7 Develop a simple application with one Edit Text so that the user can write some text in it. Create a button called “Convert Text to Speech” that converts the user input text into voice.

**XML Part– activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"

xmlns:tools="http://schemas.android.com/tools"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical"

tools:context=".MainActivity">

<TextView

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="TEXT TO SPEECH APP"

android:textColor="@color/design\_default\_color\_primary\_dark"

android:textAlignment="center"

android:textSize="30sp"

/>

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/pitch"

android:hint="Enter Pitch (1.0 is normal)"

android:textSize="20sp"

/>

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/speechrate"

android:hint="Enter Speech Rate (1.0 is normal)"

android:textSize="20sp"

/>

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/texttospeak"

android:hint="Enter Text to Speak"

android:inputType="textMultiLine"

/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/btnspeak"

android:text="SPEAK"

android:onClick="speak"

android:textSize="30sp"

/>

</LinearLayout>

**Java Code – MainActivity.java**

package com.example.textspeech;

import androidx.appcompat.app.AppCompatActivity;

import android.app.UiAutomation;

import android.os.Bundle;

import android.speech.tts.TextToSpeech;

import android.view.View;

import android.widget.EditText;

import android.widget.Toast;

import java.util.Locale;

import static android.speech.tts.TextToSpeech.\*;

public class MainActivity extends AppCompatActivity {

EditText pitchrate,setspeechrate,text;

TextToSpeech t;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

pitchrate=findViewById(R.id.pitch);

setspeechrate=findViewById(R.id.speechrate);

text=findViewById(R.id.texttospeak);

t=new TextToSpeech(this, new OnInitListener() {

@Override

public void onInit(int status) {

if(status==SUCCESS)

{

t.setLanguage(Locale.ENGLISH);

}

else

{

Toast.makeText(MainActivity.this, "TextToSpeech Initialization Failed",

Toast.LENGTH\_LONG).show();

}

}

});

}

public void speak(View v)

{

float pr,sr;

String txt;

if(pitchrate.getText().toString().equals(""))

{

pr=1.0f;

}

else

{

pr=Float.parseFloat(pitchrate.getText().toString());

}

if(setspeechrate.getText().toString().equals(""))

{

sr=1.0f;

}

else

{

sr=Float.parseFloat(setspeechrate.getText().toString());

}

t.setPitch(pr);

t.setSpeechRate(sr);

t.speak(text.getText().toString(),QUEUE\_FLUSH,null);

}

}