness. However, having this plan in place and scheduling ad hoc meetings with Dr. Liu provided an efficient way to manage my time during each phase and allowed me to catch up during the project development process.

Project Scope

- Developing a user-friendly personal assistant software with features tailored to busy moms' needs.

- Conducting user research to understand user needs and preferences.

- Building, testing, and refining the software based on user feedback.

Project Deliverables

Personal Assistant Software: The fully developed and tested personal assistant software tailored to the needs of busy moms in the form of a website.

Success Measurements

- **User Adoption Rate**: Measure the percentage of busy moms who would consider adopting and regularly using this personal assistant software.

- **User Satisfaction:** Assess user satisfaction through surveys, with a goal of achieving a high user satisfaction rating (e.g., 4 out of 5 or higher)

- **Task Efficiency**: Determine if the software helps busy moms manage daily tasks more efficiently based on user feedback.

Project Management

Each week during each phase of the project development, I meet with Dr. Liu to discuss the project's progress, challenges, and to help troubleshoot any areas of difficulty. There were at least two weeks where we had to reschedule our times due to illness. However, I was able to successfully keep the lines of communication open to ensure she understood where I stood during each phase.

III.   System Design

Stakeholder's Map
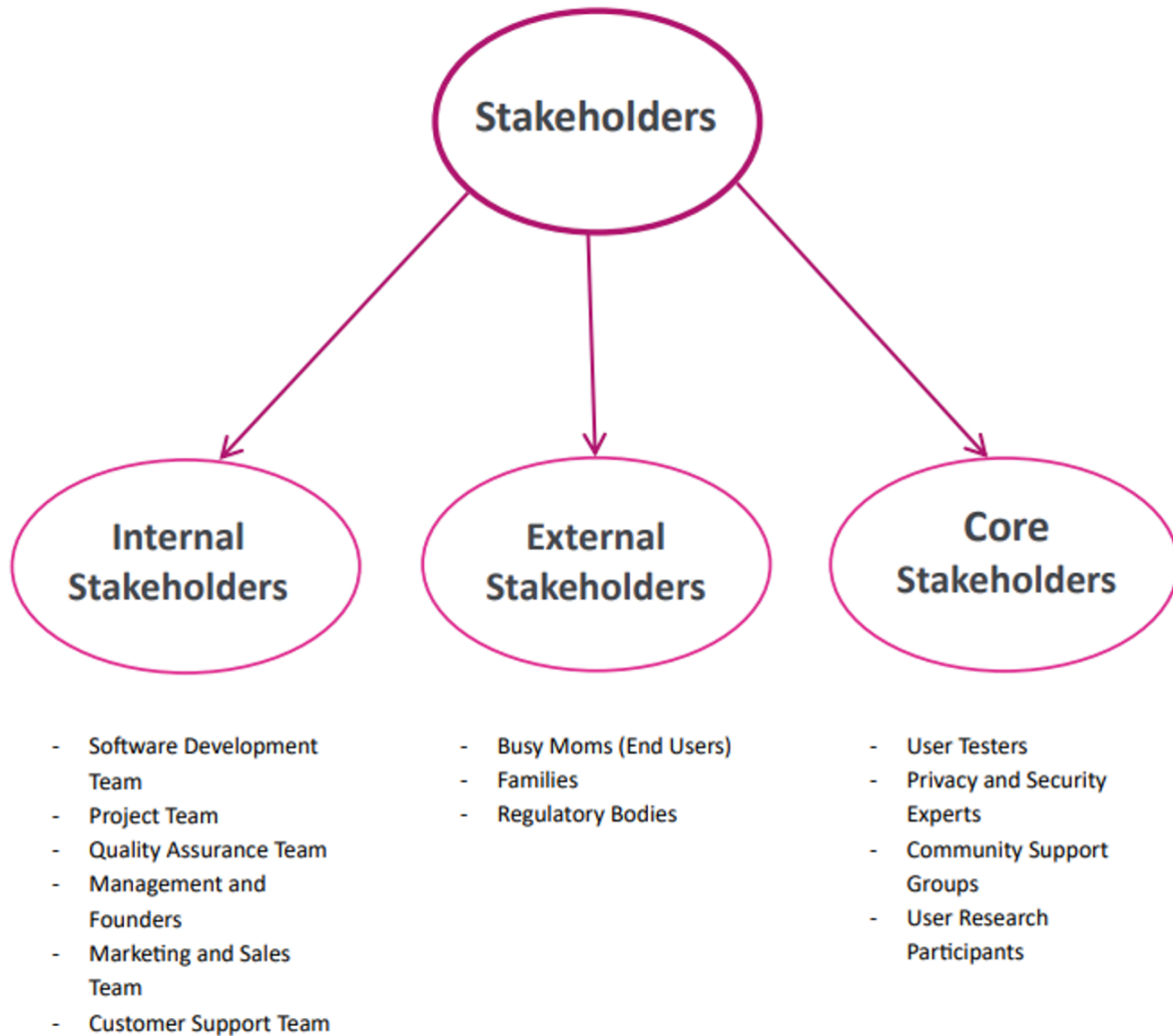
Creating a detailed stakeholders map is crucial for understanding the various parties involved in our personal assistant software project for busy moms. Here's a breakdown of internal, external, and core stakeholders:

Internal Stakeholders:

1. Project Team The internal development, design, and management team are the driving force behind the project. They have a vested interest in its success.

2. Management and Founders: These individuals or teams are responsible for the project's vision, strategy, and funding.

3. Product Development Team: Those responsible for designing and building the software, ensuring it aligns with the project's goals.

4. Quality Assurance Team: Ensures that the software meets the required standards and functions correctly.

5. Marketing and Sales Team: These teams will promote and sell the software, impacting its market success.

6. Customer Support Team: They provide assistance to users and ensure their concerns are addressed.

External Stakeholders:

7. Busy Moms (End Users): The primary external stakeholders who will use the software. Their needs and preferences are central.

8. Families: While not direct users, they are indirectly affected by the software's impact on the busy mom's daily life.

9. Regulatory Bodies: If your project involves data privacy or legal considerations, regulatory bodies have an external stake.

Needs Finding

For this project, we conducted an in-depth interview and online survey with key stakeholders such as women who are moms to gather qualitative and quantitative data about their needs, challenges, and preferences related to personal assistant software. For the qualitative method, I developed a semi-structured interview guide with open-ended questions to encourage participants to share their thoughts and experiences. I included questions about their needs,

challenges, and preferences. This interview helped me explore in-depth insights about the user's needs.

To gather the quantitative data, we utilized an online survey. Online surveys involve collecting structured data from a large sample of participants through a standardized questionnaire. This method allows for statistical analysis and the measurement of trends or patterns. The interview script and results of the online survey will be provided in the appendix.

<p align="center">**User Analysis**</p>

We utilized the information gathered from the qualitative and quantitative data for the user analysis. Then, we created personas as representative of our target user group. I took two of the participants from the online survey and utilized their desires and expectations for the persona profile.

We gathered feedback from a diverse group of women, but utilized the experiences of two women from the group for analysis. Crystal is a single mother of a two year old son. She owns a catering and event planning company and desires an effective way to manage her son's daily tasks and her busy calendar.

Crystal is a single mother of a two year old son. She owns a catering and event planning company and desires an effective way to manage her son's daily tasks and her busy calendar. Both women are depictions of real world scenarios and challenges faced everyday by women of all backgrounds and demographics.

Personas

Name: Crystal

Age: 30

Marital Status: Single

Location: Houston, TX

Goals:

- Desires to set to do list items on her planner and edit or delete them when she's done.
- Desires a helpful resource she can manage her schedule, integrate her calendar, and plan healthy lunch items for her son.

Story:

- Crystal is a single mother of a two year old son. She owns a catering and event planning company and desires an effective way to manage her son's daily tasks and her busy calendar.

Name: Lisa

Age: 35

Marital Status: Married

Location: Atlanta, GA

Goals:

- Desires to be become more organized when planning tasks for her household.
- Desires to efficiently manage the daily tasks, appointments, and activities on her family's agenda.
- Desires to find healthy recipes and ideas for her family

Story:

- Lisa is a married mother of two children that's employed full time, but struggling to manage her family's daily activities and appointments. She wants to manage her time better to ensure she can create healthy meals, but struggles to find healthy recipes her family will enjoy.

Storyboard

Lisa is having a hard time managing her family's household tasks and staying organized.

She would like a way to manage her family's busy schedule, create a to do list, and review dinner recipes all in one place.
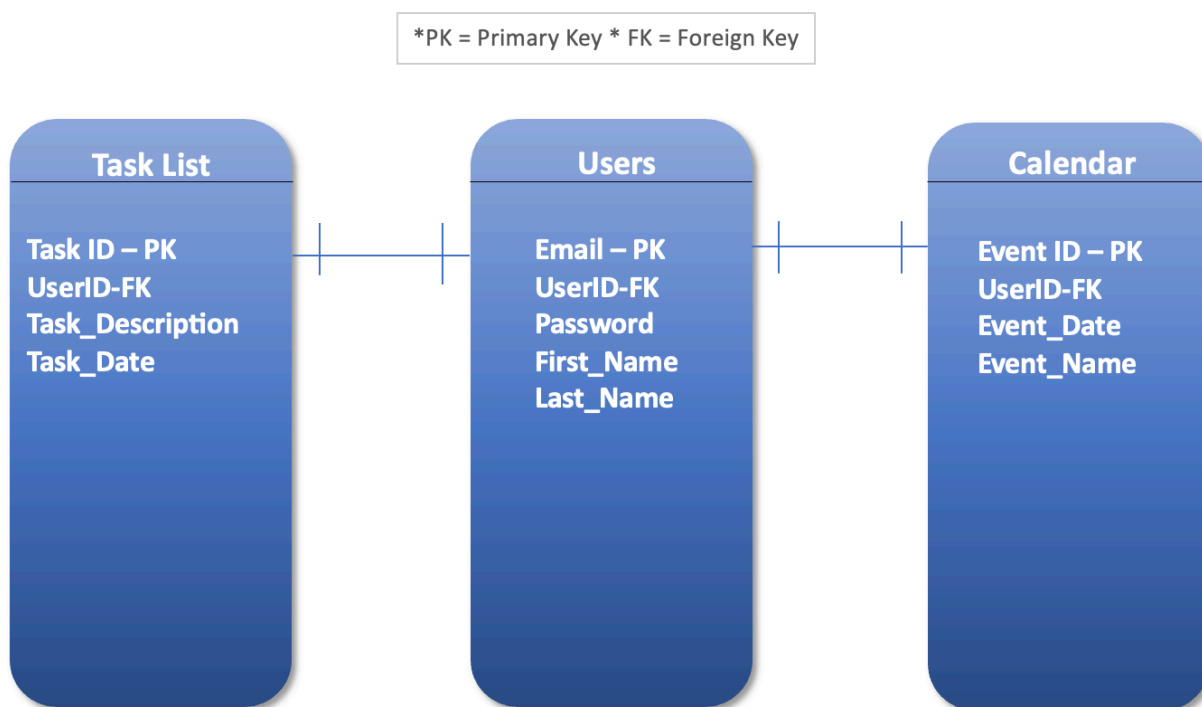
Lisa's friend told her about Mommy's Best Friend, a web application designed to help busy moms like her efficiently manage their busy schedule.

Lisa signed up and now has access to several tools in one place to help her family's busy schedule and efficiently manage her daily tasks!

