SYNOPSIS

Report on

VOICE BASED E-MAIL SYSTEM FOR BLIND

by

AVIRAL – 2200290140044

DIVANSHU AGGRAWAL – 2200290140056

Session:2023-2024 (III Semester)

Under the supervision of

DR. AMIT KUMAR

KIET Group of Institutions, Delhi-NCR, Ghaziabad

DEPARTMENT OF COMPUTER APPLICATIONS
KIET GROUP OF INSTITUTIONS, DELHI-NCR,
GHAZIABAD-201206
(2022- 2023)

ABSTRACT

We have seen that the inception of Internet has dramatically revolutionized many fields. Internet has made life of people so easy that people today have access to any information they want sitting at their home. One of the main fields that Internet has revolutionized is communication. And talking about communication over Internet, the first thing that comes in our mind is E-mail. E-mails are considered to be the most reliable way of communication over Internet, for sending or receiving some important information. But there is a special criteria for humans to access the Internet and the criteria is you must be able to see. You must be thinking that what sort of criteria is this, every one with eyes can see. But there are also specially abled people in our society who are not gifted with what you have. Yes there are some visually challenged people or blind people who can not see things and thus can not see the computer screen or keyboard.

TABLE OF CONTENTS

INTRODUCTION

As the title suggests, the application will be a web-based application for visually impaired persons, thus enabling everyone to control their mail accounts using their voice only and to be able to read, send, and perform all the other useful tasks. The system will prompt the user with voice commands to perform certain action and the user will respond to the same. **The main benefit of this system is that the use of keyboard is completely eliminated, the user will have to respond through voice and mouse click only.**

Now you must be thinking that how will a blind person will see the correct position on the screen for doing mouse clicks. But this system will perform actions based on the clicks only that is left click or right click, it does not depends on the portion of the screen where the cursor is placed before the click giving user the freedom to click blindly anywhere on the screen.

MODULES

1.Speech- to-Text Converter :

Speech-to-text converter recognizes the speech, analyzes the sounds you make by filtering what you say, then digitizes it to a format it can read. Our speech to-text system directly obtains and converts speech to text.
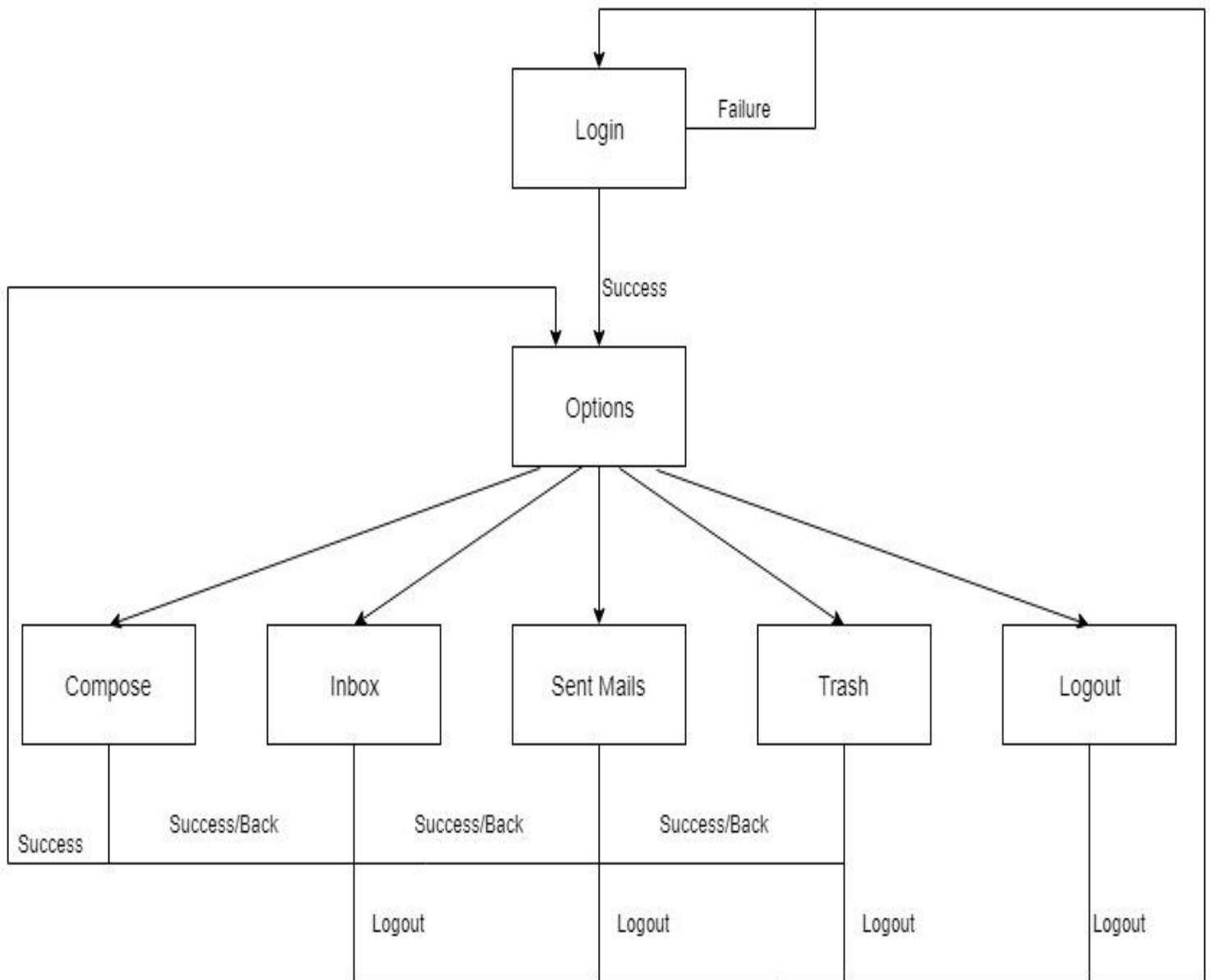
2.Text-to-Speech Converter :

