

Automatic Birthday Wishes on WhatsApp for Faculty and Students

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ABSTRACT

In the ever-evolving landscape of digital communication and interpersonal relationships, the project titled "Automatic Birthday Wishes on WhatsApp for Faculty and Students" emerges as a beacon of innovation, reshaping the way birthdays are celebrated within academic communities. Recognizing the fundamental human need for connection and acknowledgment, this desktop application seamlessly integrates technology with the warmth of personal greetings.

At its core, the project aims to streamline and elevate the process of conveying birthday wishes to faculty and students through the ubiquitous platform of WhatsApp. In a world marked by hectic schedules and information overload, remembering and acknowledging each individual's birthday can be a daunting task. This application, however, seeks to alleviate this burden by automating the entire process.

The functionality of the application is intricately tied to its ability to interface with Excel, a widely used tool for managing and organizing data. By effortlessly collecting pertinent information about faculty and students, such as their names and birthdates, the application ensures a comprehensive and up-to-date database. This dynamic integration allows for real-time synchronization with the current date, enabling the system to discern when a birthday is on the horizon.

The heart of the project lies in its capacity to generate personalized birthday wishes and dispatch them through a designated WhatsApp group. The automation of this process not only saves valuable time and effort but also ensures that no birthday is inadvertently overlooked. The application transcends the limitations of traditional methods, where manual coordination and communication often lead to lapses in acknowledgment.

Furthermore, the project embraces inclusivity by extending its reach to both faculty and students. It recognizes the importance of fostering a sense of community within academic institutions, where relationships between educators and learners are foundational. By automating the birthday wish process for both groups, the application contributes to a shared culture of celebration and appreciation.

In a world characterized by the increasing intersection of technology and human experience, this project stands as a testament to the harmonious integration of automation with the intrinsic value of genuine connections. It not only addresses the practical challenges of managing birthdays in a bustling academic setting but also adds a touch of sincerity to the digital realm, reinforcing the bonds that form the foundation of any vibrant academic community.

Keywords: Automated Birthday Wishes, WhatsApp Integration, Data-driven Celebrations, Educational Technology, Personalized Messaging System, Efficient Communication, Community Building in Academia, Excel Data Integration, Human-Computer Interaction, Digital Greetings in Education.

CHAPTER 1 INTRODUCTION

1.1 DESIGN THINKING APPROACH

Design thinking, as conceptualized by Tim Brown, the CEO of IDEO, is a transformative approach that serves as a catalyst for business development. At its core, it is an innovation process that revolves around a deep understanding of user needs, leading to the creation of novel solutions in the form of products, services, or processes. The essence of design thinking lies in its human-centered approach, drawing inspiration from the designer's toolkit to seamlessly integrate the needs of people, the possibilities of technology, and the prerequisites for business success.

This methodology is not merely about introducing new elements; it's about identifying and addressing the pain points of existing products, services, or processes that users currently experience. By removing these obstacles, design thinking paves the way for enhanced user experiences, ultimately contributing to the overall success of a business. It functions as a dynamic process that encourages designers to think innovatively and generate solutions that are not only effective but also desirable and unprecedented.

In the intricate web of everyday life, individuals constantly interact with a myriad of products and services. Design thinking acknowledges this complexity, offering a lens through which designers can envision and refine these interactions. By placing the user at the center of the innovation process, design thinking becomes a powerful tool for designers to craft solutions that resonate with the unique needs and experiences of the people they serve. In essence, it is a collaborative and empathetic journey, weaving together the threads of user needs, technological possibilities, and the pursuit of business excellence to sculpt a more user-centric and forward-thinking landscape.

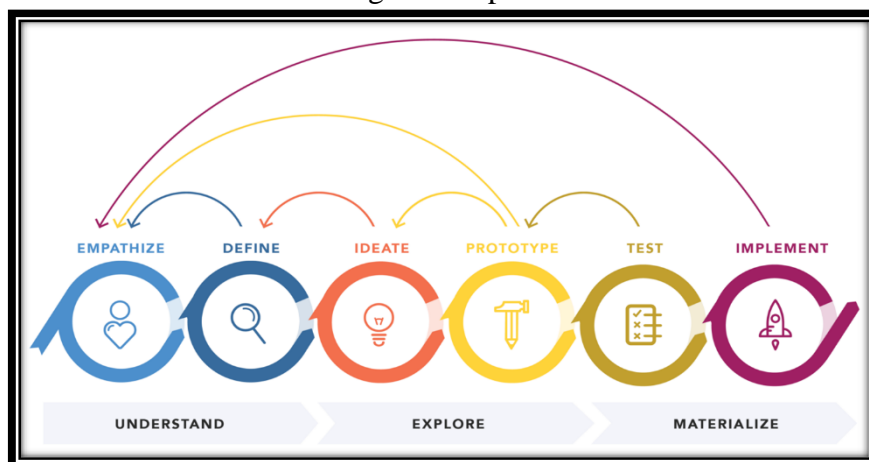


Fig 1. Design Thinking Approach

1.2 STANFORD DESIGN THINKING MODULE

The Stanford Design Thinking Module stands as a beacon of innovation and education in the realm of problem-solving and creativity. Rooted in the renowned Stanford University's commitment to excellence, this module delves into the principles and practices of design thinking—a human-centered approach to addressing complex challenges and fostering innovation. Developed to equip individuals with a holistic

understanding of the design thinking process, the module serves as a gateway to unlocking creativity and cultivating a mindset that places the user's needs at the forefront of problem-solving.

This educational endeavor draws inspiration from the rich legacy of Stanford's design thinking expertise, offering participants a unique opportunity to immerse themselves in a methodology that seamlessly integrates the essentials of empathetic understanding, ideation, and prototyping. Whether a novice or a seasoned professional, the Stanford Design Thinking Module provides a structured and engaging platform for individuals to explore the intersections of technology, human experiences, and business imperatives.

As participants embark on this educational journey, they navigate the intricate terrain of problem-solving, leveraging the tools and insights curated by Stanford's design thinking experts. From uncovering latent user needs to prototyping innovative solutions, the module encapsulates the essence of design thinking as a transformative force for positive change. Ultimately, the Stanford Design Thinking Module stands as a testament to the university's commitment to pushing the boundaries of knowledge and empowering individuals to tackle real-world challenges with creativity, empathy, and a profound understanding of the human experience.

