SPEAKLINGO

Introduction and Objective:

The “Voice Translate” project is a device-installed application designed to facilitate real-time Voice translation into the Malayalam language.

Tools / hardware and software:

Developed using HTML, CSS, and javascript ,

Problem definition and Initial Requirements:

this innovative solution enables users to input spoken phrases through text, which are then swiftly translated into written Malayalam text. By utilizing web technologies, the project provides a user-friendly platform for seamless and efficient crosslingual communication. This application serves as a practical and accessible means of overcoming language barriers, offering instant translation capabilities without the need for complex installations or additional software.

Speech Input Module: This module captures the user's spoken input using a microphone or audio input device.

Speech Recognition Module: It converts the spoken input into text. Popular APIs like Google Speech Recognition or the Web Speech API can be used for this purpose.

Translation Engine: This is the core module responsible for translating the text from one language to another. It can use machine translation models or APIs such as Google Translate, Microsoft Translator, or custom-built translation models.

Text-to-Speech (TTS) Module: After translating the text, this module converts the translated text back into spoken words. TTS engines like Google Text-to-Speech or the Web Speech API can be used here.

Audio Output Module: This module plays the translated audio for the user to hear.