Using speech synthesis techniques, it converts text to voice output. It is employed by the blind to concentrate to written material; it's now used extensively to convey financial data, e- mail messages, and other information through the telephone for everybody. Text-to-speech is also used on devices such as portable GPS units to announce street names when giving directions.

3. Voice based Email Application :

The user can send emails, listen to what they have written and also receive emails and listen to them with voice commands. In Email, the application makes use of the SMTP protocol for sending emails and POP3 protocol for receiving emails. SMTP (Simple Mail Transfer Protocol) is the reliable protocol to send emails and it works in a simple way that the SMTP server passes on the email messages quickly. POP3 (Post Office Protocol) is used to receive emails. The POP3 server stores the email and on request the emails are displayed. The same will be implement in our application.

IMPLEMENTATIONS

Diagrams: Below are some important diagrams which explains the working and will be used in implementing the project.

TOOLS

1. React JS 16.10.1

2. Tailwind CSS v3

3. SMTP Server

4. Speech To Text Library

5. MySql Database 8.0.34

APPLICATIONS

This project is proposed for the betterment of society. This project aims to help the visually impaired people to be a part of growing digital India by using internet and also aims to make life of such people quite easy. Also, the success of this project will also encourage developers to build something more useful for visually impaired or illiterate people, who also deserves an equal standard in society.

FUCTIONAL REQUIREMENTS

A voice-based email system for individuals who are blind should be designed to provide a user-friendly and accessible interface.Here are some functional requirements for such a system:

1.User Registration and Authentication:

•Users should be able to create accounts with their voice and set up authentication methods, such as voice recognition or PINs.

2.Voice Commands:

•Enable users to compose, send, receive, and manage emails using voice commands.

•Implement a robust and accurate speech recognition system to interpret user commands.

3.Text-to-Speech (TTS):

•Provide TTS functionality to read aloud the content of emails and navigation options.

•Allow users to customize the TTS voice and speech rate for personal preferences.

4.Email Management:

•Compose and send emails using voice commands.

•Retrieve and read incoming emails, including subject, sender, date, and content.

•Organize and manage emails, such as moving, archiving, or deleting messages.

5.Navigation and Menus:

•Implement a hierarchical voice menu system for easy navigation through email folders, inbox, sent items, drafts, etc.

•Users should be able to jump directly to specific emails or folders using voice commands.

THANK YOU