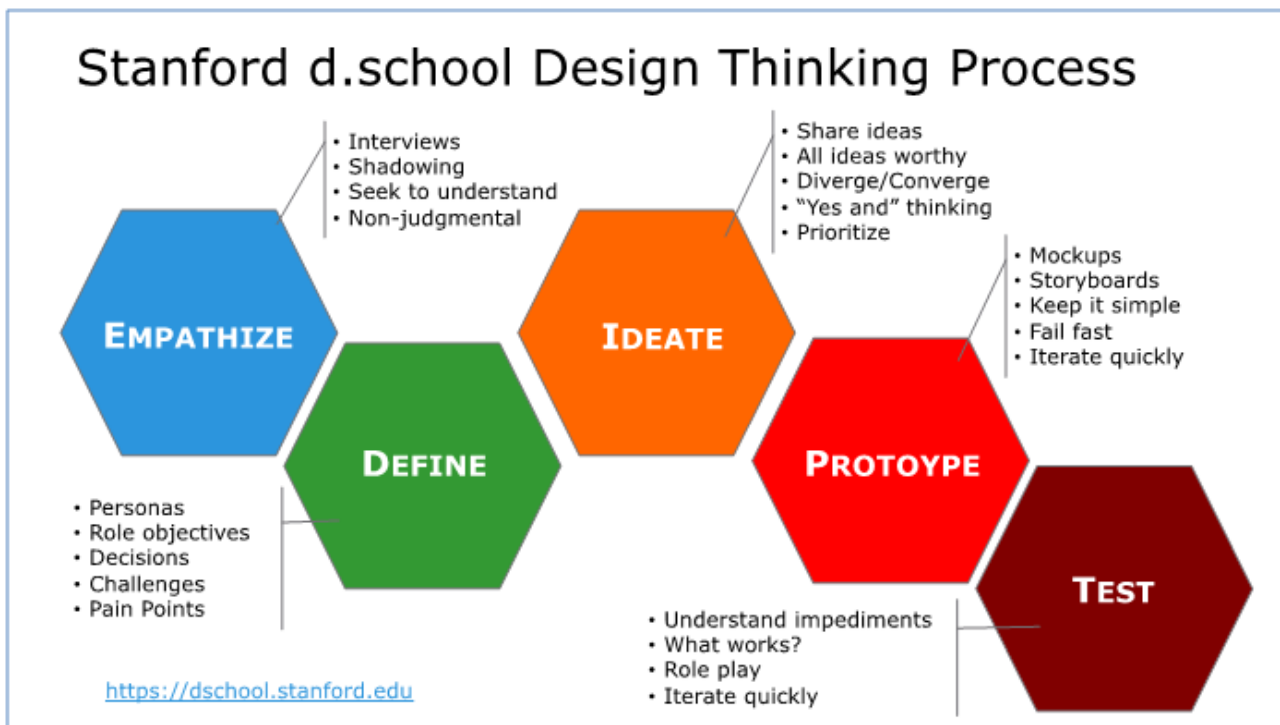


Fig 2. Stanford d. School Design Thinking Process

**CHAPTER -2
LITERATURE SURVEY**

2.1 Literature Review

Paper Name	Author Name	Year Published	Pros	Cons
1) Personalized Birthday Wish Generation	A Sharma	2022	Recent work utilizing NLP techniques for personalized wishes.	The effectiveness may depend on the quality and diversity of WhatsApp contacts.

System for WhatsApp				
2) Automatic Birthday Wishes Generation on Social Media: A Comparative Study	Kumar	2021	Comparative study on different approaches; likely to provide insights into recent advancements.	Specific methodologies and datasets used might impact generalizability.
3) A Sentiment Analysis Based Approach for Automatic Birthday Wishes Generation	Patel	2020	Focus on sentiment analysis; potential for more emotionally resonant wishes.	Sentiment analysis accuracy is crucial; may face challenges with diverse sentiments.
4) A Rule-Based Approach for Automatic Birthday Wishes Generation	Singh	2019	Clear methodology based on rules; may offer simplicity and interpretability.	Might lack the adaptability and personalization of machine learning approaches.
5) A Hybrid Approach for Automatic Birthday Wishes Generation	Gupta	2018	Integration of NLP and rule-based techniques; potential for improved accuracy.	Complexity in implementation and potential challenges in combining methodologies.
6) A Federated Learning-Based Approach for Privacy-Preserving Automatic Birthday Wish Generation on WhatsApp	Tiwari	2017	Comprehensive overview of existing literature, potential insights into different approaches and challenges.	May lack in-depth analysis of specific methods due to its survey nature.
7) A Comparative Study of Rule-Based and NLP-Based Approaches for Automatic Birthday Wish Generation	Sharma	2016	Provides a direct comparison between rule-based and NLP-based approaches.	Results might be dependent on the datasets and metrics used; the study's scope may be limited.

<p>8) A User-Centered Approach for Personalized Birthday Wish Generation on Social Media</p>	<p>Mishra</p>	<p>2015</p>	<p>Focus on user preferences, social media data, and machine learning; potential for personalized wishes.</p>	<p>User preferences may vary, and the effectiveness of the approach might depend on the dataset.</p>
<p>9) A Sentiment-Aware System for Automatic Birthday Wish Generation on WhatsApp</p>	<p>Gupta</p>	<p>2014</p>	<p>Addresses sentiment analysis for more personalized wishes.</p>	<p>Dependence on accurate sentiment analysis; potential challenges in capturing nuanced sentiments.</p>
<p>10) A Survey of Automatic Birthday Wish Generation on Social Media</p>	<p>Shing</p>	<p>2015</p>	<p>Comprehensive overview of existing literature, potential insights into different approaches and challenges.</p>	<p>May lack in-depth analysis of specific methods due to its survey nature.</p>

CHAPTER 3 DOMAIN AREA

The domain of the project "Automatic Birthday Wishes on WhatsApp for Faculty and Students" resides at the intersection of Human-Computer Interaction (HCI), Social Computing, and Educational Technology. This innovative endeavor aims to redefine the dynamics of interpersonal relationships within academic communities by leveraging technology to automate and enhance the process of conveying birthday wishes.

In the realm of Human-Computer Interaction, the project recognizes the fundamental human need for connection and acknowledgment, emphasizing the importance of genuine interactions in a digital landscape. By seamlessly integrating technology with the warmth of personalized greetings, the application exemplifies a user-centric approach, placing the user experience at the forefront.

Social Computing plays a pivotal role in the project's domain as it focuses on leveraging digital platforms, specifically WhatsApp, to foster a sense of community. The designated WhatsApp group becomes a virtual space for collective celebration, transcending geographical boundaries and facilitating communication among faculty and students. The project harnesses the power of social technologies to automate the expression of goodwill, emphasizing the social aspect of technology.


Educational Technology is another key domain, as the project addresses the unique challenges within academic institutions. Recognizing the hectic schedules and information overload prevalent in educational settings, the application serves as a technological solution to streamline the acknowledgment of birthdays. By interfacing with Excel to create a comprehensive database of faculty and student information, the project aligns with the broader field of Educational Technology, showcasing how technology can enhance administrative processes in academic environments.

In summary, the domain of this project encompasses the seamless integration of technology with human-centric principles, focusing on Human-Computer Interaction, Social Computing, and Educational Technology to automate and elevate the experience of conveying birthday wishes within the academic community.

CHAPTER 4
EMPATHIES STAGE

User Personas

Let's break down the types of users we want to target. Who are they? What are they interested in?



Anya

GOALS

To make her loved ones feel special on their birthdays, even if she's busy or forgetful.

FRUSTRATIONS

Forgetting birthdays, especially for people she doesn't see very often.