Database Design

ENTITY RELATIONSHIP DIAGRAM

*PK = Primary Key * FK = Foreign Key

Task List

Task ID – PK
UserID-FK
Task_Description
Task_Date

Users

Email – PK
UserID-FK
Password
First_Name
Last_Name

Calendar

Event ID – PK
UserID-FK
Event_Date
Event_Name

Database design and the backend development for this project was the most challenging aspect. During this phase I realized the gaps within my learning and worked to fill them to see this project through. Understanding how the database design impacts the flow of the website was a necessary lesson that taught me valuable insights into understanding the importance of a backend developers.

One important challenge was understanding how to link the ID to each user so after signing in they are able to have the task list and calendar within their sessions. This would ensure that only registered users can create a task or add an event to the calendar.

Function/Feature Design

The web application should allow users to add tasks to their to-do/task list, add events to their

calendar, and review healthy recipes. The to-do list should have buttons available to edit or

delete the task once added. The idea is to allow a seamless way users can keep up with important

tasks and special events related to their family.

User Task List

1. Lisa wants to sign up for an account

2. Lisa wants to sign into to her account

3. Lisa wants to add a reminder on the to do list

4. Lisa wants to edit a reminder

5. Lisa wants to delete a reminder

6. Lisa wants to view the veggie burger recipe

7. Lisa wants to download a recipe

8. Lisa wants to rate a recipe

9. Lisa wants to add an event to her calendar

10. Lisa wants to learn more about Mommy's Best Friend

Site Structure
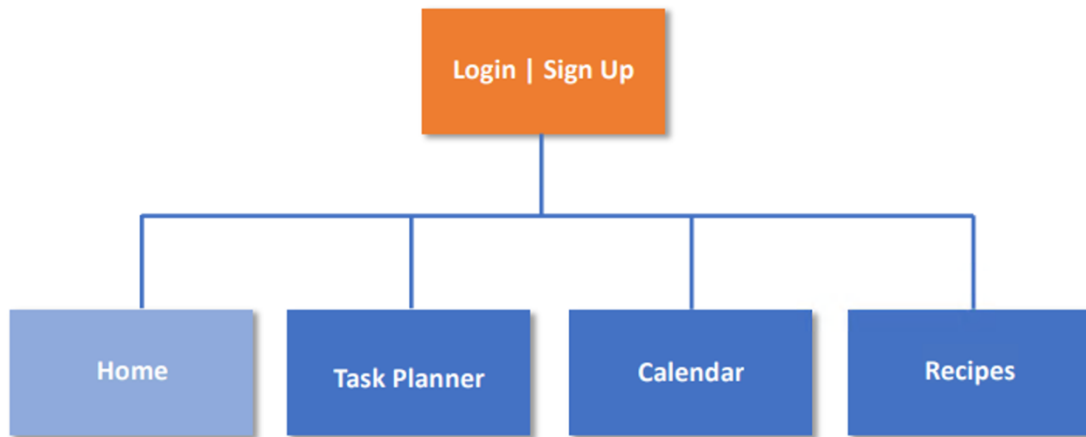
This is the revised site structure from the feedback of the online surveys. I updated the site structure to remove the blog and online store sections. Those are features we plan to implement in the future, but right now I feel it's best to focus on the features that the intended audience expressed as the most important features.

**Multi-version of prototypes with an explanation of the version difference and improvement based on user feedback**
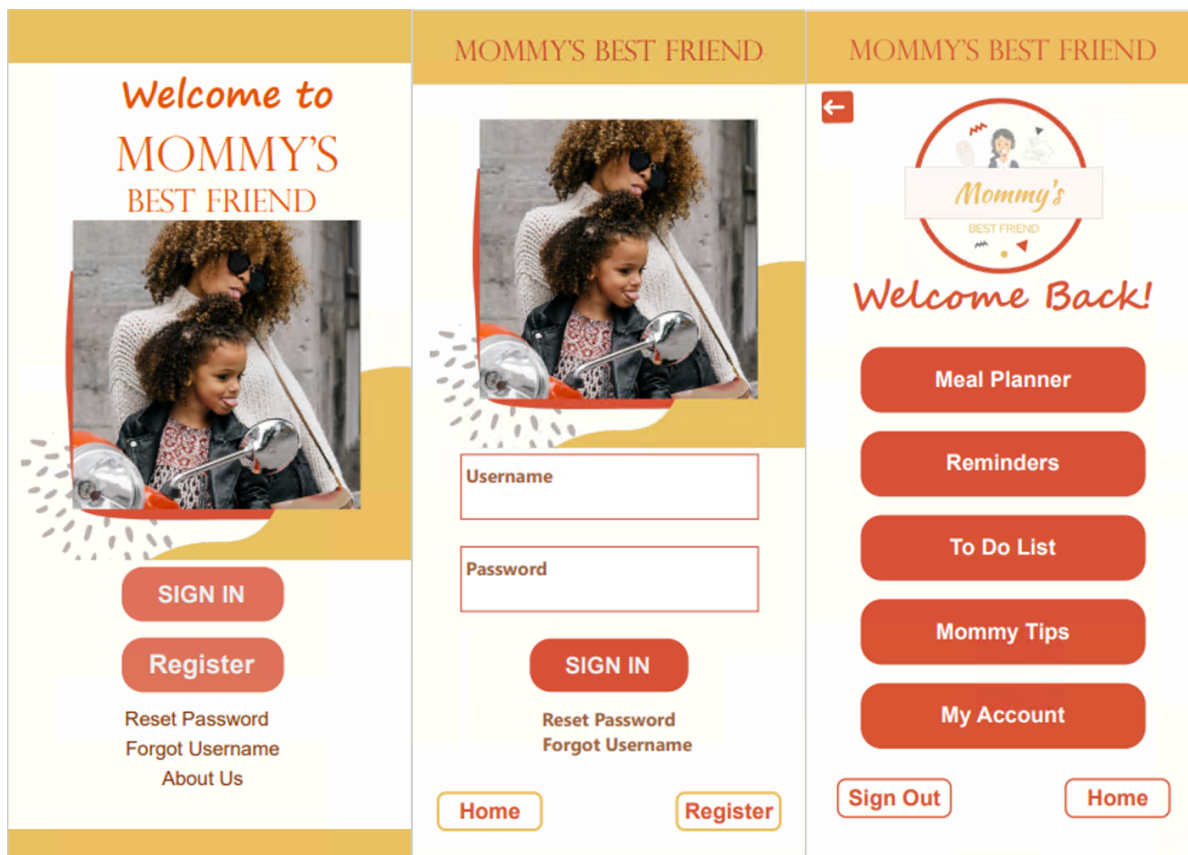
Description: This is the original prototype for Mommy's Best Friend. It was initially an application, but later transitioned into a web application based on unresolved issues with Android Studio. The three prototype images above show the first three pages the user would see upon opening the application and logging in.

Multi-version of prototypes with an explanation of the version difference and improvement

based on user feedback
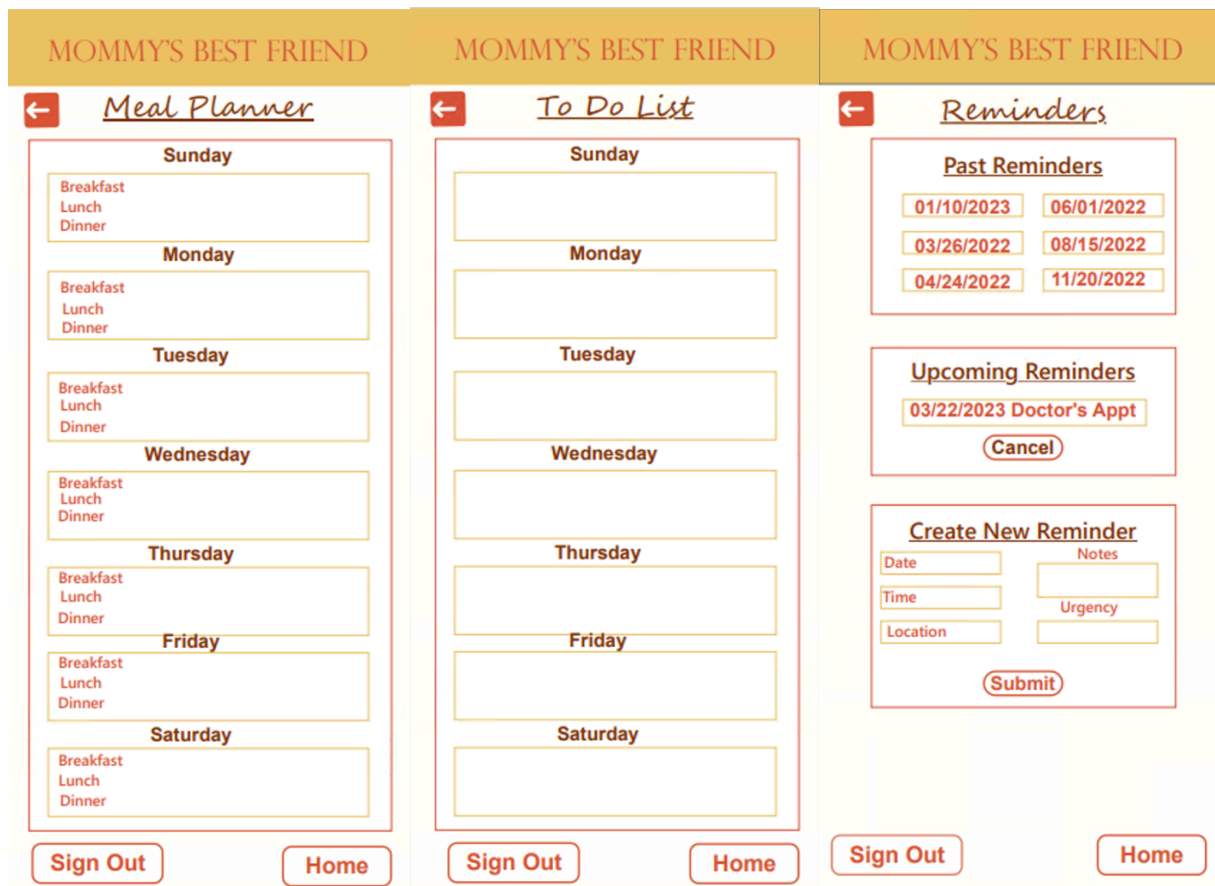
Description: The original prototype has a meal planner, to do list, reminders, and mommy tips. However, the feedback from users indicated that the most desired features was the to do list and event reminders with the calendar integration.

