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VOICE BASED EMAIL FOR BLIND USING PYTHON

Ms.MUDIGANTI.DEEKSHITHA , Ms.NARAMANENI.BHAVYA ,
Mr.S.GOKULAKRISHNAN

B.E Graduate(IV year) Computer Science and Engineering,SCSVMV,Kanchipuram,
B.E Graduate(IV year) Computer Science and Engineering,SCSVMV,Kanchipuram,
Assistant Professor,Computer Science and Engineering,SCSVMV,Kanchipuram

ABSTRACT:-

One of the most extensively utilised modes of communication is email. In today's world, emails are used to convey sensitive and time-sensitive information There are around 253 million individuals worldwide who are blind or visually impaired. Communication is a challenge for many visually challenged individuals. Because technology is advancing at a rapid pace, persons who are visually impaired see themselves to be more challenged than ever before. The most crucial consideration in building this system is accessibility. Only when both able and disabled individuals can utilise a system is it considered accessible. The suggested project intends to create an email system that would allow even inexperienced visually impaired people to use communication services without prior training.
The user will not be able to use the keyboard, instead relying solely on mouse operation and speech-to-text conversion. It can be utilised by a non-blind individual who is having problems reading. The technology is entirely dependent on interactive voice response, making it extremely user-friendly.

Keywords: Speech to text converter, IVR (Interactive voice response), GUI (Graphical User Interfaces), SR (Speech_recognition), Gtts (Google Text To Speech)

I. INTRODUCTION

Technology is advancing at a rapid pace, making people's lives easier by allowing them to complete most tasks in less time and with more accuracy and efficiency. Communication is one of the professions that has advanced to the next level due to technological advancements and the availability of the Internet. Distance has become such a minor factor in communication as a result of technological advancements. Email is one of the most reliable methods for exchanging critical information, and it is also utilised globally; However, a person must be able to see in order to use the internet. Millions of individuals who are blind or visually impaired are unable to use the internet because they are unable to see the screen or keypad. In this way, they are very far away from email communication and internet world The current email system is inaccessible to these blind persons. they are unable to send and receive emails, as well as read the material shared by email; As a result, they are unable to use existing systems.
To access the internet, a person must be able to read what is printed on the screen, rendering internet technology worthless for visually impaired persons. A visually impaired person can only send an E-mail if they offer a third party the whole content of the message so that the third party may prepare and send the message on their behalf. This method, however, does not result in a solution to the problem. Finding a third person is not always possible for a visually impaired individual, and sometimes the content is personal in order to retain the

specifications' integrity. As a result, in order to assist these people and build society, authors devised this concept, which allows a visually impaired person to send and receive emails using voice commands rather than a keyboard or a visual device.

Disadvantages: Because existing systems do not offer voice commands or audio capabilities, they are unsuitable for visually impaired users.

Advantages: The most significant consideration in constructing the suggested system has been accessibility. It is a big advantage that the user does not need to use a keyboard. To start all activities, mouse click events will be used.

1.1 Scope of the Project:

To access the internet the person must be able to read what is written on the screen so, this makes internet useless technology for visually challenged people. There is only one way by which a visually challenged person can send an E-mail is, they have to tell the entire content of the mail to a third person so that the third person can compose the mail and send on the behalf of the visually challenged person. But this approach does not take us to the solution of the problem. Every time finding a third person is not possible for a visually challenged person and also sometimes the content can be personal, for maintaining the Integrity of the Specifications.

Therefore, for helping these people and developing society authors have come up with this idea that helps a visually challenged person by providing ability to send and receive emails throw voice commands without using any keyboard and visual thing.

1.2 Literature Survey:

To develop a voice-first email system that enables visually impaired persons to easily access email . In addition to making postal services more accessible and efficient, the method will reduce the psychological It takes a lot of work for visually impaired people to remember and sort characters on traditional Braille keyboards. which are accessible to them. The graphical user interface of this technology has been compared to the UI of the classic mail system Not only the visually handicapped, but even the illiterate, could benefit from this method. When constructing this approach, the most important thing to remember is that the people who will be using it have a certain level of expertise. no basic knowledge of the keyboard shortcuts used or where the keys are used for. All of the functions to be used in this technique are designed to be simple mouse click procedures, making the system very user pleasant. This app shows an Android app designed exclusively for persons who are blind or visually impaired. This programme provides a voice-based mailing solution that enables people to browse and send letters without the need for help. Users should employ terminology like Read, Send, Compose Mail, Address Book, and others to do specific tasks. This EMAIL system is used by a visually challenged individual to access emails easily and quickly. As a result, the visually impaired's dependency on others for his or her own mail-related activities is generally minimised.

II. PROJECT DESCRIPTION

2.1 Problem Statement:

The visually challenged people find it very difficult to utilize this technology because of the fact that using them requires visual perception. However not all people can use the internet. This is because in order to access the internet you would need to know what is written on the screen. If that is not visible it is of no use. This makes internet a completely useless technology for the visually impaired and illiterate people.

2.2 Proposed system:

The proposed system is based on a completely novel idea and is nowhere like the existing mail systems.

A web system is only efficient when all types of people/user can use whether able or disable. Thus the system we are developing is completely different from the current system.