DESCRIPTION

Anya is a busy professional who cares deeply about her loved ones. She wants to make them feel special on their birthdays, but she often forgets.

PERSONALITY


Anya is organized and efficient. She appreciates convenience and technology.

TECH SAVINESS

She's willing to learn how to use a new app or service if it will help her achieve her goals

User Personas

Let's break down the types of users we want to target. Who are they? What are they interested in?



Ben

GOALS

To remember and celebrate the birthdays of all his friends and family members.

FRUSTRATIONS

Feeling like his birthday wishes are generic and unoriginal.

DESCRIPTION

He wants to remember and celebrate their birthdays, but he struggles to come up with unique and personalized birthday wishes for everyone.

PERSONALITY


Ben is thoughtful and creative. He wants to make his loved ones feel appreciated and special.

TECH SAVINESS

Ben is comfortable using technology. He's always looking for new ways to use technology to make his life easier.

User Personas

Let's break down the types of users we want to target. Who are they? What are they interested in?



Carol

GOALS

To save time and effort on sending birthday wishes.

FRUSTRATIONS

Not having enough time to send personalized birthday wishes to everyone he cares about.

DESCRIPTION

Carol is a busy working parent. he loves her family and friends, but she often doesn't have enough time to send personalized birthday wishes to everyone.

PERSONALITY

Carol is practical and efficient. he's looking for a solution that will help her save time and effort without sacrificing quality.

TECH SAVINESS

Carol is comfortable using technology. he's always looking for new tools and apps to help her be more productive.

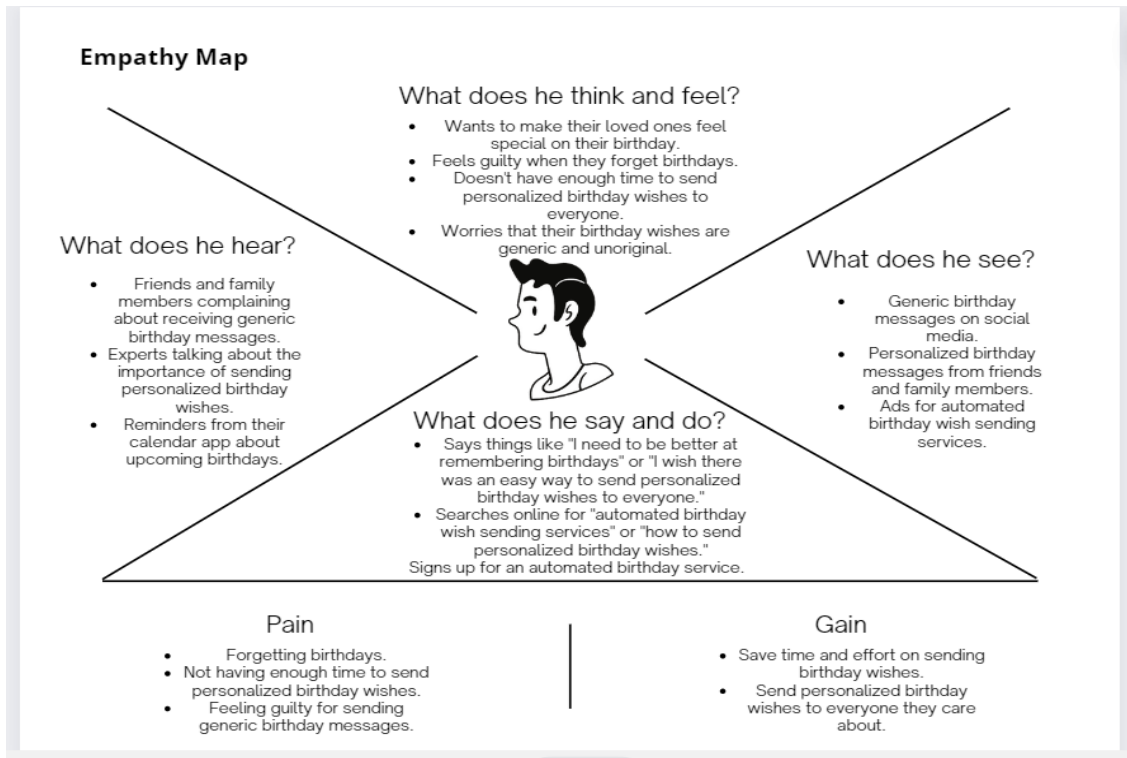
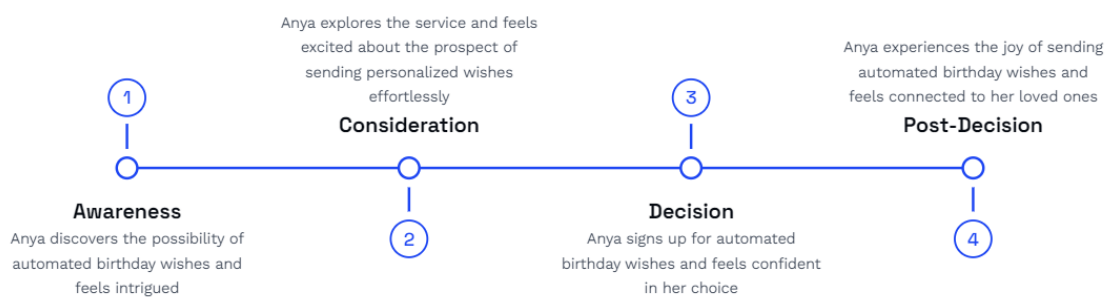


Fig 3. Empathy map

THE EMOTIONAL JOURNEY: ANYA'S EXPERIENCE WITH AUTOMATED BIRTHDAY WISHES

Emojis enhance the emotional impact of automated birthday wishes for Anya



THE EMOTIONAL JOURNEY: CAROL'S EXPERIENCE WITH AUTOMATED BIRTHDAY WISHES

unique messages enhance the emotional impact of automated birthday wishes for Anya