Multi-version of prototypes with an explanation of the version difference and improvement based on user feedback
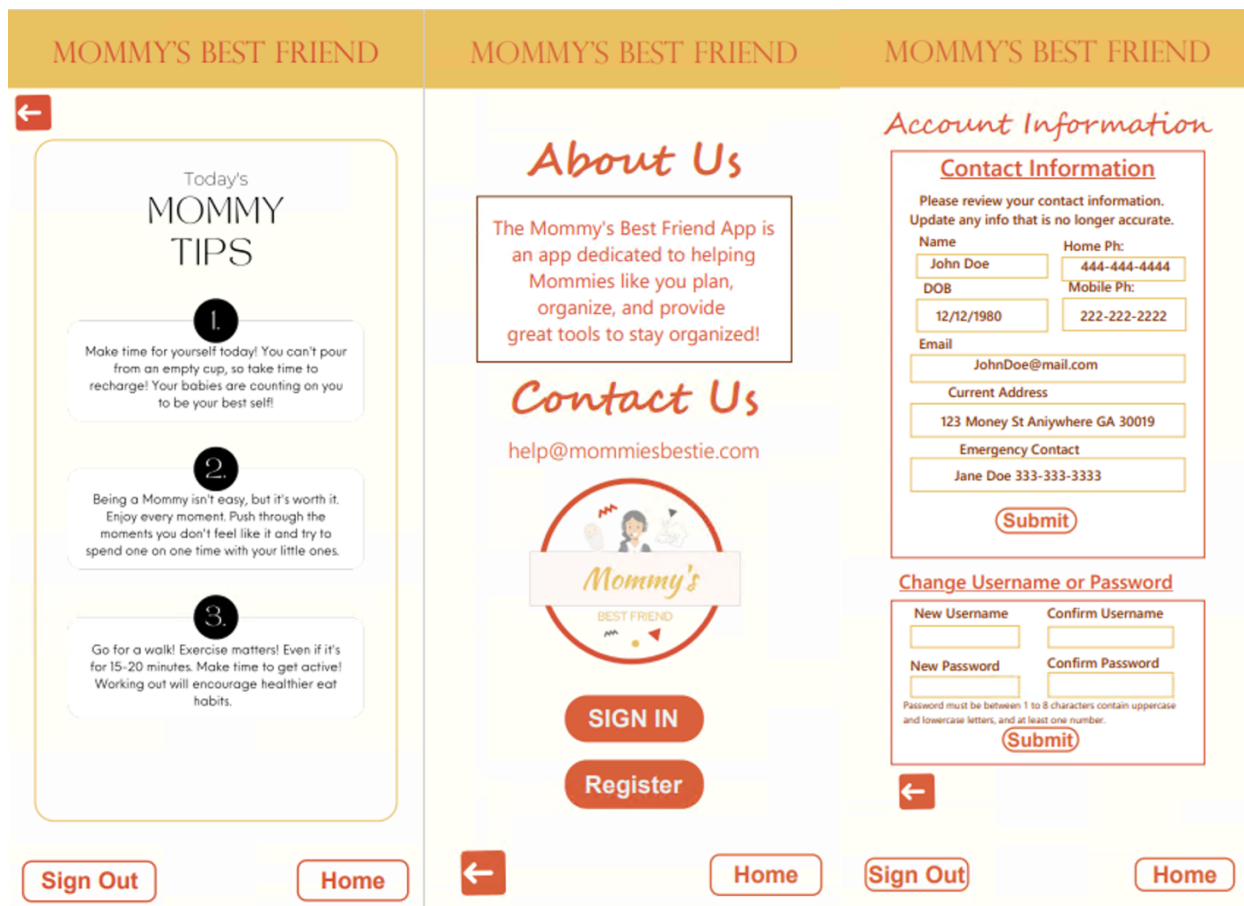
Description: The images above are additional images of the original prototype.

IV.   Usability Study Methodology

Design Research Methodology and Data Collection Instruments

When developing a web or mobile application for mothers, it is important to use both qualitative and quantitative research methods to gather comprehensive data and insights. Below is an explanation of how each approach works.

Qualitative Research Approach

Method: In-Depth Interviews

Explanation:

In-depth interviews involve conducting one-on-one conversations with individuals to gain a deep understanding of their perspectives, experiences, and insights. For this project, we can conduct in-depth interviews with key stakeholders such as women who are moms to gather qualitative data about their needs, challenges, and preferences related to personal assistant software.

Process:
1. Sampling: Select a diverse group of women from different ages groups to gather valuable insights regarding women and the challenges faced when managing everyday tasks.
2. Interview Guide: Develop a semi-structured interview guide with open-ended questions to encourage participants to share their thoughts and experiences. Include questions about their needs, challenges, and preferences. These interviews will help you explore in-depth insights.
3. Data Collection: Conduct individual interviews in a comfortable and private setting. Use probing questions to delve deeper into participants' responses.
4. Data Analysis: Transcribe and analyze interview transcripts, identifying recurring themes, patterns, and unique insights.
5. Findings: Summarize the findings, highlighting commonalities and differences among participants. Use direct quotes to support key points.
6. Implications: Use the qualitative data to inform software development, identify areas for improvement, and gain a nuanced understanding of stakeholders' perspectives.

Quantitative Research Approach

Method: Online Surveys

Explanation:

Online surveys involve collecting structured data from a large sample of participants through a standardized questionnaire. For this project, we can use online surveys to gather quantitative data on stakeholders' needs, challenges, preferences, and demographics. This method allows for statistical analysis and the measurement of trends or patterns.

Process:

1. Survey Design: Develop a well-structured survey questionnaire with closed-ended questions, including Likert-scale items, multiple-choice questions, and demographic inquiries.
7. Sampling: Select a diverse group of women from different ages groups to gather valuable insights regarding women and the challenges faced when managing everyday tasks.
2. Distribution: Distribute the online survey through email and ensure ease of access and user-friendliness.
3. Data Collection: Collect responses over a defined period, ensuring data integrity and anonymity.
4. Data Analysis: Use statistical software to analyze the quantitative data.
5. Findings: Summarize the survey results, highlighting significant findings, trends, and patterns.
6. Implications: Utilize the quantitative data to make data-driven decisions about the software and stakeholder preferences.

Independent and Dependent Variables

Independent Variable:

- The independent variable in this research is the "Personal Assistant Software." We are studying to see how it influences or impacts busy moms.

Dependent Variables: the dependent variables in this research includes:

- **Efficiency in Task Management**: How well busy moms can manage their daily tasks and responsibilities with the assistance of the personal assistant software.

- **User Preferences**: The features and functionalities that busy moms desire in such software.

- **Frequency of Technology Usage**: How often busy moms use technology and apps for organizing tasks.

- **Challenges Faced**: The perceived challenges in managing daily tasks efficiently before using the software.

- **User Satisfaction**: The overall satisfaction and perceived usefulness of the personal assistant software.

Integration of Qualitative and Quantitative Research:

By collecting both qualitative and quantitative data, we will gain a comprehensive understanding of the needs and preferences of busy moms. The qualitative data will provide depth and context, while the quantitative data will allow for statistical analysis and the identification of trends and patterns. These insights will inform the development of the personal assistant software, ensuring that it addresses the specific needs of our target audience effectively.

V.   System Development and System Version 1.0
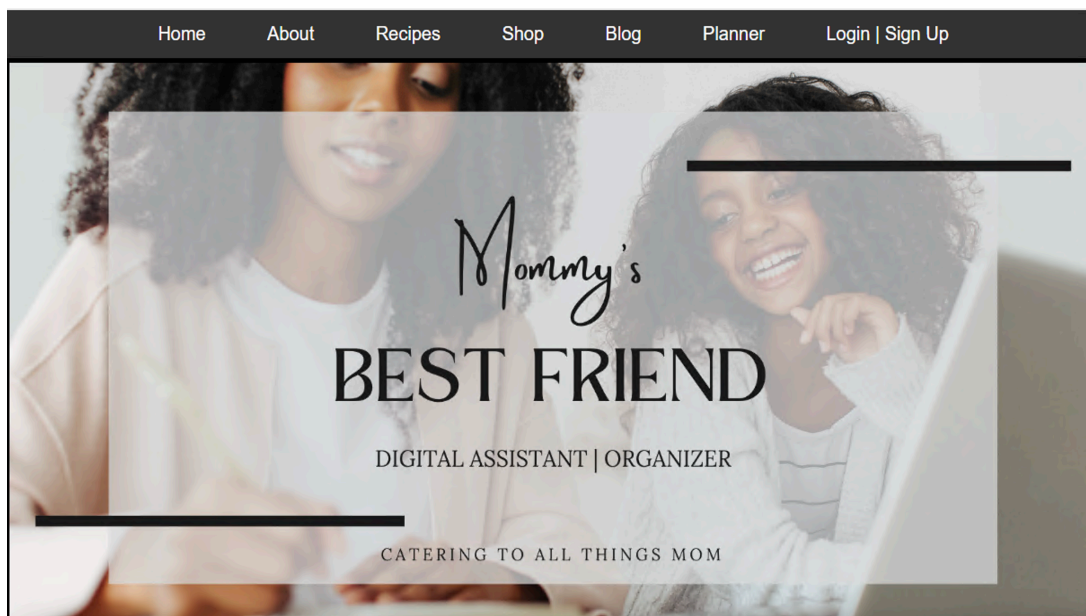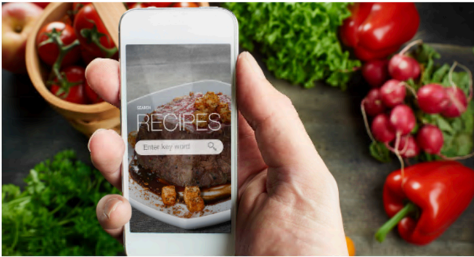
Description: The image above is the first version of the home page for Mommy's Best

Friend. From a design perspective, I chose a mother with her child to symbolize the key

stakeholders for the project, which are mothers.
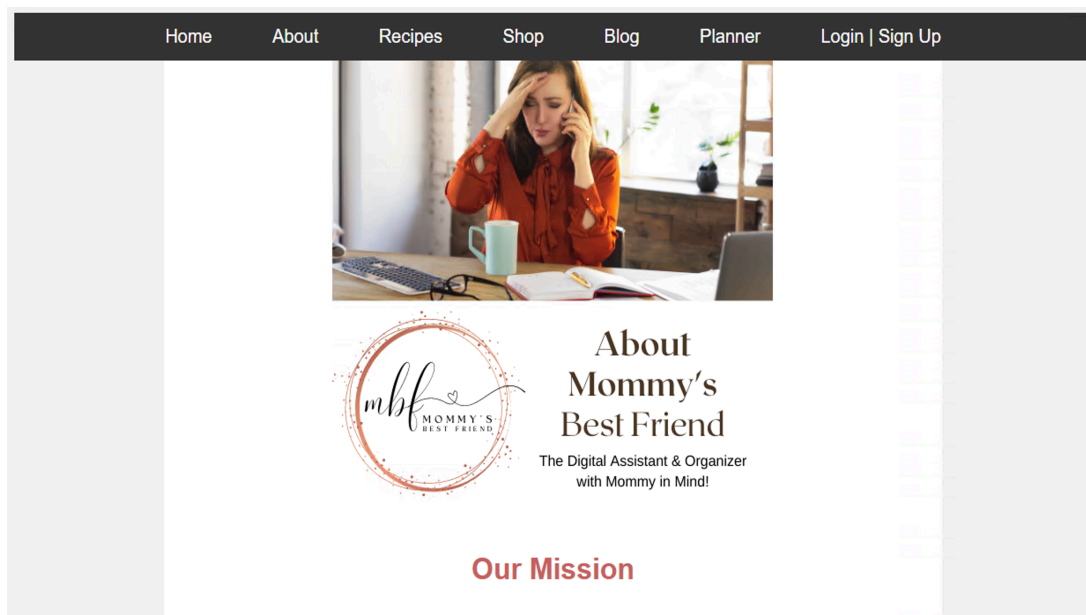
Description: The About Us page will focus on the mission of Mommy's Best Friend.

Home   About   Recipes   Shop   Blog   Planner   Login | Sign Up

Mommy's Best Friend Recipes

Check out our simple but healthy dinner recipes!

Description: The recipe page is where we will add healthy recipes for mothers.

Subscribe to Our Newsletter   Enter Email   Subscribe

Creamy Spinach Pasta Recipe

Read More

Looking for a delicious and easy-to-make pasta recipe that's perfect for a cozy night in or a quick weeknight dinner? With just a handful of ingredients and a few simple steps, you can whip up a deliciously satisfying bowl of pasta that's packed with flavor and nutrition.

Easy Homemade Dumplings Recipe

Read More

Dumplings are a beloved comfort food that can be found in many cultures around the world. And while they may seem like a daunting task to make at home, this Easy Homemade Dumplings recipe is here to prove otherwise!

