***Practical-10***

***Create an app text to speech when user can type something which is spoken by clicking on speak button .Also add functionality to adjust the voicetone speed.***

***XML code:-***

*<?***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"  
 tools:context=".test33"  
 android:orientation="vertical"**>  
 <**EditText  
 android:id="@+id/enterYouText"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="8dp"  
 android:text="Welcome to JournalDev.com"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintLeft\_toLeftOf="parent"  
 app:layout\_constraintRight\_toRightOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
  
 <**Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="8dp"  
 android:text="SPEAK TEXT"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/enterYouText"** />  
  
 <**Button  
 android:id="@+id/btnChangePitch"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginEnd="8dp"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginTop="8dp"  
 android:text="Change Pitch"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/btnChangeSpeed"** />  
  
 <**Button  
 android:id="@+id/btnChangeSpeed"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginEnd="8dp"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginTop="8dp"  
 android:text="Change Speed"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/button"** />  
</**LinearLayout**>

Java

**package** com.example.testing;  
  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.os.Bundle;  
**import** android.speech.tts.TextToSpeech;  
**import** android.speech.tts.UtteranceProgressListener;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** java.util.Locale;  
  
**public class** test33 **extends** AppCompatActivity **implements** TextToSpeech.OnInitListener{  
 Button **button**, **btnChangePitch**, **btnChangeSpeed**;  
 EditText **editText**;  
 **private** TextToSpeech **tts**;  
  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_test33***);  
 **tts** = **new** TextToSpeech(**this**, **this**);  
  
 **button** = findViewById(R.id.***button***);  
 **btnChangePitch** = findViewById(R.id.***btnChangePitch***);  
 **btnChangeSpeed** = findViewById(R.id.***btnChangeSpeed***);  
 **editText** = findViewById(R.id.***enterYouText***);  
  
 **button**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 speakOut();  
 }  
 });  
  
 **btnChangePitch**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 **tts**.setPitch(0.2f);  
 }  
 });  
  
 **btnChangeSpeed**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 **tts**.setSpeechRate(2f);  
 }  
 });  
 }  
  
 @Override  
 **public void** onInit(**int** status) {  
  
 **if** (status == TextToSpeech.***SUCCESS***) {  
 **int** result = **tts**.setLanguage(Locale.***US***);  
  
 **if** (result == TextToSpeech.***LANG\_MISSING\_DATA*** || result == TextToSpeech.***LANG\_NOT\_SUPPORTED***) {  
 Toast.*makeText*(getApplicationContext(), **"Language not supported"**, Toast.***LENGTH\_SHORT***).show();  
 } **else** {  
 **button**.setEnabled(**true**);  
 }  
  
 } **else** {  
 Toast.*makeText*(getApplicationContext(), **"Init failed"**, Toast.***LENGTH\_SHORT***).show();  
 }  
 }  
  
 **private void** speakOut() {  
  
  
 **tts**.setOnUtteranceProgressListener(**new** UtteranceProgressListener() {  
 @Override  
 **public void** onStart(String s) {  
  
 **final** String keyword = s;  
 runOnUiThread(**new** Runnable() {  
 @Override  
 **public void** run() {  
 Toast.*makeText*(getApplicationContext(), **"Started"** + keyword, Toast.***LENGTH\_SHORT***).show();  
 }  
 });  
 }  
  
 @Override  
 **public void** onDone(String s) {  
  
 runOnUiThread(**new** Runnable() {  
 @Override  
 **public void** run() {  
 Toast.*makeText*(getApplicationContext(), **"Done "**, Toast.***LENGTH\_SHORT***).show();  
 }  
 });  
 }  
  
 @Override  
 **public void** onError(String s) {  
  
  
 runOnUiThread(**new** Runnable() {  
 @Override  
 **public void** run() {  
 Toast.*makeText*(getApplicationContext(), **"Error "**, Toast.***LENGTH\_SHORT***).show();  
 }  
 });  
 }  
 });  
  
 Bundle params = **new** Bundle();  
 params.putString(TextToSpeech.Engine.***KEY\_PARAM\_UTTERANCE\_ID***, **""**);  
  
 String text = **editText**.getText().toString();  
 **tts**.speak(text, TextToSpeech.***QUEUE\_FLUSH***, params, **"Dummy String"**);  
 }  
  
 @Override  
 **public void** onDestroy() {  
 **if** (**tts** != **null**) {  
 **tts**.stop();  
 **tts**.shutdown();  
 }  
 **super**.onDestroy();  
 }  
}