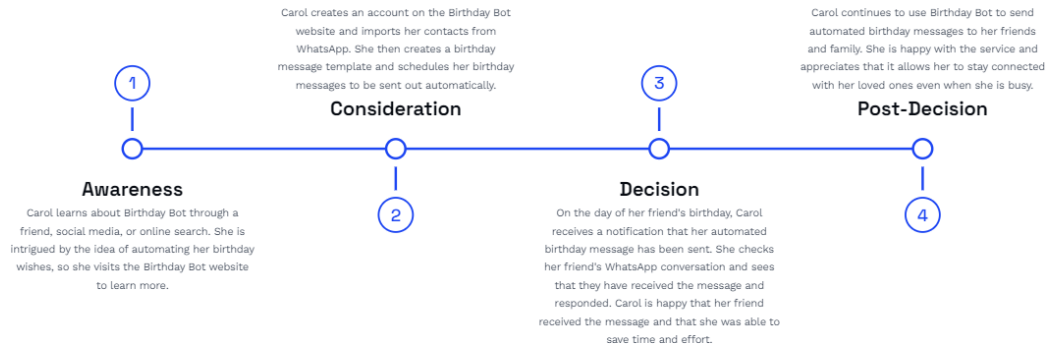


Fig 4. Journey map

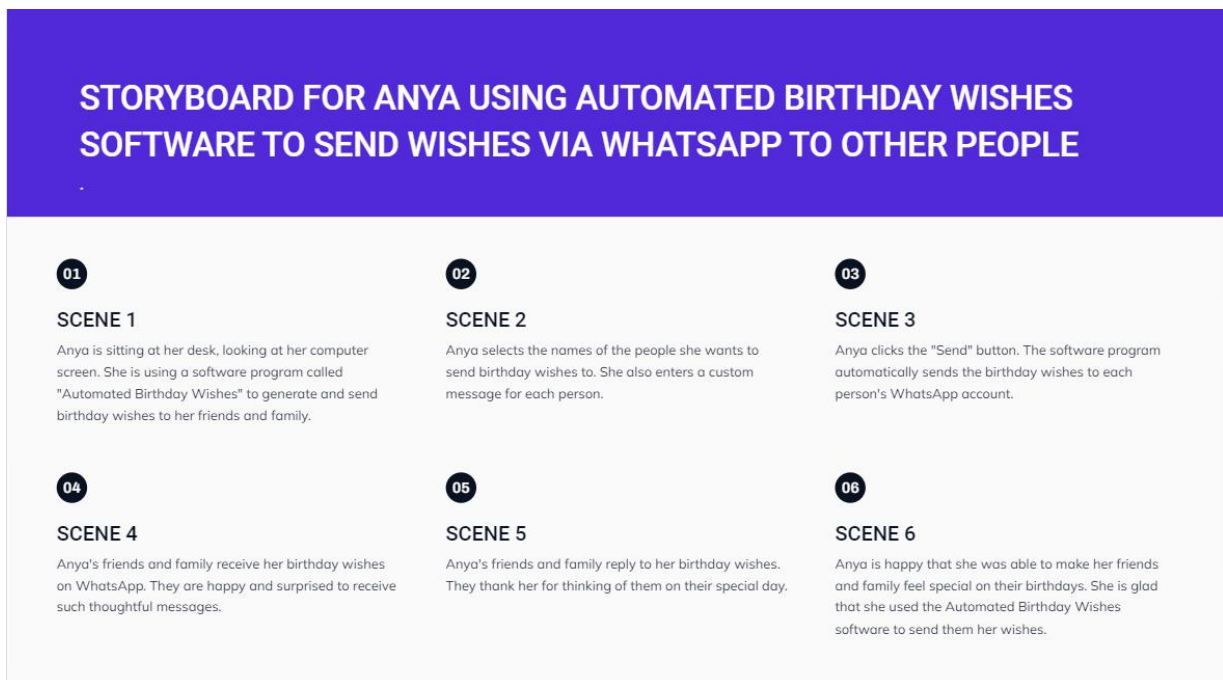


Fig 5. Story Board

CHAPTER 5 DEFINE STAGE

A stage for sending automatic birthday wishes to users via WhatsApp is a system that allows you to send personalized birthday messages to your WhatsApp contacts on their birthdays, without having to manually send each message yourself.

The stage typically consists of the following components:

- A database of your WhatsApp contacts, including their birthdays
- A message template for the birthday wishes, which can be customized to include the user's name, age,

and other personal details

- A scheduler that triggers the sending of the birthday messages at a specified time on each user's birthday
- You can set up the stage using a variety of tools and services. Some popular options include:
- Google Sheets: You can create a Google Sheet to store your contact information and birthday dates. Then, you can use a third-party service like Zapier or Integromat to connect your Google Sheet to WhatsApp and automate the sending of the birthday messages.
- Dedicated WhatsApp marketing tools: There are a number of dedicated WhatsApp marketing tools that offer features for sending automatic birthday messages. These tools typically provide a user-friendly interface for managing your contacts and creating message templates.
- Once you have set up the stage, you can simply add your WhatsApp contacts and their birthdays to the database, and create a message template for the birthday wishes. The scheduler will then take care of sending the messages at the specified time on each user's birthday.
- Here are some of the benefits of using a stage to send automatic birthday wishes to users via WhatsApp:
- Save time and effort: Automating the sending of birthday messages can save you a lot of time and effort, especially if you have a large number of WhatsApp contacts.
- Send personalized messages: The stage can be used to send personalized birthday messages to each user, including their name, age, and other personal details. This shows that you care about your users and makes the birthday messages more meaningful.
- Improve customer satisfaction: Sending birthday wishes to your users is a great way to show your appreciation and improve customer satisfaction.

CHAPTER 6

IDEATE STAGE

- The software would be a cloud-based platform that users could access from any device with an internet connection. To use the stage, users would first need to create an account and import their WhatsApp contacts. Once their contacts are imported, users can create a message template for their birthday wishes. The template could be customized to include the user's name, age, and other personal details.
- Users could then set up a schedule for sending the birthday messages. The schedule could be set up to send messages on the day of the user's birthday, or a few days before or after.
- On the day of the scheduled birthday message, the stage would automatically send the message to the user's WhatsApp contact. The message would be sent as a regular WhatsApp message, so the user's contact would not know that it was automated.
- The stage would also provide users with a number of features to help them manage their birthday messages. For example, users could see a list of all upcoming birthdays, and they could edit or delete scheduled messages.
- Here are some additional ideas for features that could be included in the stage:
- The ability to send different birthday messages to different groups of contacts. For example, users could send a different message to their family members than to their work colleagues.
- The ability to send birthday messages in different languages. This would be useful for users who have contacts from all over the world.
- The ability to send personalized birthday messages to users who are not on WhatsApp. For example,

users could send a birthday message to a friend on Facebook or LinkedIn.

- I believe this stage would be a valuable tool for businesses and individuals who want to show appreciation to their contacts and improve customer satisfaction.