Veggie Burger Recipe

Read More

If you're looking for a delicious and healthy alternative to traditional beef burgers, look no further than this Veggie Burger recipe! This burger is not only delicious but also loaded with nutrients. And the best part? It's easy to make at home!
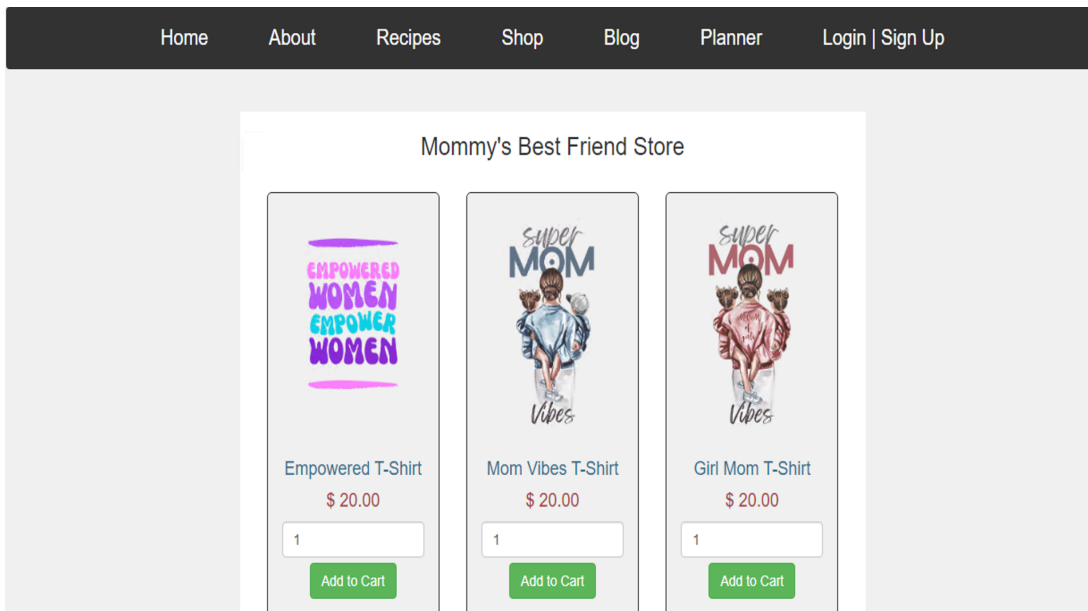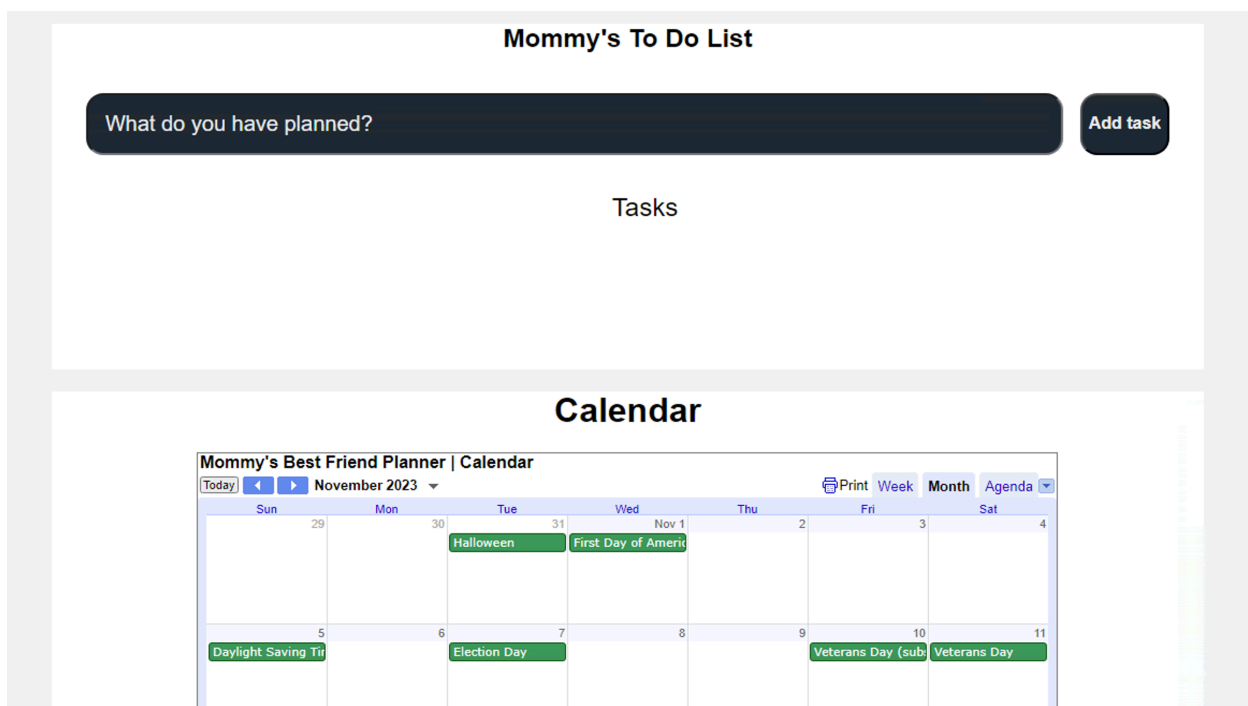
Description: For the shop or store page, I wanted to add different items I would sale and offer a membership option.
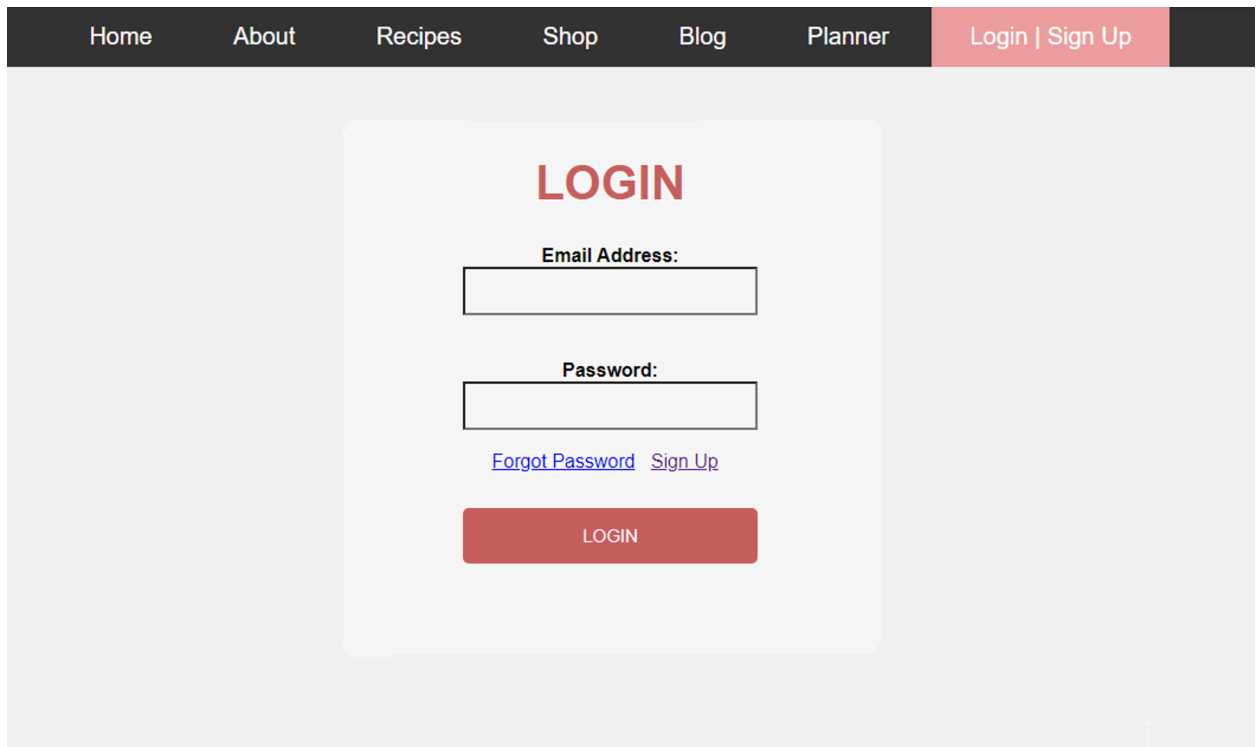

Description: The blog is where we discuss helpful topics for mothers.
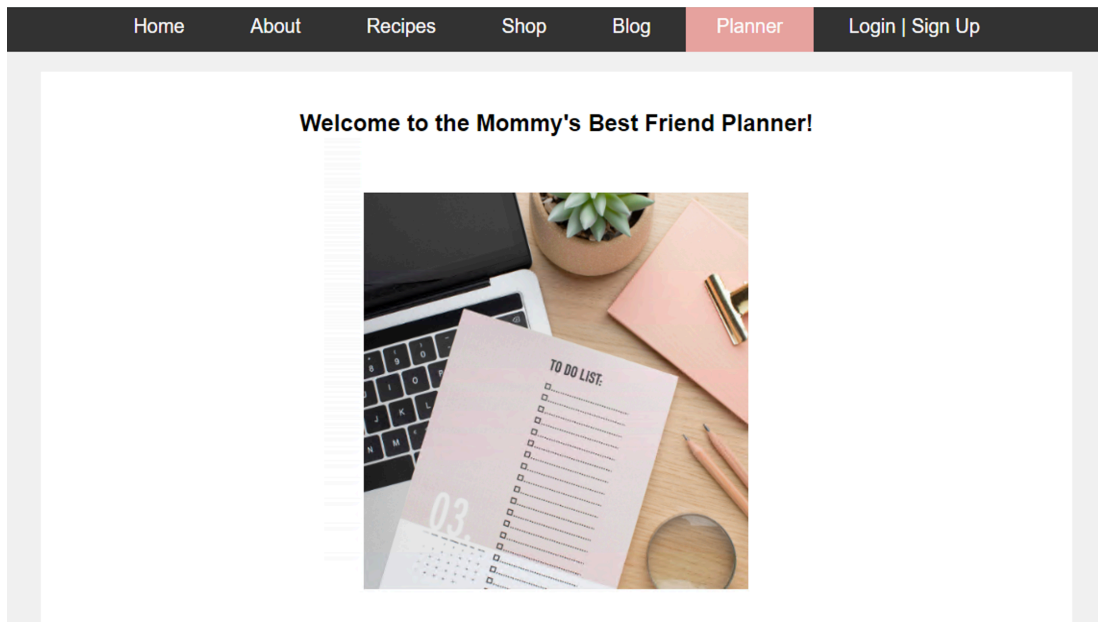
Description: The images above and below show "Mommy's Best Friend Planner." The planner has the to do list with the calendar. The idea was to have the calendar available to add different events like picking up your child for soccer practice on certain dates or something similar. The To Do List and the calendar are two different features.

Description: The login page has links to reset password and sign up.

