Voice Based Mail System for Visually Challenged People

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Abstract -In today's world communication has become so easy due todevelopment of technologies. Anyway the outwardly tested individuals think that its hard to use this innovation since utilizing them requires a reasonable vision. Even though many new advancements have been implemented to help them use the computers efficiently, visually challenged people can't use this technology as efficiently as a normal user.This paper aims at developing an email system that will help even a visually impaired person to use the services for communication without previous training. The system will not let the user make use of the keyboard instead it will work only on voice response and speech conversion to text.Also this system can be used by any normal person and handicapped person. The system is completely based on voice responses which will make it user friendly for any person.

Key Words: Voicemail,STT,TTS conversions,

Communication.

1. INTRODUCTION

Internet has made the lives of individuals so natural that individuals today approach any data easily.Communication is one of the principle fields profoundly changed by the Internet. E-mails are the most formal way of communication over the Internet, for sending and receiving some important information related to business or any official. But there is a certain norm for humans to access the Internet and the norm is you must be able to see.But there are also differentlyabled people in our society. There are some visually impaired people or blind people who can't see things and thus can't see the computer screen or keyboard.The only way by which a visually challenged person can send an Email is, they have to speak the entire content of the mail to another person (not visually challenged) and then that third person will compose the mail and send on the behalf of the visually challenged person.. Yet, this is certainly not a correct method to manage the issue and it is likewise impractical that each time an outwardly impeded individual can discover somebody for help. So building up a mail framework utilizing voice reactions are required for the outwardly impeded individuals.

2. PROPOSED WORK

The main objective of the project is to help the visually impaired and the older people because the visually challenged people find it very difficult to utilize the technology because of the fact that using them requires vision. Inorder to access the internet everyone would need to know what is written on the screen. If that is not visible it is of no use. This makes web a totally futile innovation for the outwardly impeded and uneducated people..This shortcomings are eradicated by using Speech to text and text to speech conversions. Various tasks in mails also performed by voice input given by the user.Proper voice guidance is given to the user for making them convenient in using mail systems.
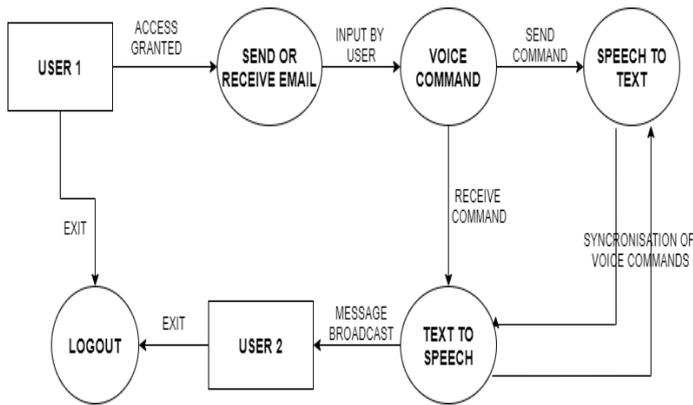
Figure-1. System Architecture

3.IMPLEMENTATION

The system includes the following modules

3.1.Login

If login module will ask user to provide username and password then there is no privacy and security to the user using it.so instead of speech to text conversion in this process ,the details for login are hard coded in the system.Once user opens the mail system it will automaticallydirect to the main page.

3.2.Compose Mail

A very important feature of mailing systems is composing a mail.Without compose, one cannot mail. Since the system is for visually challenged people and keyboard operations are completely avoided composing mail is totally done using voice response as inputs.Typed input is not required in this case.By using the speech-to-text technology the message given by the blind user gets converted to text and sent to the receiver side.

3.3.Inbox

This module contains the emails received from other users. Mails are arranged in sorted way on the basis of they received. The mails are saved in text format in inbox. These text mails

are converted into voice mail for user convenience. The system read out the recent unopened mail to the user.Additional details such as sender of the mail ,subject ,date and time information also given to the user through voice command.