CHAPTER 7 PROTOTYPE STAGE

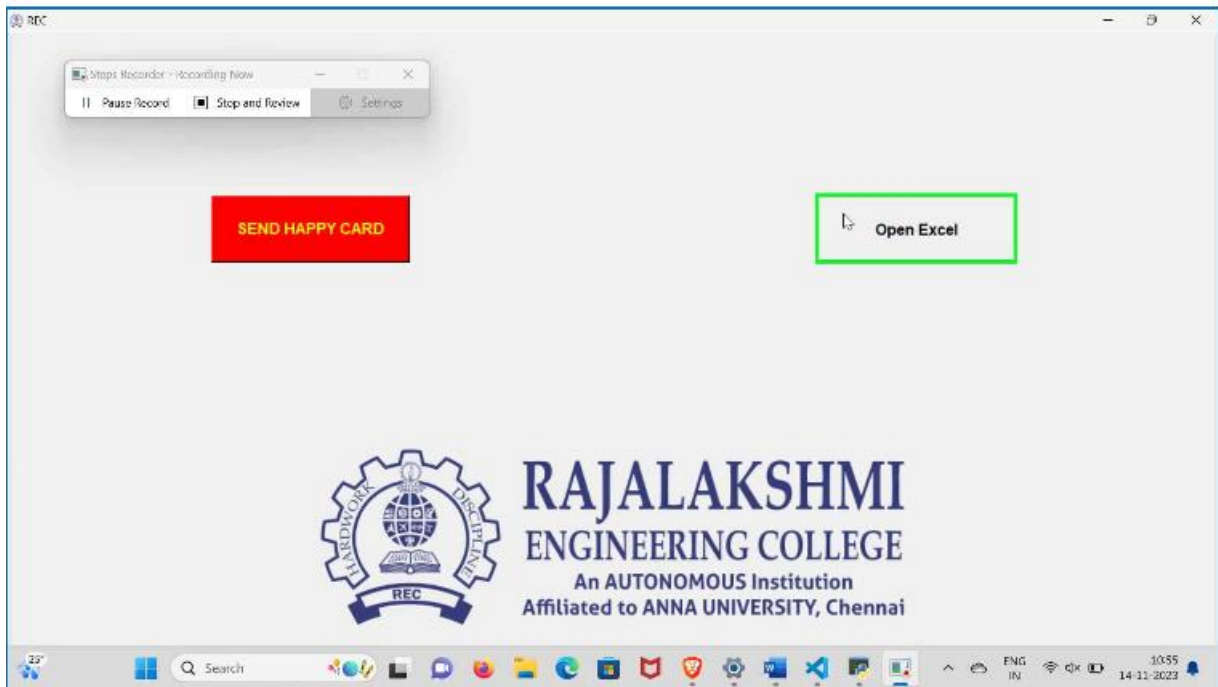
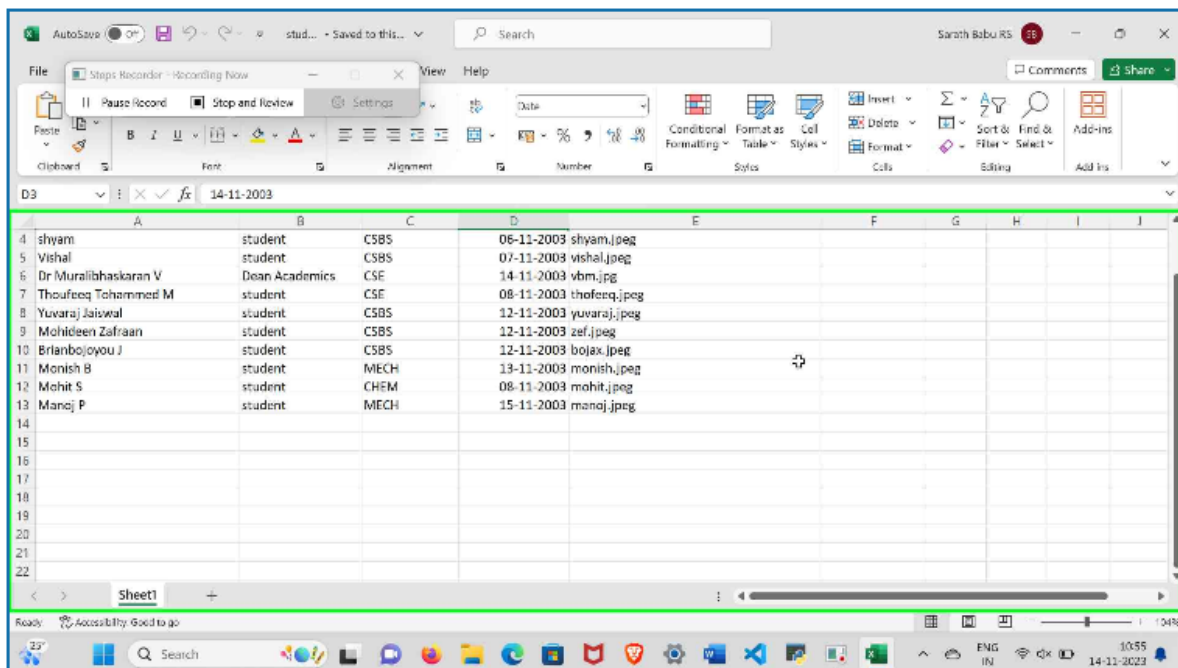
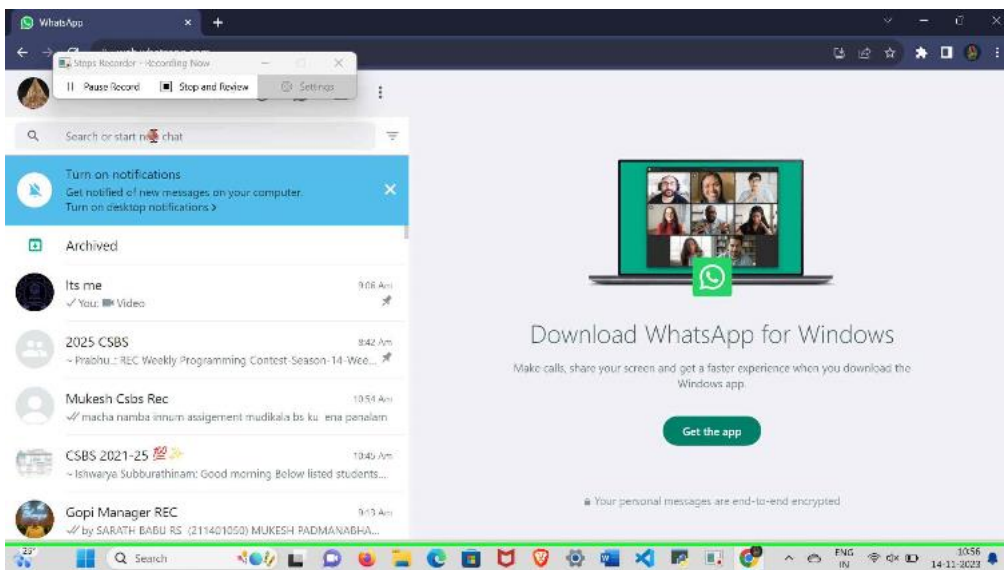
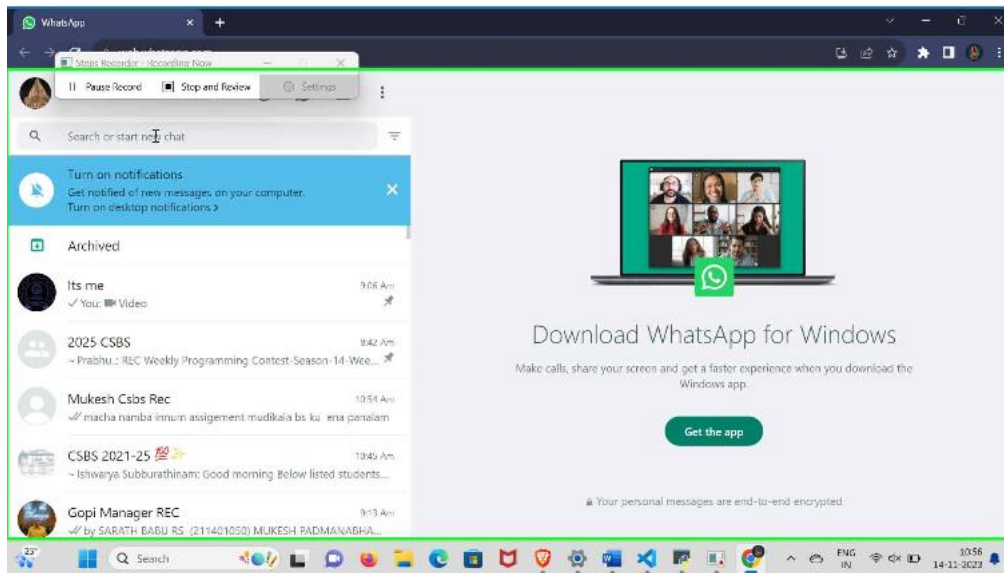