In summary, System Version 1 was developed based on the feedback of users after showing the initial prototype. However, when developing system version 1 I realize that the initial concept was too ambitious of a project given the small window of time available to develop this project. The prototype had several features we weren't able to develop or add in time to version 1, the meal planner and mommy tips were changed to recipes and a blog since it was easier to create.
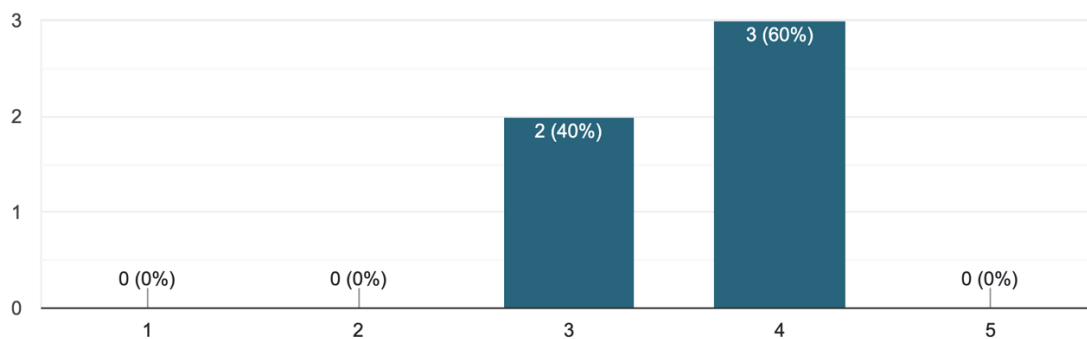
VI. Usability Study Analysis

Following the release of System Version 1, I invited five of our initial participants to try out the website using a user task list. The goal was to gather insights on the website's usefulness and effectiveness in assisting them with their tasks. Interestingly, much of the feedback centered on enhancing the interactivity of the calendar and optimizing the planner feature, given their pivotal roles in the web application. Both participants, mothers within our target demographic using the site. To assess its user- friendliness, I provided them with a task list and observed their success in completing each task. This hands-on approach allowed me to gauge the software's effectiveness in real-life scenarios, ensuring that it truly caters to the needs of our busy mom users.

u After they completed the items from the task list, they were instructed to complete an online survey to provide their feedback. Below are the results of their feedback.

Likelihood of Usage: On a scale of 1 to 5, how likely are you to frequently use this personal assistant software for managing your daily tasks?
5 responses

User Experience Issues:

Did you encounter any challenges or issues while using the web application? Please describe them in the space below.

5 responses

> The calendar didn't seem to do anything. I'm not sure how it relates to the planner since I couldn't add anything to it.

> The sign up form didn't send you back to log in once you signed up. It was cumbersome to use.
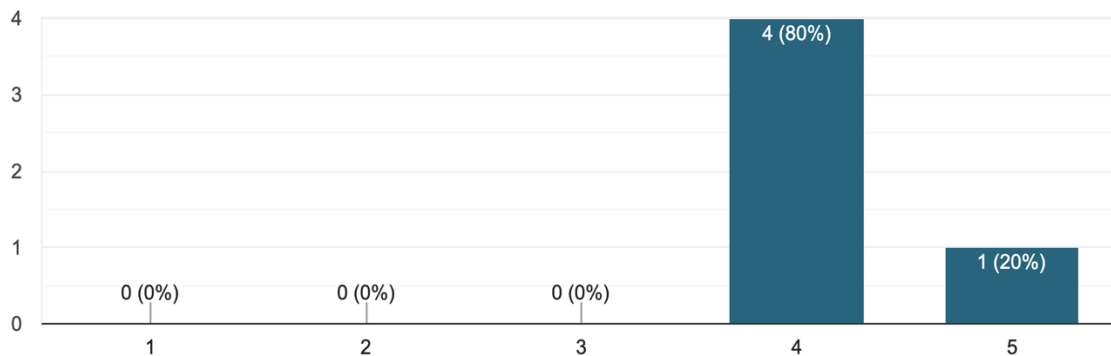
> Signing in seemed to be challenging since you just get a blank screen after signing in and it doesn't take you to the website. But the login is kind of off to itself, so you don't have to sign in. Not sure if you meant it like that or not. So it's out of place.

> I did not have any significant issues, but I think the website should flow better.

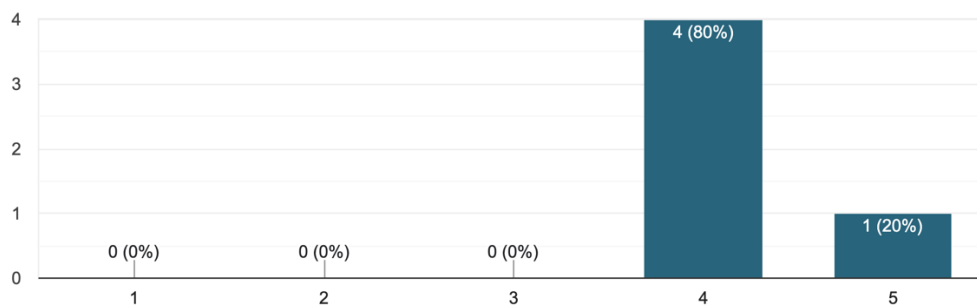> I had an issue with viewing one of the recipes it didn't work.

Clarity of Fonts and Wording: How would you rate the clarity of fonts and wording used in the software interface? (Choose from: Very Clear, Clear, Neutral, Moderately Unclear, Terribly Unclear)
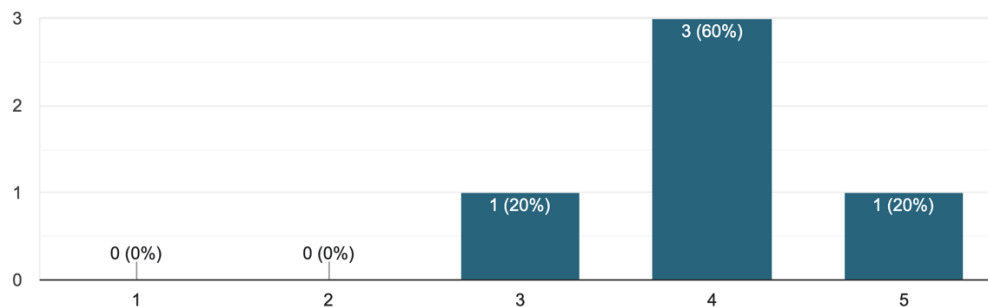
5 responses

Design and Color Palette: How would you rate the design and color palette in terms of being visually appealing and easy on the eyes? (Choose fr...ling, Neutral, Not Appealing, Not at All Appealing)
5 responses

Ease of Use Perception: Do you find the system cumbersome to use? (Choose from: Very Easy, Easy, Neutral, Difficult, Very Difficult)
5 responses

Favorite and Least Favorite Feature:

What is your most favorite feature of the software? Please describe.What is your least favorite feature of the software? Please describe.

5 responses

Favorite thing was the planner it seemed like a nice tool that can be optimized to be more useful to help as a to do list. Least favorite is probably the blog. You can probably do without it.

The task list was probably the favorite thing but I think the recipes have the potential to be better or a favorite as well. Just think the recipes could be better.

Least favorite is the calendar. It doesn't do anything.

Favorite is the planner. Least is the blog.

I think you did good with the design. It is inviting but I think the planner should be bigger or have a bigger focus on the website. The planner and the blog idea is my favorite. I don't have a least favorite. I think it has good potential.
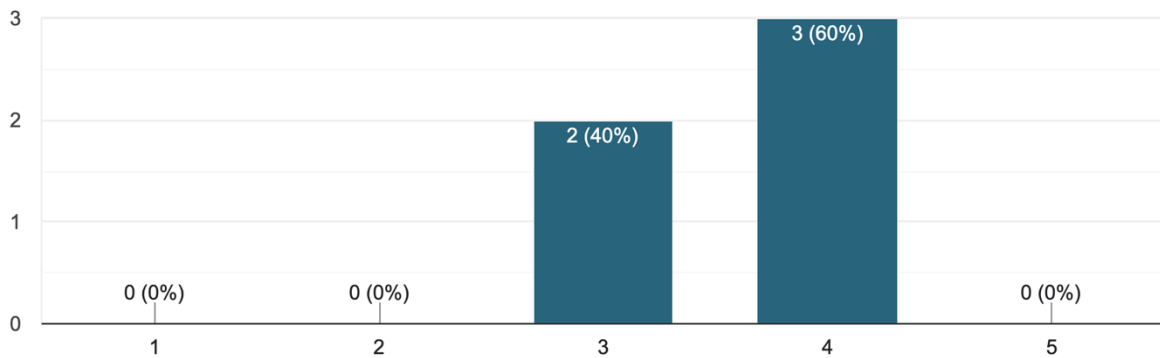
Design Improvements:

Are there any specific improvements or suggestions you would recommend for the design of the software? Please share your thoughts.

5 responses

The calendar and the planner should be more interactive.

I would have better recipes and make the calendar and planner better.

Integrate the planner with the calendar so you can add things to the calendar

Make the planner and recipes better and more interactive. The calendar is on the same page of the planner but I can click on it or add anything.

Make the planner and calendar better.

Overall Experience Rating: On a scale of 1 to 5, how would you rate your overall experience with the personal assistant software? (1 being the lowest, 5 being the highest)
5 responses

During the usability study for Mommy's Best Friend, a personal assistant software

designed for busy moms, I closely observed mothers within our target demographic using

the site. To assess its user-friendliness, I provided them with a task list and observed their

success in completing each task. This hands-on approach allowed me to gauge the

software's effectiveness in real-life scenarios, ensuring that it truly caters to the needs of

our busy mom users.

In the upcoming sections, I'll share the outcomes of these observations and the valuable

insights gained from the participants' experiences. Additionally, to provide a visual

representation of the task list testing, I'll be including screenshots of the process in the

report.

The first task shown below is signing up for Mommy's Best Friend.

Thank you, **Lisa**, for signing up!

The second task is logging into the account. This task was successful. However, it didn't provide the best experience for the user because after signing in it shows a blank screen. I wasn't able to figure out why it wasn't forwarding to the proper page after signing in. I also had issues setting up the web application so only users that sign in are able to add a task in the to do list or schedule an event with the calendar.

The third task is adding a task to the to do list. The to do list has gone through several edits. I added the date feature, but it has an error since it is not posting the date with the to do list item.

To-do lists are great tools that can help your daily routine!
Recording your daily tasks with specific deadlines in one place
is a great way to stay organized. Below, you can add your task along with
a deadline to stay on track!

Mommy's To-Do List

| Take Camille to Dance Recital on Thursday | 12/14/2023 | Add Task |

Tasks

informatics.mercer.edu says

Task added successfully!

OK

is a gre... ...with
a deadline to stay on track!
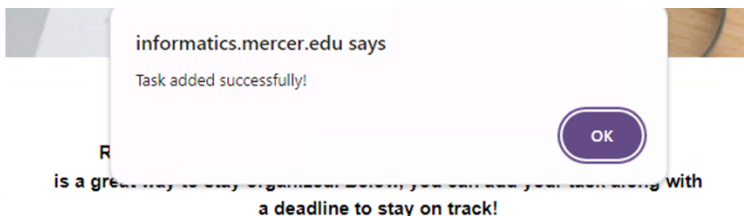
Mommy's To-Do List

| Enter Task | 12/14/2023 | Add Task |

Tasks

Take Camille to Dance Recital on Thursday   (EDIT) (DELETE)

The fourth task is editing the to do list reminder.

The fifth task is deleting the to do list reminder.

The sixth task is adding an event to the calendar.

The test event was successfully added to the calendar, but there is an error in the code that makes it post twice instead of once on 12/12/23.

