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Voice based E-mail system

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Abstract -*With the invention of computer system the communication have become quite easier. A mobile provide various features such for communication such as voice calling, text sms etc. We have proposed a system which is helpful for those persons who are physically challenged. With the help of this tool the voice can be transformed into text and from text to voice. This project will completely eliminate the use of keyboards and we would be able to access the things only by using our voice and mouse click. The normal person can also be used this system for read purpose. It is a user friendly and also efficient to use.*

Keywords— ***Google API, microphone, Mouse click event, IVR (Interactive voice response), speech to text convertor,***

1. INTRODUCTION

The invention of internet has made the things easier .Almost every activity is done over internet,without internet none of the work can be performed. In the field of communication ,internet has provided various tools like Facebook,whatsapp , skype etc which make easier communication.We have modified the way of communication .In this project we are using voice to text converting feature, for chatting or messaging when user will speak any thing then it will be converted into text automatically .There are various circumstances when the users cannot type and text then in that particular situation this system would be very helpful. The system trace speech at run time through a microphone and processes the speech to recognize the relevant text. This text will be typed in respected field and when user will click on send button using mouse then the send operation will be performed.

2. Ease of Use

Text to speech

The main feature of this system is to convert speech into relevant text. When user gives input in form of voice , that voice is received by the sensor or microphone and translated into text by using API. In this process , all the characters, numbers and symbols are translated.

Speech to text

Another task of this system is to re-translate the text into equivalent voice format. This process is known as computer speech recognition or automatic speech recognition. There is a microphone which take voice as input, a speech recognition software and a soundcard to pronunciation the texts.

3. Existing system

There are different kind of email systems which provide various facilities. But these are helpful for a limited range of users. A group of blind people are not able to use these features. These systems are only able to convert voice to text format, text to voice is not available. In order to improve this problem, we have proposed a system which provides both facility of voice to text and text to voice conversation.

4. Proposed system

The proposed system is fully derived from the innovative idea and is much different from the existing mail systems. The proposed system is alternative of existing system which has more features including voice to text and text to voice conversation. The proposed system focus on reliability and user friendly. This system is helpful for visually impaired people. There is big challenge of security related to authentication. So for authentication the voice of user is the main key for verification .

5. DESIGN

A. User Interface Design: The user interface is designed using Java eclipse (Html, CSS, Javascript). The website focuses more on efficiency in understanding the Interactive voice response(IVR) rather than the look and feel of the system as the system is primarily developed for the blind people3 to whom the look and feel won't be of that primary importance as the efficiency of understanding the prompting would be.

B. Database Design: Our system maintains a database for user validation and storing mails of the user. The database is used to store the information of user like username, password ,his mails .When user request for any information then information is retrieved from database. There are total of five tables. The relationship between them is assigned after much consideration. The implementation part of Fig 1.

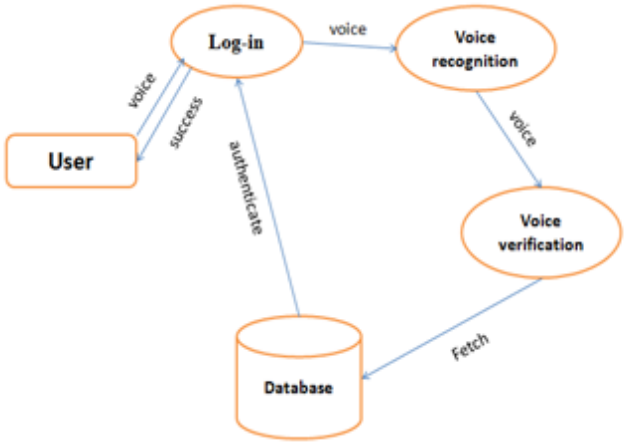


Fig.1 database connectivity

C. System Design: Fig. 2 depicts the complete system design. It is the level-2 data flow diagram which gives complete detailed flow of events in the system. As we can see all operations are performed by mouse click events only. Also at some places voice input is required.