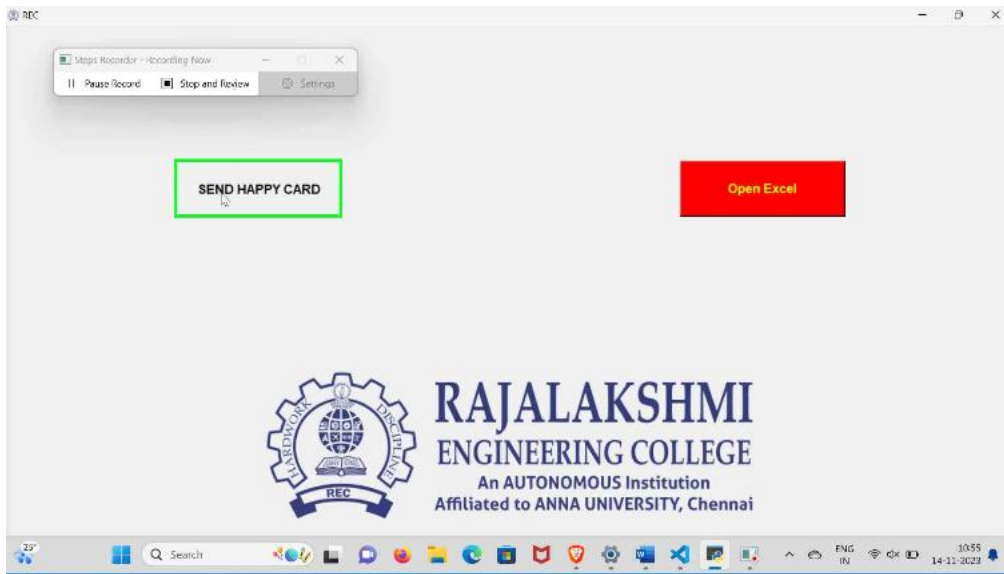
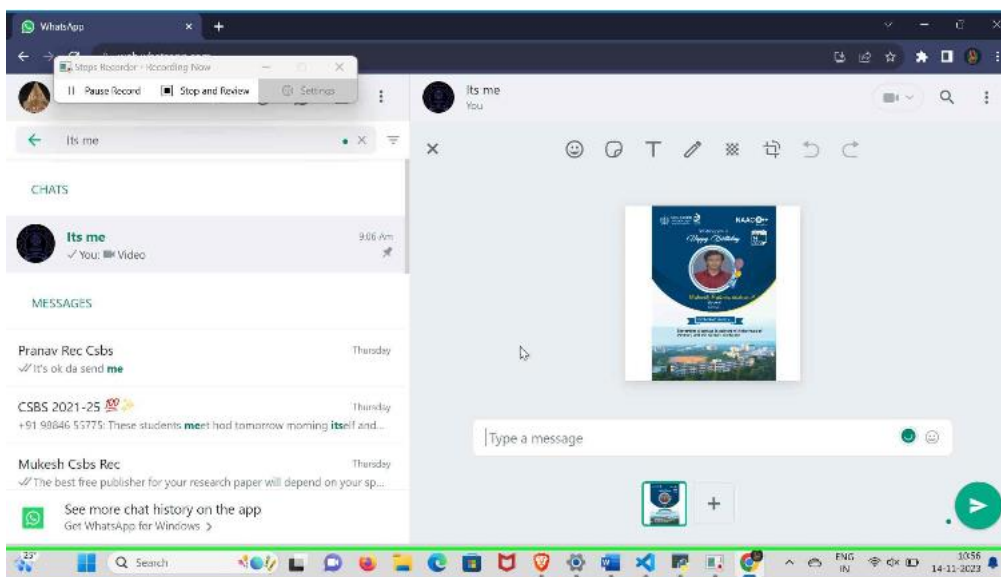
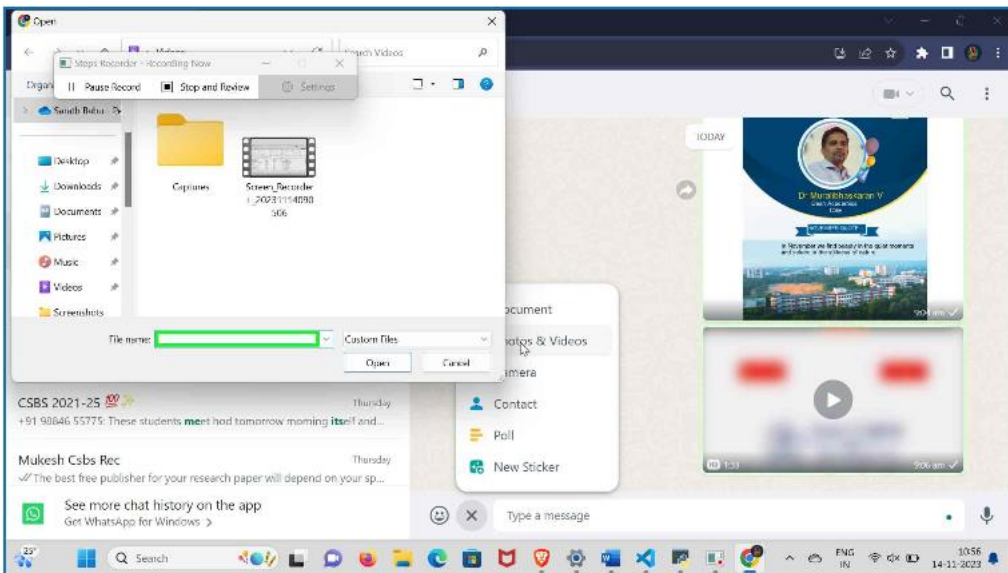
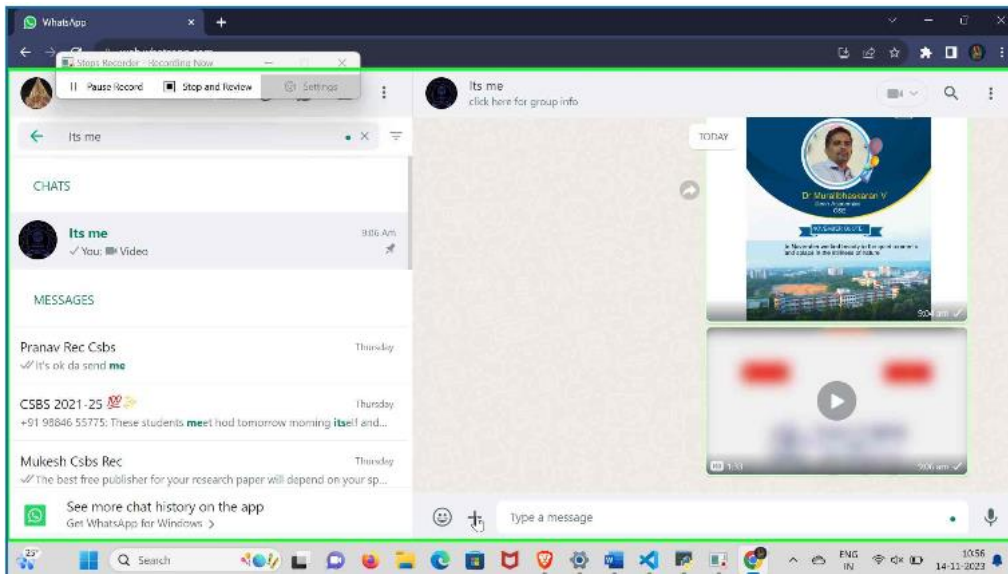
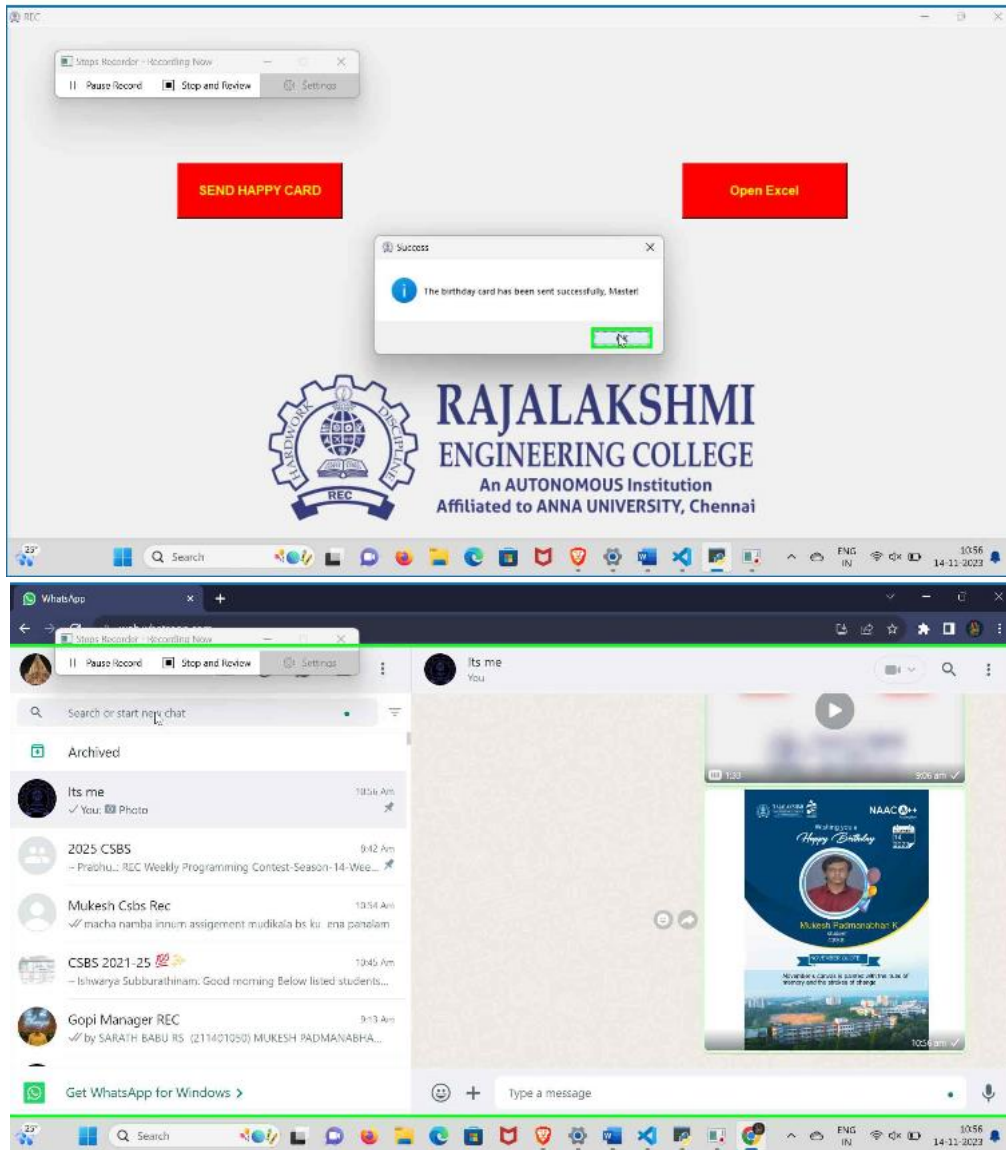