The seventh task is "Lisa wants to view the veggie burger recipe.
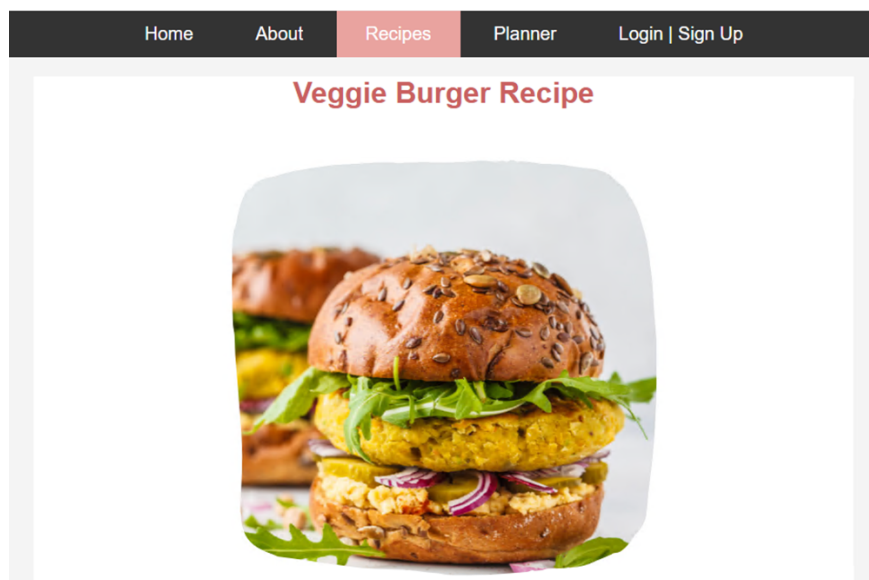
The eighth task is downloading the recipe. It was successfully downloaded as a pdf.
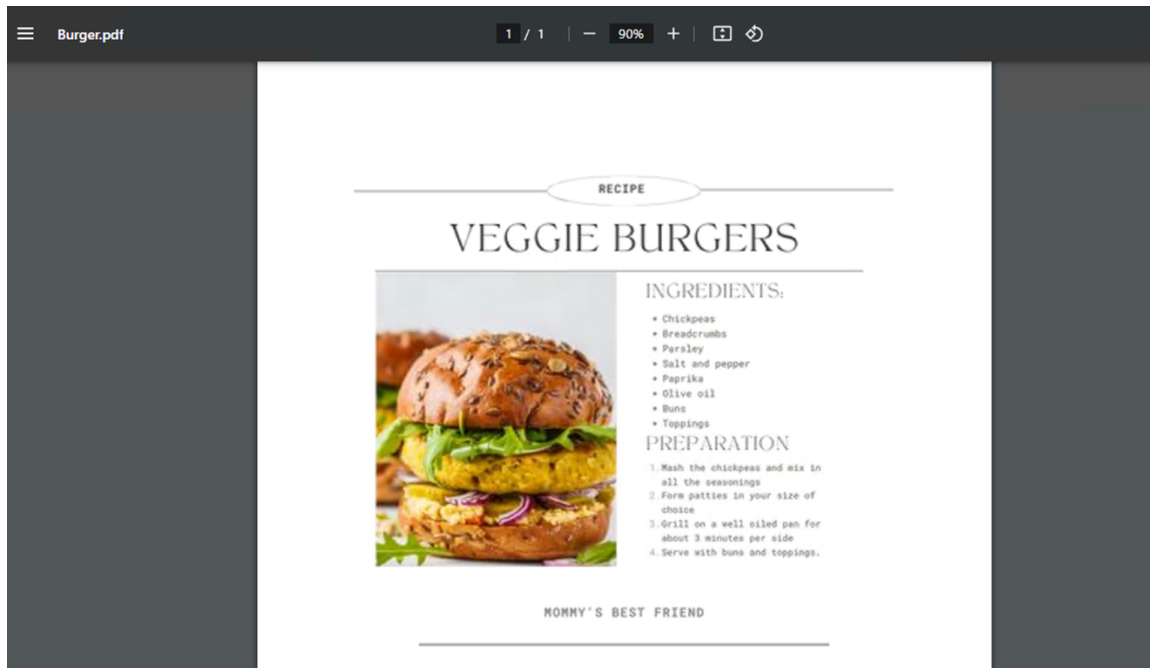
The nineth task is rating a recipe.

The tenth task is visiting the "About Us" page to learn more about Mommy's Best Friend.

In summary, the screenshots

VII.   **System Version 2.0**

Navigating the role of a full-stack developer throughout the project proved to be both demanding and gratifying. The extensive learning experience provided valuable insights, although the aspiration to meticulously address every nuance before the project deadline remained unfulfilled. Despite encountering several issues during testing, the time constraints posed a significant challenge, limiting the extent to which these errors could be systematically resolved.

The crux of the complexity lay in the backend development phase, where the web application was meticulously crafted using a combination of HTML, CSS, PHP, JS, and MySQL. This intricate amalgamation of technologies aimed at fostering a seamless and dynamic user experience revealed the pivotal role of backend coding in the project's success.

Central to the project's functionality were the planner (to-do list) and calendar features, which emerged as particularly intricate during backend coding. The to-do list functionality, for instance, involved capturing user input and seamlessly integrating it onto both the webpage and the database. Despite grappling with challenges, the overarching objective was to enhance the robustness of these components for optimal user interaction and efficient data management. While the time constraints prevented the complete resolution of all identified issues, the process became an invaluable learning opportunity, highlighting the critical importance of thorough backend coding in ensuring the project's overall success.

VIII.   **Conclusion**

Wrapping up this project has been both a challenge and a rewarding experience that has expanded my coding skills. The journey through Mommy's Best Friend, our personal assistant software for busy moms, not only honed my technical abilities but also reinforced the essence of why I chose to pursue a major in software development. The allure lies in the capacity to craft something meaningful from scratch, a creation that not only makes a difference but is also enjoyed by its users.

As with any project, adhering to the timeline posed its own set of challenges. While the endeavor pushed me to my limits, regrettably, not all aspects were brought to fruition in alignment with the standards set by our success measures. However, every obstacle encountered served as a valuable lesson, contributing to my growth as a developer.

In the future, I envision further enhancements and refinements for Mommy's Best Friend, building upon the foundation laid during this project. Despite the hurdles faced, the journey has been one of learning, adaptation, and the pursuit of creating something truly beneficial for our intended users – busy moms seeking efficient and user-friendly assistance. The road ahead holds exciting possibilities for improvement and innovation, a prospect that motivates me to continue refining and expanding upon the success measures outlined for this project.

IX.   References

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X. Appendix

a) **Appendix A: User Manual / Help Document**

b) **Appendix B: Presentation Outline**

c) **Appendix C: System File Structure**

d) **Appendix D: Usability Study Questionnaires**

e) **Appendix E: Data Collected**

User Help Document for Mommy's Best Friend | A Personal Assistant Software

Introduction: Mommy's Best Friend is a user-friendly personal assistant software, tailored specifically to meet the needs of busy moms. This help guide will walk you through proper use of the website.

Getting Started

System Requirements

Device:

- Desktop or Laptop Computer

- Tablet

- Smartphone

- Smart TV

Operating System:

- Windows (7 and newer)

- macOS (10.9 and newer)

- Linux

- Android

- iOS

Web Browser:

- Google Chrome

- Mozilla Firefox

- Apple Safari

- Microsoft Edge

- Opera

Internet Connection:

- Broadband or high-speed internet connection for optimal performance

- Wi-Fi or Ethernet connectivity

Main Features and How-To Guides

Planner | The Planning feature allows users to add a task to the To-Do List

How to Utilize the Planner

- From the homepage, click on Planner that's located on the top navigation menu

- Scroll down to Mommy's To Do list

- Enter a Task, Date, and Add Task

- Scroll down to Tasks, to see the entered tasks

Calendar | The Calendar feature allows users to add an event/task to the calendar

How to Utilize the Calendar

- From the homepage, click on Calendar that's located on the top navigation menu

- Scroll down to Add New Event to Calendar

- Enter an Event, Date, and Click Add Event to add a task or reminder to the Calendar

- Scroll down to the Calendar, to see the entered tasks, events, or reminder on the calendar

Recipes | The Recipes section features healthy dinner recipes

How to Navigate to a Recipe

- From the homepage, click on Recipes that's located on the top navigation menu

- Scroll down and select the recipe of your choice

Login

How to Login

- From the homepage, click on Login | Sign Up that's located on the top navigation menu

- Enter the email address and password used to sign up

- Click Login

Sign Up

How to Sign Up

- From the homepage, click on Login | Sign Up that's located on the top navigation menu

- From the login page, click on the Sign Up link located below the password box

- Enter the requested information and click Login

Reset Password

How to Reset Password

- From the homepage, click on Login | Sign Up that's located on the top navigation menu

- From the login page, click on the Forgot Password link located below the password box

- Enter your email address and click Submit

Conclusion

Thank you for choosing Mommy's Best Friend, A Personal Assistant Software for Busy

Moms! We hope this document helps you make the most of our features. Happy organizing!

Appendix B: Presentation Outline

Presentation Outline Mommy's Best Friend | A Personal Assistant Software

I. Executive Summary

A. Brief Overview

    1. Concise summary of the personal assistant software project

II. Acknowledgements

A. Recognition of Contributors and Expressing gratitude for their contributions

III. Background

A. Introduction to the Personal Assistant Software

    1. Overview of the software's purpose and target audience

    2. Purpose for the project

IV. Project Planning

A. Planning Process

    1. Overview of the planning phase and timeline

V. System Design

A. Design Principles

VI. Usability Study Methodology

A. Research Approach

Appendix C: System File Structure

```
                    ┌─────────────────────┐
                    │   Login | Sign Up   │
                    └──────────┬──────────┘
        ┌──────────────┬───────┴───────┬──────────────┐
   ┌────┴────┐   ┌─────┴──────┐   ┌─────┴────┐   ┌─────┴────┐
   │  Home   │   │Task Planner│   │ Calendar │   │ Recipes  │
   └─────────┘   └────────────┘   └──────────┘   └──────────┘
```

This is the revised site structure from the feedback of the online surveys. My plan is to update the site structure to remove the blog and online store sections. Those are features we plan to implement in the future, but right now I feel it's best to focus on the features that the intended audience expressed as the most important features.

Systems Specification: Personal Assistant Software

1. Introduction

1.1 Project Overview

The personal assistant software website is designed to provide busy moms with a user-friendly platform to organize daily tasks, manage schedules, and enhance overall productivity. The website aims to simplify the lives of busy moms by offering a suite of features tailored to their unique needs.

1.2 Purpose
The purpose of this document is to define the requirements and functionalities of the personal assistant software website. It serves as a guide for development, testing, and maintenance.

2. System Overview

2.1 System Architecture

The website will follow a client-server architecture. The client-side will be implemented using HTML, CSS, and JavaScript, while the server-side will utilize a backend framework (e.g., PHP) with a database (e.g., MySQL).

2.2 Key Features
1. **User Registration and Authentication:**
   o Users can register for an account and log in securely.
   o Password recovery functionality for forgotten passwords.
2. **To-Do List Management:**
   o Users can create, edit, and delete multiple to-do lists.
   o Each to-do list can contain multiple tasks with due dates and statuses.
3. **User Profile:**
   o Users can manage their profiles, including personal information and preferences.
4. **Responsive Design:**
   o The website will be responsive to ensure optimal user experience on various devices.

3. Functional Requirements

3.1 User Registration and Authentication

3.1.1 Registration
- Users can register with a valid email address, username, and password.

3.1.2 Authentication
- Secure login with username/email and password.
- Password recovery mechanism.

3.2 To-Do List Management

3.2.1 Create/Modify/Delete Lists
- Users can create new to-do lists.
- Modify existing to-do lists, including updating names and descriptions.
- Delete to-do lists.

3.2.2 Task Management
- Add tasks to a to-do list with a name, description, due date, and status.
- Edit and update tasks.
- Mark tasks as completed.

3.3 User Profile
- Users can view and edit their profiles.
- Profile includes personal information and preferences.

3.4 Responsive Design
- The website will be responsive and accessible on various devices, including desktops, tablets, and smartphones.

4. Non-Functional Requirements

4.1 Performance

- The website should load within a reasonable time frame.
- Efficient database queries to ensure quick data retrieval.

