

Text to Speech Converter:

Android allows you convert your text into voice. Not only you can convert it but it also allows you to speak text in variety of different languages.

Android provides **TextToSpeech** class for this purpose. In order to use this class, you need to instantiate an object of this class and also specify the **initListener**. Its syntax is given below –

```
private EditText write;
ttobj=new TextToSpeech(getApplicationContext(), new TextToSpeech.OnInitListener() {
    @Override
    public void onInit(int status) {
    }
});
```

In this listener, you have to specify the properties for TextToSpeech object , such as its language ,pitch e.t.c.

Language can be set by calling **setLanguage()** method. Its syntax is given below –

ttobj.setLanguage(Locale.UK);

Sr.No	Locale
1	US
2	CANADA_FRENCH
3	GERMANY
4	ITALY
5	JAPAN
6	CHINA

Once you have set the language, you can call **speak** method of the class to speak the text. Its syntax is given below –

```
ttobj.speak(toSpeak, TextToSpeech.QUEUE_FLUSH, null);
```

Apart from the speak method, there are some other methods available in the TextToSpeech class. They are listed below –

Sr.No	Method & description
1	addSpeech(String text, String filename) This method adds a mapping between a string of text and a sound file.
2	getLanguage() This method returns a Locale instance describing the language.
3	isSpeaking() This method checks whether the TextToSpeech engine is busy speaking.
4	setPitch(float pitch) This method sets the speech pitch for the TextToSpeech engine.

5	setSpeechRate(float speechRate) This method sets the speech rate.
6	shutdown() This method releases the resources used by the TextToSpeech engine.
7	stop() This method stop the speak.

Example

The below example demonstrates the use of TextToSpeech class. It crates a basic application that allows you to set write text and speak it.

To experiment with this example , you need to run this on an actual device.

Steps	Description
1	You will use Android studio to create an Android application under a package com.example.sairamkrishna.myapplication.
2	Modify src/MainActivity.java file to add TextToSpeech code.
3	Modify layout XML file res/layout/activity_main.xml add any GUI component if required.
4	Run the application and choose a running android device and install the application on it and verify the results.

Here is the content of **src/MainActivity.java**.

```
package com.example.activity_lifecycle;

import android.app.Activity;
import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import java.util.Locale;
import android.widget.Toast;

public class MainActivity extends Activity {
    TextToSpeech t1;
    EditText ed1;
    Button b1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}
```

```

        ed1=(EditText)findViewById(R.id.editText);
        b1=(Button)findViewById(R.id.button);

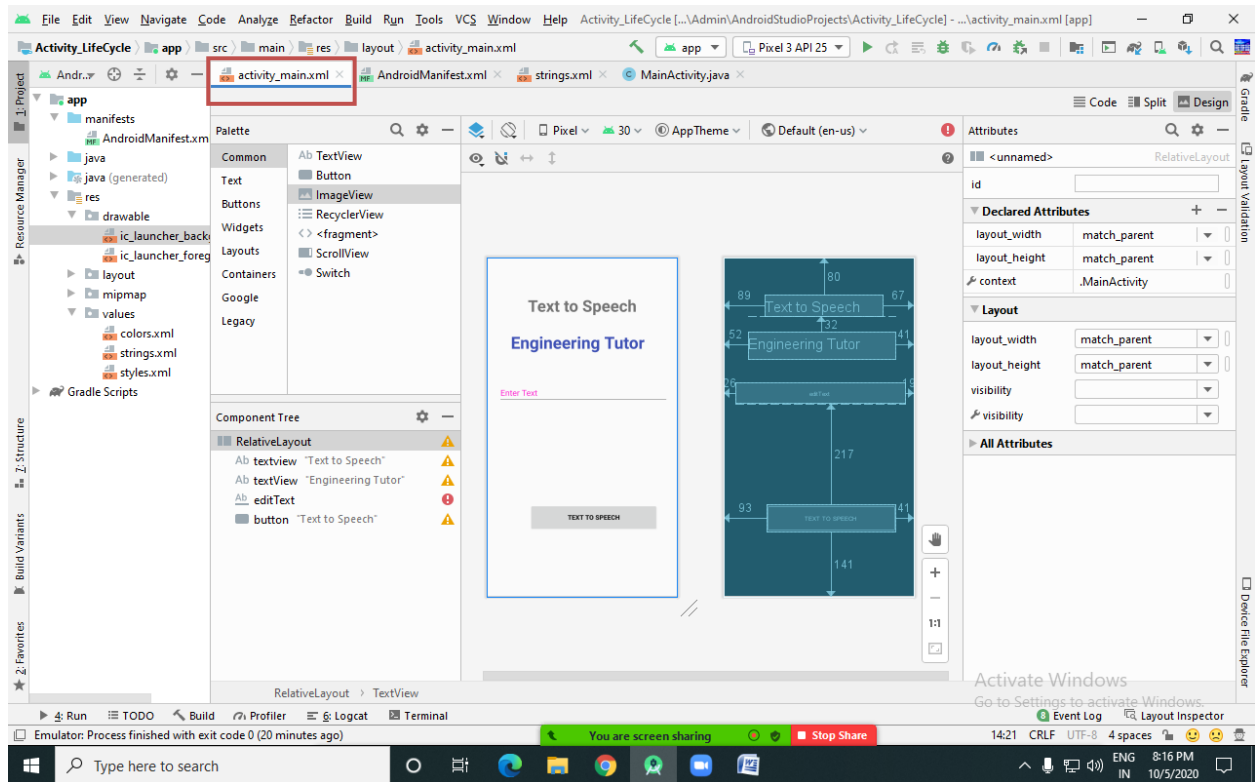
        t1=new TextToSpeech(getApplicationContext(), new
TextToSpeech.OnInitListener() {
            @Override
            public void onInit(int status) {
                if(status != TextToSpeech.ERROR) {
                    t1.setLanguage(Locale.UK);
                }
            }
        });

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String toSpeak = ed1.getText().toString();
                Toast.makeText(getApplicationContext(),
toSpeak, Toast.LENGTH_SHORT).show();
                t1.speak(toSpeak, TextToSpeech.QUEUE_FLUSH, null);
            }
        });
    }

    public void onPause(){
        if(t1 !=null){
            t1.stop();
            t1.shutdown();
        }
        super.onPause();
    }
}