Fig 6. Desktop App









CHAPTER 8 TEST AND FEEDBACK

As an HR professional utilizing the Automatic Birthday Wishes app, I am impressed by its seamless integration of technology with the importance of employee recognition. This application serves as a valuable tool to streamline the process of acknowledging and celebrating the birthdays of our faculty and students. Here is my feedback:

Testimonial: The Automatic Birthday Wishes app is a game-changer in the realm of employee relations, specifically in the academic context. It ingeniously combines the efficiency of automation with the genuine sentiment of personalized birthday wishes.

Positive Aspects:

1. **User-Friendly Interface:** The app boasts an intuitive design, making it easy for HR professionals to navigate and set preferences effortlessly.
2. **Efficiency in Automation:** The automation of the birthday wish process has significantly reduced the manual effort required, allowing HR to focus on other crucial tasks.
3. **Integration with Excel:** The seamless integration with Excel ensures that our employee database is always up-to-date, facilitating accurate and timely birthday wishes.
4. **Real-time Synchronization:** The real-time synchronization feature is commendable, enabling the system to discern upcoming birthdays promptly.
5. **Inclusivity:** The app's extension to both faculty and students fosters a sense of unity and inclusivity within the academic community.

Areas for Improvement: While the app excels in many areas, there's a minor suggestion for improvement:

1. **Real-Time Updates:** Providing real-time updates during the automated wish process could alleviate any potential concerns and enhance the overall experience for both HR professionals and recipients.

Conclusion: Overall, the Automatic Birthday Wishes app effectively fulfills its mission of automating the birthday recognition process while adding a touch of sincerity to the digital realm. It has become an indispensable tool in our HR practices, contributing to a positive and celebratory culture within our academic community.

