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Voice Based e-mail System for Blind Person

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ABSTRACT-

To develop a voice-based email system that will help visually impaired people to access email in a easy manner. Together with providing usage of mail services simply and with efficiency, the system also will cut back the psychological feature work that must be unremarkably taken by the visually impaired to recollect and sort characters using the normal Braille key boards, which are accessible to them. The graphical user interface of this method has been evaluated against the interface of the traditionally accessible mail system. The users of this technique do not have any basic knowledge of the keyboard shortcuts utilised or what the keys are for, which is the most important factor that will be taken into consideration when designing this technique The system is particularly user-friendly because it bases all of its functionality on gesture and t ouch operations.This application suggests a specially created A ndroid app for those who are blind.This application provides a voice primarily based mailing service which provides them to browse on their own, without any guidance. The users ought to use certain gesture which can perform certain actions for e.g., Read, Address Book etc. This email system is utilized by a visually handicapped person to access mails easily and with efficiency. As a result, the dependence of people with vision impairments on others for their own activities related to mail is frequently decreased.

1. INTRODUCTION

A computer-based voice mail system enables users and subscribers to communicate without typing. Due to the fact that all official letters must be transmitted via mail and that blind persons cannot text messages, it is very helpful for them. A voice bank is another name for a voice mail system. In the modern world, the internet is regarded as a significant repository of knowledge. It is necessary for the completion of every single task. Even today, it is still widely utilised as a form of communication. And out of all methods available email is one of the most common forms of communication especially in the business world. However, not everyone has access to the internet. This is because you would need to understand what was printed on the screen in order to access the internet. It serves no use if that is not apparent. This makes internet a completely useless technology for the visually challenged and illiterate people. Even the systems that are available currently like the screen readers TTS and ASR do not provide full efficiency to the blind people so to use the internet. As nearly 285 million people worldwide are estimated visually challenged it become necessary to make internet facilities for communication usable for them also. Therefore, we have come up with this research in which we will be developing a voice-based email system which will aid the visually challenged people who are naive to computer systems to use email facilities in a hassle-free manner. Users of this system wouldn't need to be familiar with the location of the keys or any fundamental knowledge of keyboard shortcuts. This system is incredibly simple to use for any sort of user because all functions are based on basic mouse click actions. Additionally, because the system will alert the user as to which mouse click will offer them with which actions, the user need not worry about remembering which mouse click operation is required in order to use a particular service. People can use this kind of programme to send time-consuming and precise messages. The system interacts with the user in this application by asking for the message to be input, displaying the message as it is entered, and also by asking for the recipient's email address before sending the message when we tell it to.

PROJECT DESCRIPTION:

We have seen how the advent of the Internet has fundamentally altered several industries. People today can access any information they desire while sitting at home thanks to the internet, which has made life incredibly simple. Communication is one of the key areas that the Internet has revolutionised. When we talk about online communication, email is the first thing that springs to mind. For delivering or receiving sensitive information over the Internet, emails are the most dependable mode of communication. However, there is a unique requirement for humans to use the Internet, and that requirement is that you must be able to see. You must be wondering what kind of standard this is since everyone with sight can see it. But there are also exceptionally capable persons in our society who lack your talent. Yes, there are some blind or visually impaired individuals who are unable to perceive objects, including the computer screen and keyboard. Before, blind persons did not use the technology to send email. The multitude of email types along with the ability setting enables their use in normal daily contexts.

But these emails are not useful in all types of people such as blind people they cannot read the received email.

SYSTEM DESCRIPTION:

This voice-activated email system was created with blind users in mind. The initial step is to log in to the newly built application; after logging in, we must provide access to the mailing app. It will redirect to the mailing app with the user's gesture and begin reading the name and topic of the unread mails that have been received.

Registration:
The system's initial module is this one. Anyone wishing to use the system must register in order to receive a username and password. By informing the user what information has to be entered, this module will gather all of the user's information. The system will again validate by prompting alphabetically after the user speaks out the details.

Login:
The user can log into the system after completing the registration process. The user will be prompted for their login and password in this module. The database will be checked for entry once the entry has been completed appropriately. The user will be taken to the homepage if they are authorised.

Forgot Password:
An authorised user can utilise the forgotten password module if they are unable to log in because they forgot their password. The user will be instructed to input their username in this module. The security question will be looked up in the database based on the username. This is the inquiry that was asked upon registration. The machine will speak out the question. The user must then specify the response that was given by him or her while registering. The user is given the option to update their password if both match.

Inbox:
This option helps the user view all the mails that has been received to his/her account. The user can listen to mails he/she wants to by performing the gesture operation specified by the prompt.

Database:
A database is critical to any project because it manages all storage-related data and references. Moreover, it is a database containing most of the time, mostly the users, authentication, and protection of the environment, of any user of the email. Hence, the design and databases to include the creation of a database to store the email.

Receiving Email:
The server's user agent checks the mailboxes at a predetermined time. If any data is detected within this time, it immediately notifies the user. Furthermore, when a user opens an email, it is scanned for certain information, such as the subject line.

2. EXPERIMENTAL SETUP

TEXT TO SPEECH UNIFICATION:

It is an automatic text-to-speech. This technique is very similar to a human verbalizer, to say that it's a text. TTS (text-tospeech) is a technology that enables portable computers to communicate with you. Here are some great examples of the text-to-speech engine used for primary, text-processing, and synthesis. The engine will usually trigger the sound-and-audio format, the output control.

DIGITAL SIGNAL PROCESSING: MODULE

It converts representative data from information science into speech that can be heard and understood.

3. AUTHENTICATION AND SECURITY

Due to authentication, users are given account information like usernames and passwords, ensuring that they always have the correct information when they need to sign in to the programme. As a result, this information needs to be kept in a database for comparison in the future. We shall apply the control system to the user in order to identify them. Password organisation could be risky: Keeping a password straight might be risky, so make sure to teach them how to establish a database table while also keeping the password straightforward. The server will be contacted when the user requests to log in so it may check the live load and save the username and password. The password kept in the database will then receive this information. The user will finally have access to the app if the game is a success. Only passwords kept in plain text might be risky and will always be vulnerable to attack. Passwords are stolen by the government in cybercrime, and you can block the account. However, one method of saving it is to change it into an actual password and nonconvertible form. This method is known as hashing.

ANALYSIS OF COMPARISON AND RESULT

SR. NO.	TRADITIONAL SYSTEM	PROGRESSIVE SYSTEM
1.	It is insecure in comparison to the progressive system.	It has high security, which makes it more trustable.

2.	The keyboard is mandatory in this system.	Because the system is based on gestures, a keyboard is not required.
3.	Time-consuming process(Slow execution).	It is more efficient and faster than a typical system.
4.	The only person without disabilities can use the system.	Both normal and disabled people can use the system.

5. FUTURE SCOPE

This paper suggests that it will be useful for the community so that people with disabilities to develop on the side of the village. Through this project, persons with visual impairments are better able to contribute to the development of a digital India, making it simpler for them to communicate online and improve people's lives. This technique eliminates a number of email recipients' drawbacks. The success of this project can affect the developers, encouraging them to create useful products that can help people with low vision or who are blind.

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