

# Voice for the Voiceless - A Text to Speech and Graphic to Speech Converter

Hamza Khan

All India Shri Shivaji Memorial Societies, Kennedy Road, Shivaji Nagar, Pune - 411001, India

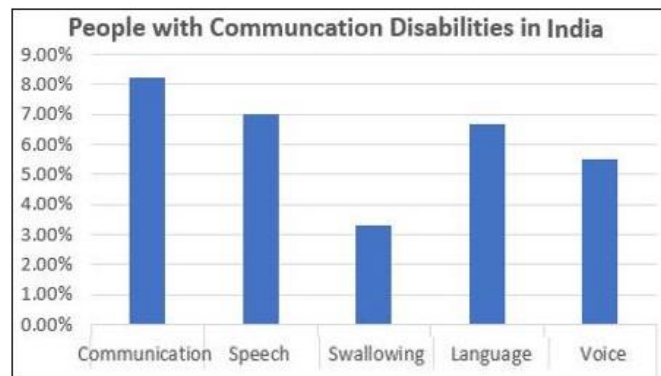
**Abstract:** A “Voice for the Voiceless” is an application which reads digital text aloud. With a click of a button, TTS can take words on a computer and convert them into audio. It is very useful for people who have communication disabilities and reading problems. It also helps them with writing and editing and even focusing. Additionally, it also helps the little kids who cannot provide digital text, to speak by providing them with various user-friendly graphics. All kinds of graphics and be read aloud with makes this application very flexible. Users can also customize the speech for various graphics and can also add various graphics templates according to their own requirements which further increases the flexibility of the application. Furthermore, it can be also used in car navigation, announcements in railway stations, response services in telecommunications, and e-mail reading.

**Keywords:** digital text, communication disabilities, graphics, templates.

## 1. Introduction

### 1.1 Need of “Voice for the Voiceless” Application:

According to the survey of 2019 in India, 8.23% of children ages 3-17 years had a communication or swallowing disorder. Speech problems were the most prevalent type of communication disorder (7.0%), while swallowing problems were (0.9%). Language problems (6.7%) and voice problems (5.5%) were also prevalent. Following illustration give a full pledged idea about the number of people with Communication disabilities in India.



**Figure 1:** Statistics of People with Communication Disabilities in India

Therefore, it is very important to address this barrier and unlock the hidden potential of so many people with so much to contribute to the world.

Addressing these barriers is within our reach and we have a moral duty to do so.

Keeping all these things in mind and with the motive of filling the communication gap between a person with communication disabilities and the world “Voice for the Voiceless” application is developed.

### 1.2 Description of “Voice for the Voiceless” Application:

“Voice for the Voiceless” is a Text to Speech and Graphic to speech converter which converts any text or graphic into Speech signal. It aims to fill the communication gap between a person with the communication disabilities and the world. It is developed in Visual Basic language. It provides a Graphical User Interface to the user. The user and Speak in two ways using the application:

- 1) By giving text input
- 2) By using graphics

### 1.3 Purpose of developing “Voice for the Voiceless” Application

The main purpose behind developing this application is to assist the people with communication disabilities and fill the communication gap between them and the world. It can be also used in car navigation, railway announcements, telecommunications and e-mail reading.

## 2. Overview of “Voice for the Voiceless” Application

The “Voice for the Voiceless” is a Text to Speech and Graphics to Speech converter which converts any text or graphic into Speech. It provides to features to user:

- 1) Speak with Keyboard
- 2) Speak with Pictures

It is designed with the motive that it can be used by both adults and little kids.

Adults can convert their ideas into appropriate Speech by giving input through the Keyboard.

Little kids can address their ideas by clicking on the appropriate graphics provided in the application.