```

Here is the content of [activity_main.xml](#)



```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"

    tools:context=".MainActivity"
    android:transitionGroup="true">

    <TextView
        android:id="@+id/textview"
        android:layout_width="255dp"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentLeft="true"
        android:layout_alignParentTop="true"
        android:layout_alignParentEnd="true"
        android:layout_alignParentRight="true"
        android:layout_marginStart="89dp"
        android:layout_marginLeft="89dp"
        android:layout_marginTop="80dp"
        android:layout_marginEnd="67dp"
        android:layout_marginRight="67dp"
        android:text="Text to Speech"
        android:textSize="35dp"
        android:textStyle="bold" />
```

<TextView

```
    android:id="@+id/textView"
    android:layout_width="318dp"
    android:layout_height="58dp"
    android:layout_below="@+id/textview"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_marginStart="52dp"
    android:layout_marginLeft="52dp"
    android:layout_marginTop="32dp"
    android:layout_marginEnd="41dp"
    android:layout_marginRight="41dp"
    android:text="Engineering Tutor"
    android:textColor="#3F51B5"
    android:textSize="36sp"
    android:textStyle="bold" />
```

<EditText

```
    android:id="@+id/editText"
    android:layout_width="366dp"
    android:layout_height="wrap_content"
    android:layout_below="@+id/imageView"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_marginStart="26dp"
    android:layout_marginLeft="26dp"
    android:layout_marginTop="270dp"
    android:layout_marginEnd="19dp"
    android:layout_marginRight="19dp"
    android:hint="Enter Text"
    android:textColor="#ff7aff10"
    android:textColorHint="#ffff23d1" />
```

<Button

```
    android:id="@+id/button"
    android:layout_width="277dp"
    android:layout_height="58dp"
    android:layout_below="@+id/editText"
    android:layout_alignParentStart="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentEnd="true"
    android:layout_alignParentRight="true"
    android:layout_alignParentBottom="true"
    android:layout_marginStart="93dp"
    android:layout_marginLeft="93dp"
    android:layout_marginTop="217dp"
    android:layout_marginEnd="41dp"
    android:layout_marginRight="41dp"
    android:layout_marginBottom="141dp"
    android:text="Text to Speech"
    android:textSize="14sp"
```

```
android:textStyle="bold" />
```

```
</RelativeLayout>
```

AndroidManifest.xml