4.2 Security
- Secure data transmission using HTTPS.
- Passwords stored securely using encryption.
- Protection against common web vulnerabilities

4.3 Usability
- Intuitive and user-friendly interface.
- Consistent design and navigation.

5. Technical Requirements

5.1 Frontend

- HTML5, CSS3, JavaScript for client-side development.
- Responsive design using a frontend framework (e.g., Bootstrap).

5.2 Backend

- Backend framework (e.g., PHP) for server-side logic.
- Database management system (e.g., MySQL

6. Conclusion

This systems specification outlines the features, functionalities, and technical requirements for the personal assistant software website. It serves as a comprehensive guide for development and ongoing maintenance, ensuring the successful implementation of the project.

Results of Online Survey

Age:
7 responses
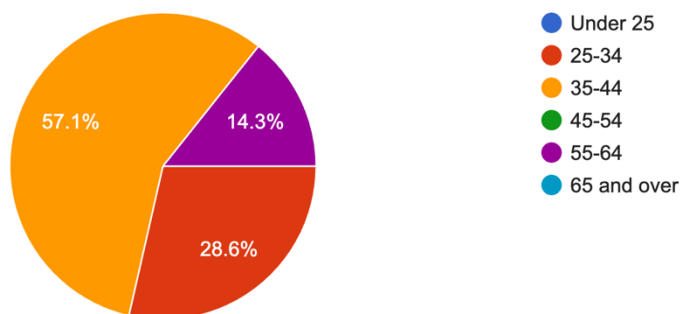
Marital Status:

7 responses

- 🔵 Single
- 🔴 Married
- 🟠 Divorced
- 🟢 Widowed

71.4%

28.6%
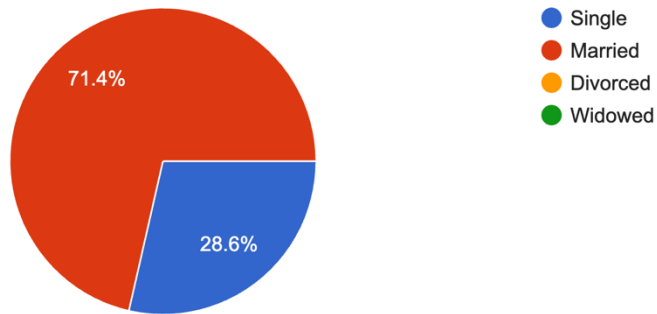
Employment Status:

7 responses

- 🔵 Full-time Employed
- 🔴 Part-time Employed
- 🟠 Self-Employed
- 🟢 Stay-at-home mom
- 🟣 Unemployed
- 🔵 Retired

14.3%

14.3%

14.3%

57.1%
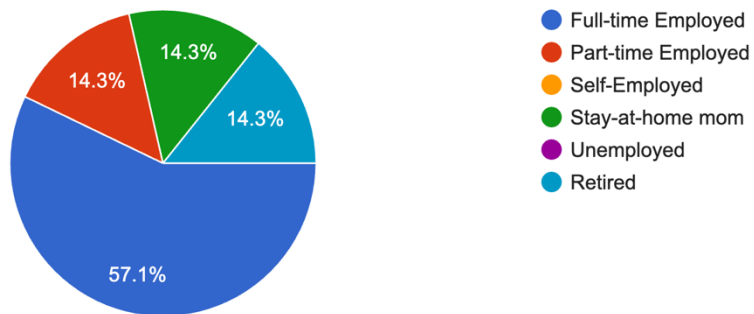
Number of Children:

7 responses

- 🔵 1
- 🔴 2
- 🟠 3
- 🟢 4 or more
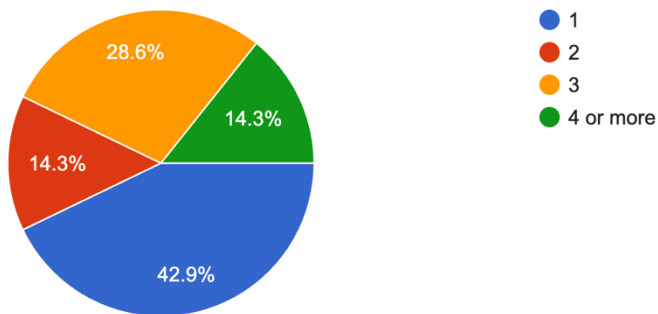
Educational Level:

7 responses

- 🔵 High school or less
- 🔴 Some college/Associate degree
- 🟠 Bachelor's degree
- 🟢 Master's degree
- 🟣 Doctoral degree
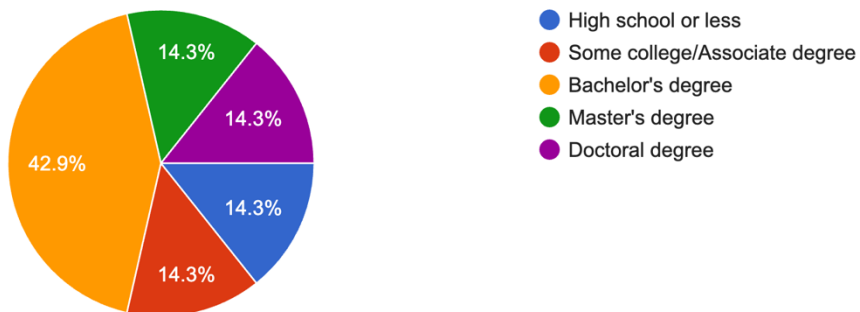
On a scale of 1 to 5, how challenging is it for you to manage your daily tasks efficiently? (1 = Not Challenging, 5 = Very Challenging)

7 responses
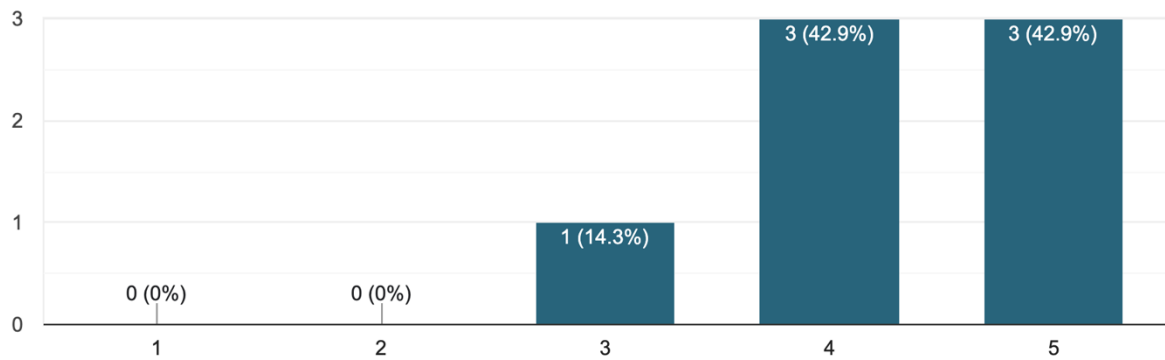
How often do you use technology and apps for organizing your tasks? (Daily, Weekly, Monthly, Rarely, Never)

7 responses
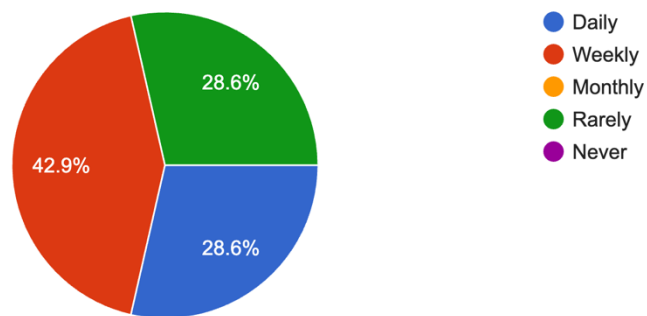
How do you currently organize your daily tasks and responsibilities? (Select all that apply)

7 responses

Physical planner or Calendar	5 (71.4%)
Digital calendar app (e.g., Goo…	5 (71.4%)
To-do list app (e.g., Todoist, Tre…	5 (71.4%)
Pen and paper lists	2 (28.6%)
Virtual assistant device (e.g., Al…	1 (14.3%)
Phone reminders and alerts	1 (14.3%)
I use the reminders feature on…	1 (14.3%)
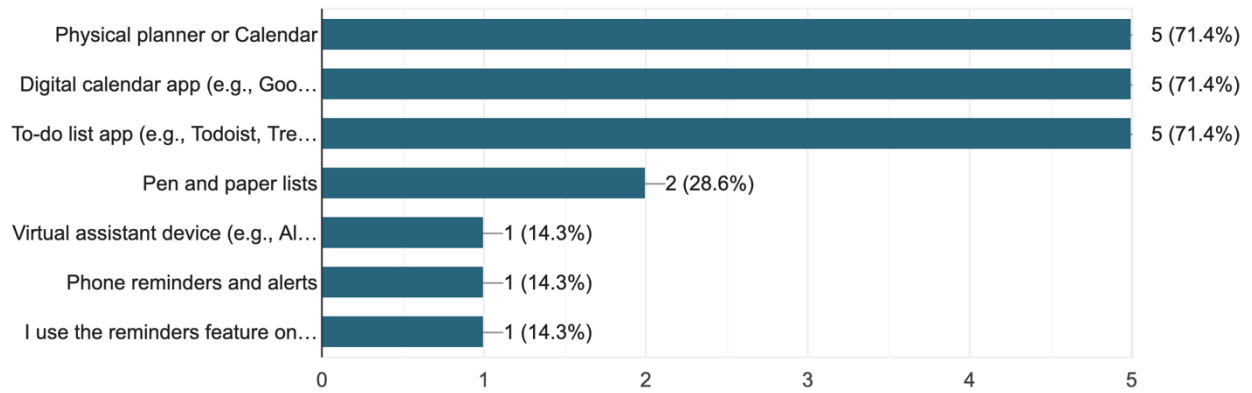
Which of the following features would you find most useful in a personal assistant software designed for busy moms? (Select up to three)

7 responses

Task and to-do list management	6 (85.7%)
Calendar integration	7 (100%)
Meal planning and grocery lists	3 (42.9%)
Family schedule tracking	5 (71.4%)
Customizable reminders and alerts	6 (85.7%)
Community and support features for connecting with other moms	3 (42.9%)
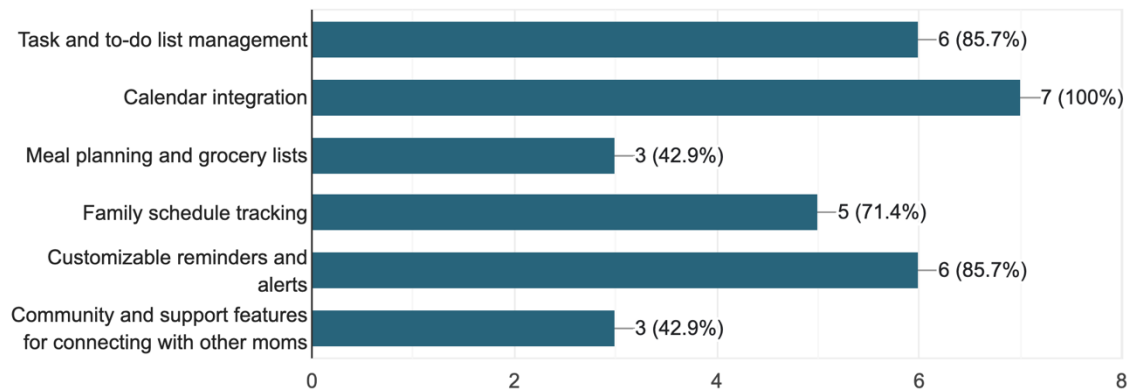
Do you have any additional comments or suggestions for features that would improve a personal assistant software for busy moms? If so, please share.

