

AN APPLICATION TO CONVERT SPEECH TO TEXT, TEXT TO SPEECH ANALYZER

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Abstract

The Main objective is to build a user-friendly android application. This application is developed using Xml as front-end tool and java as back-end. The goal of this application is to convert text to speech and speech to text and activating short cuts for many programs in the mobile phone using this app. In this app, user can operate other functions like call, mail, detail, music in the mobile using key word used in this app. It is very helpful to all the uneducated people, physically challenged and also to all the people. The major aim is to convert written text into speech and convert voices into text in English.

The proposed work can take any lines or words as input. The computer users get tired of typing keyword every time, this method is an alternate solution for them so that if they dictated it will type automatically so for proof reading purpose it will be very useful. An automatic speech recognition tool that is Text to Speech converter app is proposed for Android phones. When users enter the text in the text column the android app takes an input from the user and leaves a voice output to the user. This application will accept alphabets (a-z) both uppercase and lowercase, numeric value, special characters, symbols, and Emoji's.

Keywords: Text , Speech, Speech converter app, numeric value, special characters, symbols, and Emoji's

I.INTRODUCTION

The Main objective is to build a user-friendly android software [1]. This software is developed using Xml as front-

end tool and java as back-end. The goal of this project is to convert text to speech and speech to text and activating short cuts for many programs in the mobile phone using this app. By using this app people can operate other functions like call, mail, detail, music in the mobile phones using key word used in this app. It will be very helpful to uneducated people, physically challenged and also to all. The conversion of written text to speech and voices into a text in English language is the primary goal.

1.1Specialties

Software Development, IT Support, BPO, Web Development, Networking, Training & Placement, Network Security, Ethical Hacking, Penetration Testing, Android / IOS Development[2].

II.PROPOSED WORK

An unstructured file of any size based on the developer needs can be given as input. Additionally, the same file may be read differently by different programs. The unstructured streams of files are most common inputs. Formal structure of files are in the form of records, a developer identifies the size and format of the record, and then all I/O to that file must happen on record boundaries and be a multiple of the record length.

2.1.1 Input Media

The following are consideration in selecting the input media:

Considering the above points the inputs are mostly of the form of internal and interactive [5], the most suitable input device is keyboard using this data is given by user.

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2.2 Output Design

In general output design deals with the following:

2.2.1 Output types

The content for printing[7] is stored in the system. For

Example

- How to insert decimal points.
- How suppressed leading zeros

2.2.2 Output Media

In the next stage it is to be decided that which medium is the most appropriate for the output. The main considerations when deciding about the output media are:

III. IMPLEMENTATION

Implementation can be done successfully by rendering this project in local host server. The application can be successfully implemented in real-time environment provided it has its own server for its implementation.

3.1 Input

Text to Speech

- Here it will get an input from user in text field.
- If input is null it does not return any result and it waits until the input from user.
- Here, it is declared in such terms of condition, such that if input is equals to null it print that the field is vacant or missing data.
- Otherwise, the field is not null, it will return the value and convert the given text into voice in US. English.
- It reads only such type of characters.
- Symbols.
- Uppercase.
- Lowercase.
- Numerical value.
- Emoji's.
- Special Characters
- Blank Space.

Speech to Text

- It created an array list inside where it will store the key

voice inside the Application.

- After entering every output, it will Automatically flush all the elements in the row and make the input column entry as empty.
- It does not need any data base, so it does not create a database to run and store the application.
- It will be asking permission form OS in mobile to run this App.
- And set a path to the App.