There are five categories provided in Speak with Pictures module:

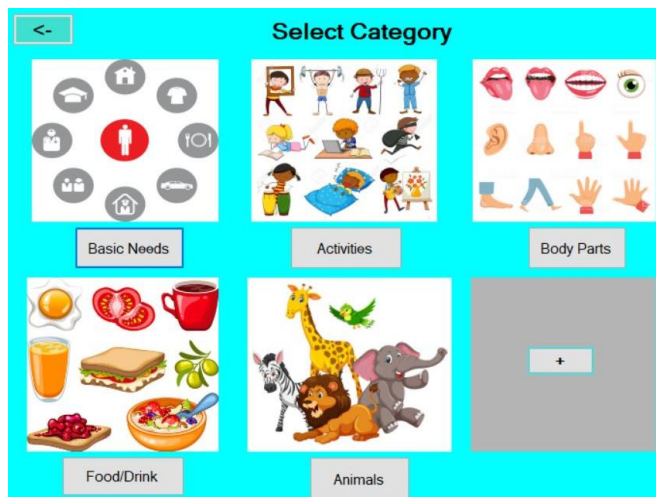


Snap 1: Homepage of Application

1. Basic Needs
2. Activities
3. Body Parts
4. Animals
5. Food/Drinks

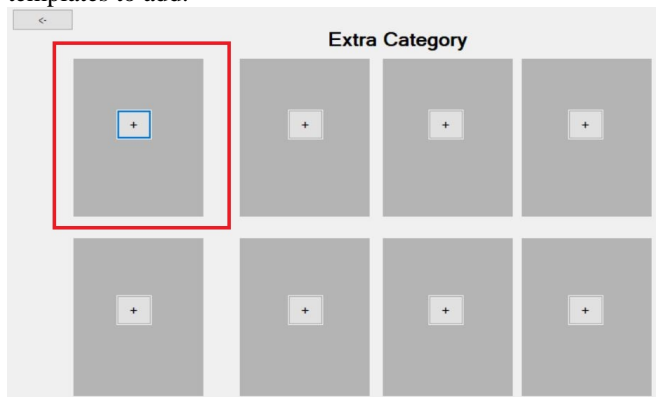
## 2.1 Speak from Pictures Module

### 2.1.1 Addition of Extra Category

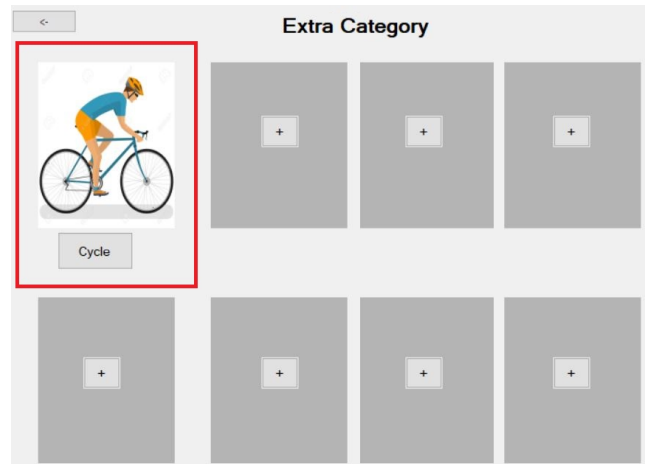


Snap 2: Category Module

Additional 1 category is reserved for the user. User can include additional 2 categories as per his requirements. Inside every category there are additional graphical templates to add.



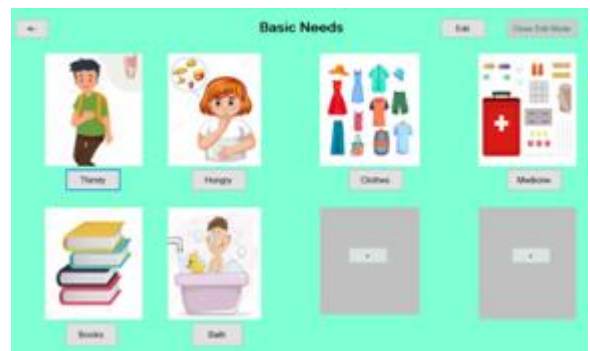
User can insert the graphical template as per his/her own requirement.