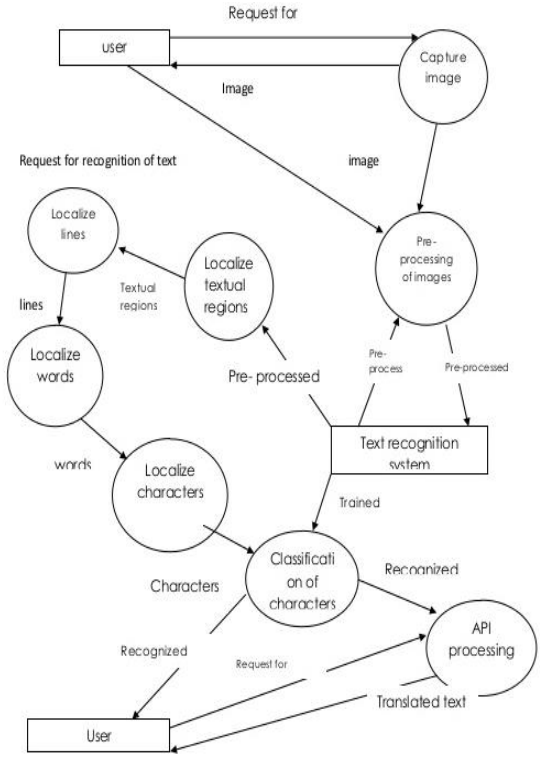


Fig2. Text Recognition process

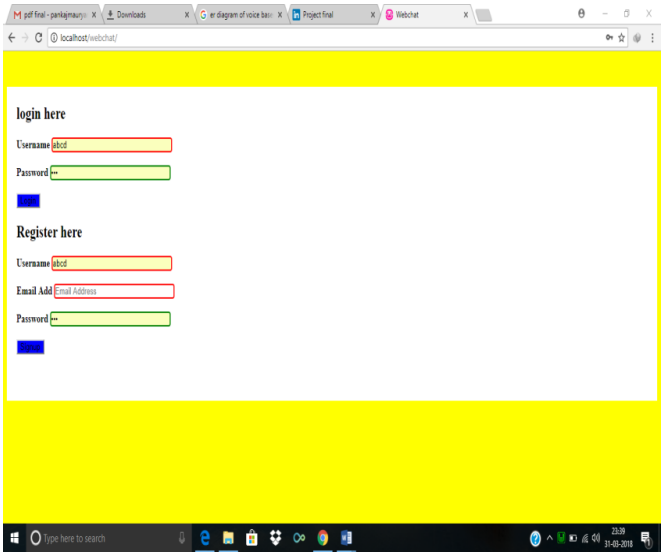
6. Implementation

Create account :

The first module of the system is to create account. There is a form which contains some information required for account creation. User is able to fill all the entries using his voice . The inputs may be username , his date of birth ,contact number ,alternative e-mail id ,gender etc.

- **Login :**

After the successful registration the user has to log in using valid user name and password. Once he/she provide valid details, he/she is allowed to access their account and the features of the email system.



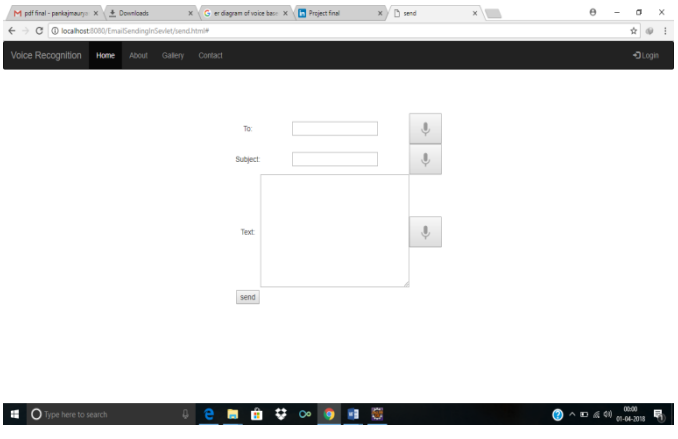
- **Account module** :

1. Inbox

This module contains the emails received from other users. These mails are arranged in sorted way on the basis of they received. The mails are saved in text format in inbox. User can convert these text mails in voice mail. When he click on text to voice convert button ,the text is converted into voice.

2. Sent mail

This module contains the mails which are successfully sent by the user to others. User can decide whether to save or delete the mails from sent mail.



3. Draft

This module contains the mails which are not sent due to various reasons like bad internet connection etc. All such mails are stored in draft. When user close the window instead of sending mail ,the mail is automatically saved as draft . User is able to re-send the draft as mail to desired location . The mails are saved as drafts until user delete it or send to someone. Once the draft has sent, it moves from draft to sent mail folder.

4. Trash

This module contains the mails which are deleted from inbox , sent-box or draft. After deleting ,mails are kept in trash from where user can restore these mails as per one's requirement .When is mail is restored it return to it's initial folder.

7. CONCLUSION

In this paper we have designed a system which is helpful for visually impaired people to access email services efficiently. This system helps in reducing some drawbacks that were earlier faced by the blind people in accessing emails. We have eliminated the concept of using keyboard shortcuts along with screen readers which will help reducing the cognitive load of remembering keyboard shortcuts. Also any naive user who does not know the location of keys on the keyboard need not worry as keyboard usage is eliminated. The user only needs to follow the instructions given by the IVR and use mouse clicks accordingly to get the respective services offered. Other than this the user might need to feed in information through voice inputs when specified.

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