7 responses
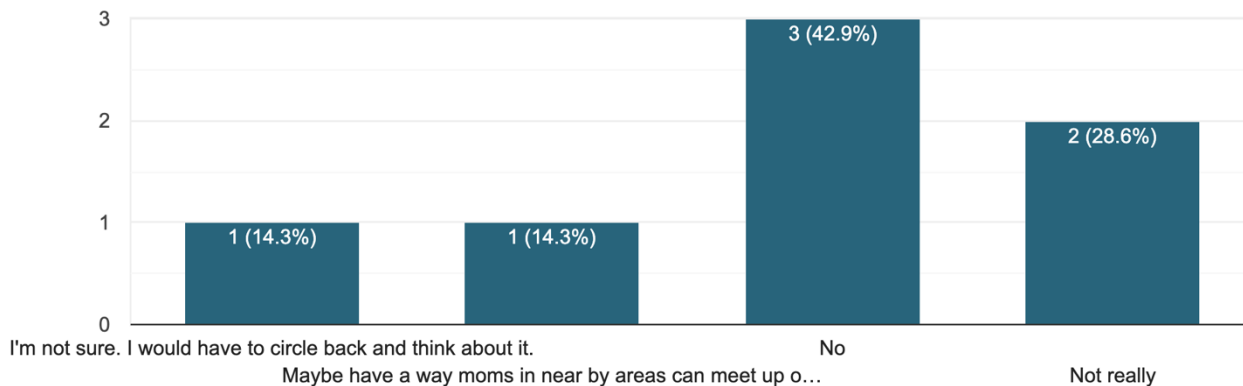
Results of Final Survey

Likelihood of Usage: On a scale of 1 to 5, how likely are you to frequently use this personal assistant software for managing your daily tasks?

5 responses

User Experience Issues:

Did you encounter any challenges or issues while using the web application? Please describe them in the space below.

5 responses

> The calendar didn't seem to do anything. I'm not sure how it relates to the planner since I couldn't add anything to it.

> The sign up form didn't send you back to log in once you signed up. It was cumbersome to use.

> Signing in seemed to be challenging since you just get a blank screen after signing in and it doesn't take you to the website. But the login is kind of off to itself, so you don't have to sign in. Not sure if you meant it like that or not. So it's out of place.

> I did not have any significant issues, but I think the website should flow better.

> I had an issue with viewing one of the recipes it didn't work.

Clarity of Fonts and Wording: How would you rate the clarity of fonts and wording used in the software interface? (Choose from: Very Clear, Clear, Neutral, Moderately Unclear, Terribly Unclear)

5 responses

Design and Color Palette: How would you rate the design and color palette in terms of being visually appealing and easy on the eyes? (Choose fr...ling, Neutral, Not Appealing, Not at All Appealing)
5 responses

Ease of Use Perception: Do you find the system cumbersome to use? (Choose from: Very Easy, Easy, Neutral, Difficult, Very Difficult)
5 responses

Favorite and Least Favorite Feature:

What is your most favorite feature of the software? Please describe.What is your least favorite feature of the software? Please describe.
5 responses

Favorite thing was the planner it seemed like a nice tool that can be optimized to be more useful to help as a to do list. Least favorite is probably the blog. You can probably do without it.

The task list was probably the favorite thing but I think the recipes have the potential to be better or a favorite as well. Just think the recipes could be better.

Least favorite is the calendar. It doesn't do anything.

Favorite is the planner. Least is the blog.

I think you did good with the design. It is inviting but I think the planner should be bigger or have a bigger focus on the website. The planner and the blog idea is my favorite. I don't have a least favorite. I think it has good potential.

Design Improvements:

Are there any specific improvements or suggestions you would recommend for the design of the software? Please share your thoughts.

5 responses

The calendar and the planner should be more interactive.

I would have better recipes and make the calendar and planner better.

Integrate the planner with the calendar so you can add things to the calendar

Make the planner and recipes better and more interactive. The calendar is on the same page of the planner but I can click on it or add anything.

Make the planner and calendar better.

Overall Experience Rating: On a scale of 1 to 5, how would you rate your overall experience with the personal assistant software? (1 being the lowest, 5 being the highest)

5 responses

Task List

1. Lisa wants to sign up for an account

2. Lisa wants to sign into to her account

3. Lisa wants to add a task to her to do list

4. Lisa wants to lookup a recipe

5. Lisa wants to add an event to her calendar

6. Lisa wants to learn more about Mommy's Best Friend

7. Lisa wants to download a recipe

8. Lisa wants to rate a recipe

9. Lisa wants to delete a task on her to do list

10. Lisa wants to edit a task on her to do list

Interview Questions for Capstone Project

Introduction:

Thank you for participating in this interview. Your insights are invaluable to our project. To

begin, could you please tell us a bit about yourself and your family? (e.g., number of

children, occupation, daily routine)

Current Challenges and Tools:

1. Can you describe your typical day as a busy mom? What are the main tasks and

   responsibilities you juggle?

   > • Work, picking kids up from school and daycare, cooking and helping
   >
   > kids with homework/studying. The main tasks I juggle are drop
   >
   > offs/pickups, meal prepping, time management, shopping, and helping
   >
   > kids with homework/studying.

2. What are the biggest challenges you face in managing your daily tasks efficiently?

   - Time management

3. Currently, how do you organize and manage your daily tasks, schedules, and to-do

   lists?

   - Calendar and my phone

4. Are there any specific tools or apps you use to help you stay organized? If so,

   which ones and how effective have they been for you?

   - I don't currently use any apps. I mainly use my phone's note pad and
     reminders.

Technology Usage:

5. How comfortable are you with using technology and apps in your daily life?

- I'm comfortable using app or technology. I just haven't really looked for any apps to help.

6. Do you use any voice-activated devices or virtual assistants like Amazon Echo (Alexa) or Google Home? If yes, how do you use them?

- No. I haven't used any.

Preferences for Personal Assistant Software:

7. If you could have a personal assistant software tailored to your needs as a busy mom, what features would you find most valuable? Please describe these features.

- Reminders: just adding a task or appointment I don't want to forget.

- Calendar: just a regular calendar I can edit

- Planner: something similar to the calendar would be fine. Both wouldn't be needed.

8. How important is it for such software to seamlessly integrate with your existing tools and routines?

- It's very important for it to seamlessly fit into my daily routine if it's fulfilling a need to make things easier.

9. Privacy and security are essential when dealing with personal and family-related information. How concerned are you about the security and privacy aspects of a personal assistant software?

- Privacy and security is always important. I don't like when apps ask for my location because I don't always know what they will use it for so I

don't want to use an application or visit a website that will be collecting

my information to sell it.

Family and Social Aspects:

10. How do you currently manage your family's schedules, including your children's

activities, appointments, and school events?

• I have reminders feature on my phone but sometimes I use a paper planner.

11. Would you find it beneficial if the personal assistant software could help you

coordinate family schedules and activities more efficiently? If yes, in what ways?

• I guess so. If it had a way I could easily plan my day and not forget about

important tasks it would be helpful.

12. Do you connect with other busy moms for support, advice, or sharing resources? If

so, how do you currently do this, and how could a personal assistant software

enhance this aspect of your life?

• Absolutely! We talk on the phone and encourage each other and get advice from

each other. I'm not sure how an app could do it with my circle of family and

friends but it could have a community of moms that support each other and give

each other advice, ask questions, or chat with each other just in case you don't

have a circle of friends or family you connect with.

Future Expectations:

13. Looking ahead, what changes or improvements do you hope to see in the way you

manage your daily tasks and responsibilities as a busy mom?

• I just need to become more organized. I'm all over the place sometimes so I need

to focus on my time management and organizational skills to keep my family on

track and me less stressed.

14. How willing would you be to adopt and use a personal assistant software designed to

address your specific needs?

• I believe I would be willing if the software made me more efficient.

Closing:

Is there anything else you would like to share or any additional comments, suggestions, or

concerns regarding a personal assistant software for busy moms?

Thank You:

Thank you for taking the time to participate in this interview. Your insights will play a crucial

role in helping us create a valuable and user-friendly personal assistant software for busy moms.

Your input is highly appreciated.

Week One | Project Timeline: Personal Assistant Software for Busy Moms

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**In progress**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**In progress**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**In progress**
Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**Not Started**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**Not Started**
Create Database Design and Site Structure	10/05/23	11/20/23	**Not Started**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Not Started**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**Not Started**

Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**Not Started**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**Not Started**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Not Started**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**

Week Two | Project Timeline: Personal Assistant Software for Busy Moms

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**Complete**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**Complete**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**In progress**

Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**Not Started**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**Not Started**
Create Database Design and Site Structure	10/05/23	11/20/23	**Not Started**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Not Started**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**Not Started**
Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**Not Started**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**Not Started**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Not Started**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**

Week Three | Project Timeline: Personal Assistant Software for Busy Moms

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**Complete**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**Complete**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**Complete**
Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**In progress**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**In progress**
Create Database Design and Site Structure	10/05/23	11/20/23	**Not Started**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Not Started**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**Not Started**

Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**Not Started**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**Not Started**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Not Started**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**

Week Four | Project Timeline: Personal Assistant Software for Busy Moms

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**Complete**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**Complete**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**Complete**

Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**Complete**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**In progress**
Create Database Design and Site Structure	10/05/23	11/20/23	**In progress**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Not Started**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**Not Started**
Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**Not Started**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**Not Started**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Not Started**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**

Week Five | Project Timeline: Personal Assistant Software for Busy Moms

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**Complete**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**Complete**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**Complete**
Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**Complete**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**Complete**
Create Database Design and Site Structure	10/05/23	11/20/23	**Complete**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Complete**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**In progress**

Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**In progress**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**Not Started**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Not Started**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**

Week Six | Project Timeline: Personal Assistant Software for Busy Moms

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**Complete**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**Complete**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**Complete**

Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**Complete**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**Complete**
Create Database Design and Site Structure	10/05/23	11/20/23	**Complete**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Complete**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**Complete**
Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**In progress**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**In progress**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Not Started**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**

Week Seven | Project Timeline: Personal Assistant Software for Busy Moms

Task	Start	End	Status
Planning Phase 1: Project Initiation			
Define project scope, objectives, and stakeholders	8/31/23	10/15/23	**Complete**
Create a project proposal and secure necessary approvals	9/15/23	10/15/23	**Complete**
Allocate resources, including software development tools and infrastructure	9/15/23	10/15/23	**Complete**
Phase 2: Research and Analysis			
Conduct user interviews and surveys to gather requirements (30 minutes each day)	9/20/23	10/20/23	**Complete**
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	**Complete**
Study existing personal assistant software and competitors and identify gaps and opportunities in the market	9/20/23	10/20/23	**Complete**
Phase 3: Design and Prototyping			
Create Personas, Storyboard and User Task Lists	10/05/23	11/20/23	**Complete**
Create Database Design and Site Structure	10/05/23	11/20/23	**Complete**
Develop a prototype of the software and conduct a usability testing and refine the design based on feedback (30 minutes each day)	10/05/23	11/20/23	**Complete**
Prepare the design and feature specifications for development (30 minutes each day)	10/05/23	11/20/23	**Complete**

Phase 4: Development			
Backend Development: Set up the backend infrastructure. Develop database. (40 minutes each day)	10/20/23	12/12/23	**In progress**
Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/12/23	**Complete**
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/01/23	12/12/23	**Complete**
Phase 5: Deployment			
Submit Final Report			**12/14/2023**
Present Presentation			**12/14/2023**
Turn in Capstone Project			**12/14/2023**