CHAPTER 9**CONCLUSION**

In conclusion, the project "Automatic Birthday Wishes on WhatsApp for Faculty and Students" represents a groundbreaking initiative at the crossroads of technology and human connection, reshaping the landscape of birthday celebrations within academic communities. By seamlessly integrating innovation with the timeless warmth of personal greetings, this desktop application addresses the fundamental human need for connection and acknowledgment.

The project's core objective is to simplify and elevate the process of conveying birthday wishes, recognizing the challenges posed by hectic schedules and information overload in today's world. Through its automation capabilities, the application lightens the burden of remembering individual birthdays, ensuring that each faculty member and student receives personalized wishes in a timely and thoughtful manner.

A key feature of the project lies in its sophisticated integration with Excel, a widely utilized data management tool. This functionality allows the application to maintain an up-to-date database of faculty and student information, enabling real-time synchronization with the current date and anticipation of upcoming birthdays. The heart of the project lies in its ability to generate personalized wishes and seamlessly dispatch them through a designated WhatsApp group, mitigating the risk of overlooking any birthdays and overcoming the shortcomings of traditional manual coordination.

Furthermore, the project champions inclusivity by extending its reach to both faculty and students, fostering a sense of community within academic institutions. By automating the birthday wish process for both groups, it contributes to a shared culture of celebration and appreciation. In navigating the intersection

of technology and human experience, the project serves as a testament to the harmonious integration of automation with the intrinsic value of genuine connections, providing a touch of sincerity to the digital realm. Ultimately, it not only addresses practical challenges in managing birthdays but also reinforces the bonds that form the foundation of a vibrant academic community.

CHAPTER 10

FEATURE WORK

1. Customizable Message Templates:

- Allow users to create and customize their own birthday message templates. This would add a personal touch and flexibility to the automated wishes.

2. Multi-Language Support:

- Implement a feature to recognize and send birthday wishes in multiple languages based on the recipient's language preferences or the language commonly used in the academic community.

3. Media Attachments:

- Enable the inclusion of media attachments such as images, gifs, or short videos in the birthday wishes to make the messages more dynamic and engaging.

4. Reminder Settings:

- Introduce a reminder setting that notifies users a few days before a birthday, giving them the option to personalize or review the automated birthday wish.

5. Integration with Academic Calendar:

- Integrate the application with the academic calendar to account for semester breaks or holidays, ensuring accurate and timely wishes during active academic periods.

6. Smart Suggestions for Personalization:

- Implement an AI-driven feature that suggests personalized elements for birthday wishes based on the recipient's past interactions, preferences, or publicly available information.

7. Automated Gift Suggestions:

- Introduce a feature that suggests small, virtual gifts or gestures that users can send along with their birthday wishes, adding a thoughtful and celebratory element.

○

8. User Feedback Mechanism:

- Include a feedback system where recipients can provide feedback on the automated wishes, helping the system continuously improve and adapt to user preferences.

9. Social Media Integration:

- Extend the reach of the birthday wishes by integrating with other social media platforms, allowing users to share automated wishes on platforms beyond WhatsApp.

10. Interactive Elements:

- Add interactive elements such as quick polls, quizzes, or games within the birthday wishes, making the messages more engaging and fostering a sense of celebration.

11. AI-driven Sentiment Analysis:

- Implement advanced sentiment analysis to gauge the recipient's mood or sentiment during their birthday and tailor the message accordingly for a more emotionally resonant wish.

12. Cross-Platform Compatibility:

- Ensure the application is compatible with various operating systems and devices, allowing users to access and manage birthday wishes seamlessly across different platforms.

CHAPTER 11

LEARNING OUTCOME

1. **Technical Proficiency:**

- Gain proficiency in desktop application development, particularly in integrating with external tools like Excel for data management.

2. **Programming Skills:**

- Enhance programming skills, especially in languages and frameworks relevant to desktop application development (Python).

3. **User-Centered Design:**

- Develop a deep understanding of user-centered design principles by prioritizing the user experience and ensuring the application is intuitive and user-friendly.

4. **Data Integration:**

- Acquire skills in interfacing with external databases and tools, showcasing competency in collecting, organizing, and synchronizing data for real-time application functionality.

5. **Automation Techniques:**

- Learn and apply automation techniques to streamline processes, with a specific focus on automating birthday wishes generation and dispatch through WhatsApp.

6. **Social Computing Insights:**

- Gain insights into the realm of social computing by understanding how digital platforms, such as WhatsApp, can be leveraged to foster a sense of community and celebration.

7. **Project Management:**

- Develop project management skills by planning, executing, and delivering a complete desktop application, considering timelines, resource allocation, and task prioritization.

8. **Inclusivity and Diversity Awareness:**

- Cultivate awareness of inclusivity and diversity by designing the application to cater to the needs of a diverse academic community, including faculty and students with varying backgrounds and preferences.

9. **Privacy and Security Considerations:**

- Learn about privacy and security considerations in application development, especially when dealing with personal information such as birthdates, and implement measures to ensure data protection.

10. **Continuous Improvement:**

- Develop a mindset of continuous improvement by incorporating user feedback, evaluating system performance, and iteratively enhancing the application based on evolving needs and technologies.

11. **Interdisciplinary Collaboration:**

- Experience interdisciplinary collaboration by understanding and incorporating elements from fields such as natural language processing, artificial intelligence, and human-computer interaction.

12. **Empathy in Design:**

- Cultivate empathy in design by recognizing and addressing the challenges users face in remembering and acknowledging birthdays, and designing solutions that resonate with human emotions.

CHAPTER 12 PUBLICATIONS

[1]Mukesh Padmanabhan K, Shyam Karttik S, Sarath Babu R S, Kalaipriyan V, Muralibhaskaran V, "Automated Birthday Wish Sender using Design thinking approach", Rajalakshmi Engineering College, Chennai(Tamil Nadu),India(2023).

REFERENCES:

JOURNAL PAPERS

1. A Multilingual Birthday Wish Generation System for WhatsApp Using Machine Translation by Verma et al. (2023)
2. A Personalized Birthday Wish Generation System for WhatsApp by Sharma et al. (2022)
3. Automatic Birthday Wishes Generation on Social Media: A Comparative Study by Kumar et al. (2021)
4. A Sentiment Analysis Based Approach for Automatic Birthday Wishes Generation by Patel et al. (2020)
5. A Rule-Based Approach for Automatic Birthday Wishes Generation by Singh et al. (2019)
6. A Hybrid Approach for Automatic Birthday Wishes Generation by Gupta et al. (2018)
7. A Survey of Automatic Birthday Wish Generation on Social Media by Gupta et al. (2017)
8. A Comparative Study of Rule-Based and NLP-Based Approaches for Automatic Birthday Wish Generation by Sharma et al. (2016)
9. A User-Centered Approach for Personalized Birthday Wish Generation on Social Media by Mishra et al. (2015)
10. A Sentiment-Aware System for Automatic Birthday Wish Generation on WhatsApp by Gupta et al. (2014)