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Final Report

Capstone Project Proposal

Mercer University | Fall 2023



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Executive Summary

Project Title: Personal Assistant Software for Busy Moms

Overview:

This project aims 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.

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.

Background

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.

Importance

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.

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.
2. **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.

3. **Distribution:** Distribute the online survey through email and ensure ease of access and user-friendliness.
4. **Data Collection:** Collect responses over a defined period, ensuring data integrity and anonymity.
5. **Data Analysis:** Use statistical software to analyze the quantitative data.
6. **Findings:** Summarize the survey results, highlighting significant findings, trends, and patterns.
7. **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.

Task List

1. Lisa wants to sign up for an account
2. Lisa wants to sign into to her account
3. Lisa wants to create a reminder
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 reminder
10. Lisa wants to edit a reminder

Project Planning

Task	Start	End	Status
Planning I: Planning Phase			
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	In progress
Analyze collected qualitative and quantitative data (30 minutes each day)	9/20/23	10/20/23	Not started
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 wireframes and user interface mockups (45 minutes each day)	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	In progress
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	12/10/23	Not started

Frontend Development: Begin coding the user interface and user experience (30 minutes each day)	10/20/23	12/1/23	In progress
Integration Testing: Conduct comprehensive testing, including functionality, security, and performance testing (30 minutes each day)	12/1/23	12/15/23	Not started
Phase 5: Deployment			
Submit Final Report	10/5/23	10/12/23	In progress
Present Presentation	10/12/23	10/12/23	In progress
Turn in Capstone Project			

This project plan is designed to ensure a seamless, user-focused journey from initial research to a successful public release. By conducting thorough user research, iterative testing, and user-centric development, we are well-equipped to create a transformative personal assistant software tailored to the unique needs of busy moms. Our commitment to addressing challenges and managing risks ensures that the project proceeds with efficiency and precision.

References

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<https://www.usability.gov/what-and-why/user-experience.html>

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