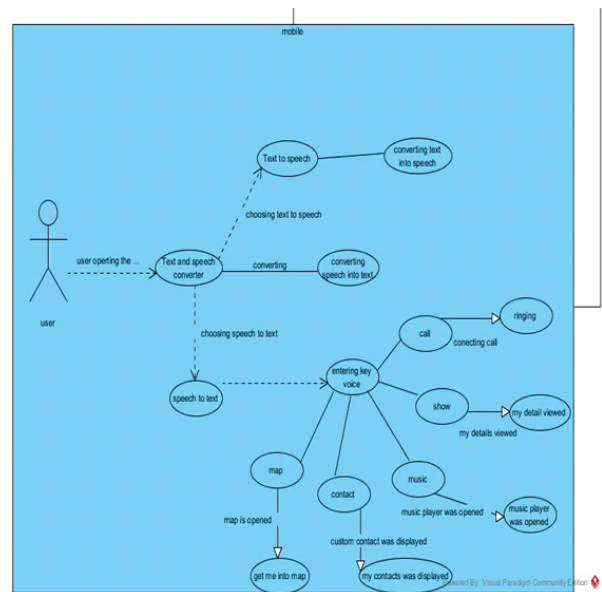


Figure 1. Use case diagram for text and speech

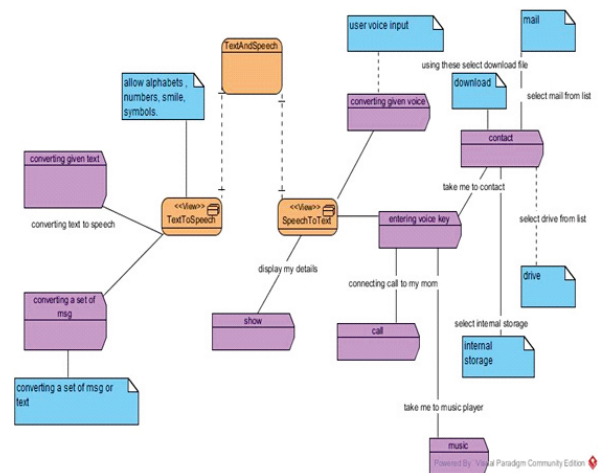


Figure 2. ER Diagram for text and speech

3.2 Output

Text to Speech

- After entering the written input in input column, if status of input is success.
- It returns result and set language as US. ENGLISH
- And speak Out the text.
- It will accept only if the characters are in alphabets, symbols, numerical digits, special character.
- If an input consists of mixture of acceptable and non-acceptable characters the system only read the acceptable characters mentioned above.
- Other language characters are considered as Non acceptable characters in this developed app.

Speech to Text

- After entering voice, it will convert it into text.
- If it is a key voice then corresponding activity will be executed.
- Key voices used in this application.
- “CALL”,
- “SHOW”,
- “MAP”,
- “CONTACT”,
- “MUSIC”

Music → music Activity

Call → call Activity

Show → show my details

Map → take me into Google Map

Contact → take me into Contact Activity

3.3 Main Activity Module:

Here 2 buttons text are used, speech and given an id in main activity. And set an on Clicklistener to button, is used to respond the buttons, and Intent is used to get user from one activity to another activity.

Text button → text to speechActivity

Speech button → speech to text activity

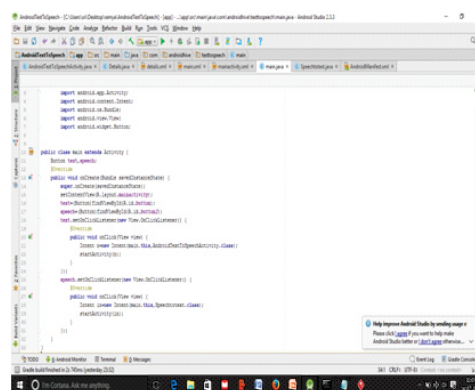


Figure 3. Main Activity

3.4 Text to Speech Module.

- After entering the written input in input column, if status of input is success.
- It returns result and set language as US. ENGLISH and speak Out the text.
- If an input consists of mixture of acceptable and non-acceptable characters the system only read the acceptable characters mentioned above.
- Other language characters are considered as Non acceptable characters in this developed app.

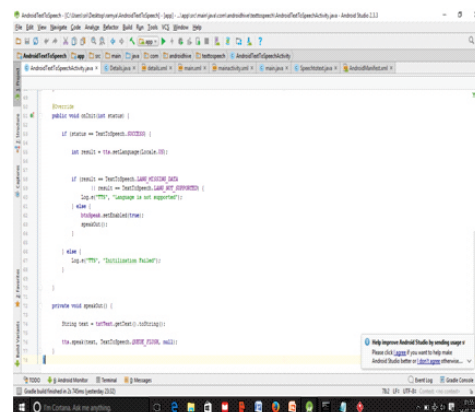


Figure 4. Text to Speech Class

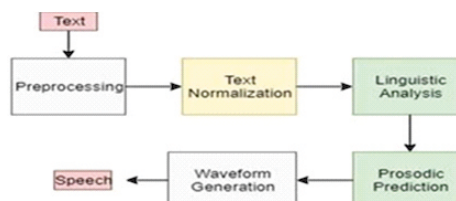


Figure 5. Text to Speech

3.5 Speech to Text Module

When a key voice is given it will get into that page,

Map → get into Google Map.

Contact → get into my saved contact.

Music → get into music screen.

Call → go call to My Friend.

Show → Display my details

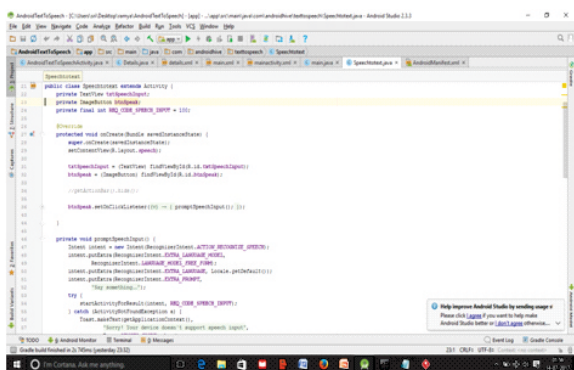


Figure 6. Speech to text

IV. CONCLUSION

In this work “An Application to Convert Speech to Text, Text to Speech Analyzer” concluded that the application works well and satisfy the end users. The application is tested very well and errors are properly debugged.

4.1 Scope for Future Development

Further enhancements can be made to the application, so that the windows application functions are very attractive and useful manner than the present one. The speed of the transactions become more enough now. Improvement can be appended by changing the existing modules or adding new modules. One important development that can be added in future is file level backup, which is presently done for folder level.

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