Snap 5: Adding Extra Category

### 2.1.2 Edit

If a user is uncomfortable with the pre-existing templates, then he/she can change the template as per the requirement. The graphic of the action, speech of the action and title can be changed.



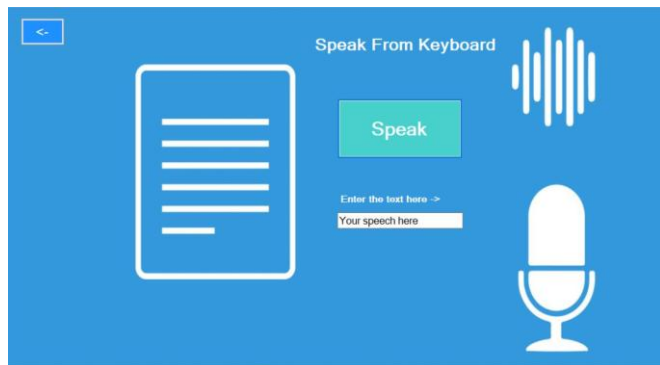
Snap 6: Basic Needs Module



Snap 7: Editing a Graphic

## 2.2 Speak from Keyboard Module

In this section, all the text written by the user is converted into Speech. The user can enter the text inside the textbox and press the Speak button to convert the non-verbal words into verbal Speech.



Snap 8: Speak from Keyboard

### 3. Advantages

- **Spread the reach of your content**  
This application helps the illiterate people, people with learning disability to spread their content.
- **Openness is relevant**  
This application will convert the people thoughts and ideas into appropriate Speech so that they can communicate with other people effectively
- **Elderly population depends on technology**  
Between 2015 and 2035, the number of people aged 62 years or over will grow by 56 percent, from 902 million to 1.6 billion
- **Mobile people are looking for convenience**  
Around the world, a growing share of time spent on digital content is on mobile devices and the demand for connected devices continues to rise on a worldwide scale. "Voice for the Voiceless" can turn any digital content into a multimedia experience and people can listen to a news or blog article, a PDF document, or an e-book on the go!
- **Help People with different learning styles**  
The application aims to help the maximum number of learners comprehend and retain information by appealing to all learning styles.
- **Reduce Eye Strain**  
With the help of this application the users can relax, sit back and listen to a particular book, pdf, magazine etc.
- **Help Disabled people**  
Did you know that 20-25 percent of the worldwide population has some form of language-based learning disability? This application will read out all of their thoughts aloud thus, making them communicate with other people. a student who may have dyslexia is able to write a sentence and then listen to their writing.
- **Fully Customizable**  
User can edit the speech, add the speech, edit graphics and can even add more templates as per his/her requirements.
- **Fully Flexible**  
The application can be used by both adults and children. Little kids can communicate using graphics which makes the communication much more interesting for them. User can use both keyboard or graphic templates for communication.
- **Easy to Use**  
Voice for the Voiceless is designed keeping in mind that it can be used easily by both adults as well as children. It is a

fully interactive application with lots of User-friendly functions.

### References

- [1] Jeffrey R. Shapiro, "Visual Basic .Net The Complete Reference," McGraw-Hill, California, USA ISBN0,07-213381-3
- [2] Holzer Steven, Visual Basic .Net Programming Black Box, Dreamtech Press, 2015, New Delhi, ISBN-13:978-81-7722-609-6
- [3] Bryan Newsome, "Beginning Visual Basic 2012" Wrox Press, USA, Edition: 2012; ISBN 9781118311813
- [4] Dr. Rajendra Kawale, "GUI Development using VB.Net" Devraj Publication.
- [5] <http://www.tutorialspoint.com/vb.net>
- [6] <http://www.functionx.com/vb.net>

### Author Profile



**Hamza Khan** completed 10<sup>th</sup> with State of Secondary Education (Maharashtra) from M.C.E Societies, Pune. Currently pursuing Diploma in Computer Engineering from All India Shri Shivaji Memorial Societies, Pune.