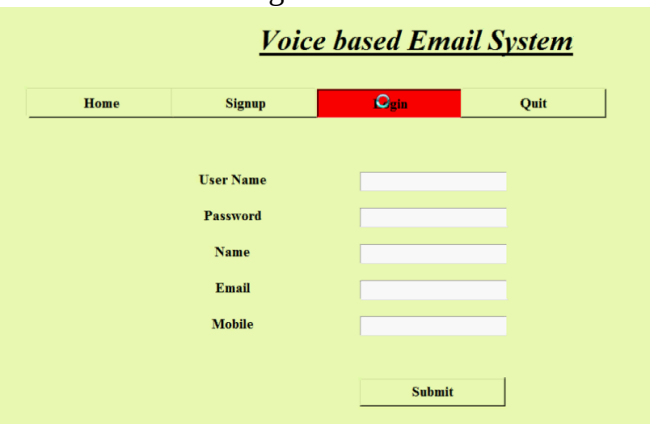
The proposed system focuses more on user friendliness of all types of people included normal people and

visually impaired people.
The complete system is based on IVR-interactive voice response. When using this system the computer will be prompting the user to perform specific operations to avail respective services he/she will have to perform operation.
In the proposed system, user free to click anywhere on the screen which type of click will perform which function will be specified by the IVR.
Also, because of IVR facility those who cannot read not worry as they can listen to the prompting done by the system and perform respective actions.

III. MODULES

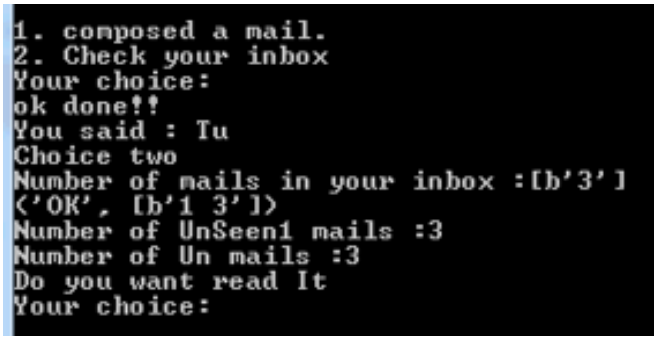
1. Authenticate to Gmail

User needs to get authenticated in Gmail with user name and password. Any number of user can use this application. User will be registered with user name and password for this application and they have to provide username and password of their own gmail account for further login.



2. Gtts and Speech recognition

Gtts is the library available for Google-speech-to text conversions. This modules helps in getting input from the microphone and converts the voice to text using speech recognition processing then give text input to the system. This application also uses speech_recognition library, which is useful in detecting the input voice and recognize it as text data.

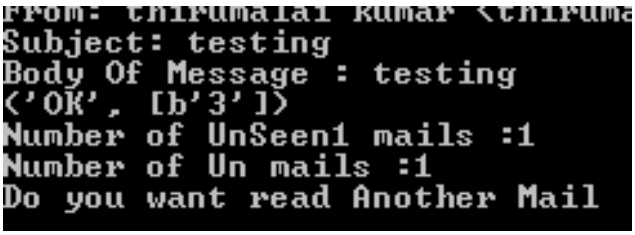


3. Compose Email

The user has to selection option 1 for read email and 2 for compose email. Compose email has three inputs such as recipient email id, subject of the email and body of the email. Once user gives all the inputs through voice, the speech recognition and gtts models gets information and process email to recipient.

4. Read Email

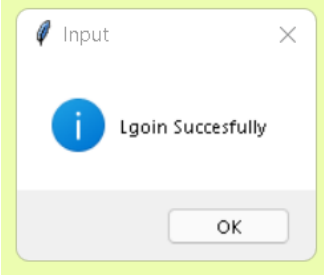
The user has to selection option 2 for read email. Read email modules read the unread email if any available in the user's email. If the email has more than one email it will be read by the system one by one.



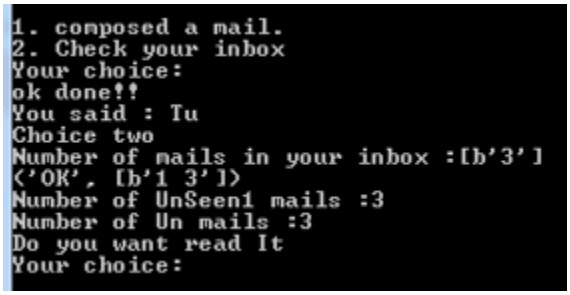
IV. RESULTS

This is implemented in Python 3.9 with libraries gtts and speech_recognition and other mandatory libraries. This application is implemented in TKinter using Python 3. The application uses voice input from microphone and given to system.
People who are blind or visually handicapped can register, login, and send emails. The sender need to give the Gmail user address and password for authentication,

so that he can able to send email. The email can be composed with subject and body of message will be delivered to recipients. Because of Pronunciation error we used SQL database for the login of user. After login it is considered as input



The experimental results shown that the use of microphone for long time may give time out errorAs a result, for the experimental assessments, a short input is necessary.



By Chosing Option 2 we can read the unread mails from the inbox of login mail.

V. CONCLUSION

We have proposed a system which will help the ostensibly handicapped people with getting to email benefits gainfully. This structure will help in overcoming a couple of burdens that were earlier looked by the outwardly disabled people in getting to messages. We have discarded using Graphical User interface click on any part of page on screen per users which will help decreasing the scholarly load of reviewing console backup ways to go. In like manner any unsophisticated customer who doesn't have the foggiest thought regarding the region of keys on the comfort need not worry as support use is cleared out. The customer simply needs to hold fast to the bearings given by the IVR and use mouse clicks in like way to get the specific organizations publicized. Other than this the customer may need to deal with in information through voice inputs when demonstrated.

For individuals who can see, messaging is anything but a serious deal, however for individuals who are not honored with endowment of vision it acts a key concern on account of its convergence with numerous professional duties. This voice based email framework has incredible application as it is utilized by daze individuals as they can comprehend.

VI. REFERENCES

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