3.4.Details of Mail in Inbox

This module is for giving useful information about the inbox to the user .It intimates the user about the total number of mails and number of unseen mails through voice command.According to the sorted order it gives the unseen mail number for easy reference .

3.5.Process Flow

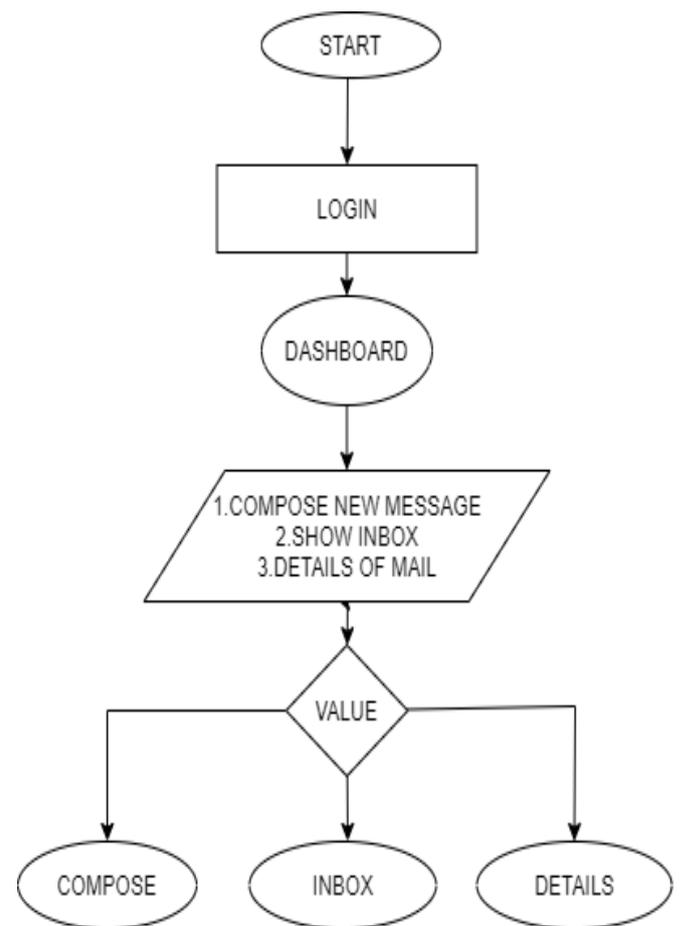The flow of the process in each module is characterized in a following flowchart

Figure-2.Flow chart

[6] Prashast Srivastava, Siddharth Bajpai, Rajat Pandey - Android application for partially blind people

4. FUTURE ENHANCEMENTS

Future enhancements include adding more features to the developed mailing system like trash,starred,draft attaching audio and filesand furthermore giving greater security to the user. Then they have to choose the receiver mail id explicitly to increase the overall efficiency of the system. The proposed system includes basic features like mail compose, sending a mail,receiving a mail and details of mails in inbox .So further features can also be added according to the need of the user in the forthcoming years.

5. CONCLUSION

Since email is the most important communication tool,making it is feasible through the voice input and commands will be helpful for the users who are visually challenged and for the older people.Eliminated the concept of using keyboard shortcuts along with screen readers which will help reduce the cognitive load of remembering keyboard shortcuts. The user may need to take care of in data through voice inputs only.This will also reduce cognitive load taken by blind to remember and type characters using keyboard. This helps the visually impaired individuals as well as helps disabled and elderly individuals.

REFERENCES

[1] Payal Dudhbale et.al - Voice based system in Desktop and Mobile devices.2018

[2] Pranjal Ingle , Harshada Kanade, Arti Lanke - Voice based e-mail System for Blinds.2016

[3] Gaurav Kumar Srivastava et.a -l Innovative and Secured User Authentication Methods for Novice Visually Impaired users.

[4] Divesh Jethani et.al- Multilingual Voice based Email System.2018

[5] Shruti Menon et.al - Voice Based Email System.2018