WEB AND MOBILE PROGRAMMING

ICP-11

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We translated the user-provided text into speech in this ICP. In general, we'll use a particular class in an Android studio called "TextToSpeech" to turn our text into a voice.

Implementation:

To use this particular Class, initially, we need to instantiate the object for this class and need to call the OnInitListener, where all the required or used properties are present.

After creating the object along with the OnInitListener, we need to call the different properties such as isSpeaking(), setPitch(), setLanguage, and so on.

Created an empty project in the Android Studio with the name of ICP11. Added textview, edittext and button in the mainacitivity.xml with id provided to each of the tags. Fetching the data based on the id provided in mainactivity.xml and event from the button. Onclick of the button an event listener is added where here the text to speech conversion takes place. Text to speech is an api provided in android built in package where on Success it takes English locale and then conversion process starts.

Code:

```
<EditText
    android:id="@+id/editText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:ems="10"
    android:inputType="textPersonName"
    android:text="Enter your Text"
    android:layout_below="@+id/textView2"
    android:layout_marginTop="50dp"
    tools:ignore="MissingConstraints"
     />
```

```
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_centerHorizontal="true"
    android:text="Speak"
    android:layout_below="@+id/editText"
    android:layout_marginTop="50dp"
    tools:ignore="MissingConstraints"
     />
```

First step of conversion from text to speech is to get the data from the user which is taken from the edittext field and used as input to TextToSpeech api.

In this TextToSpeech api , speak method is used to convert the text to speech and results in producing speech as output. In one of the corner case there might be a scenario where the user entered text may not be translated and that error scenario is handled and shown an error message displaying that TextToSpeech cannot be translated.

From this task we are able to create an application which converts from text to speech for mobile devices and able to test and develop the application in the android studio.

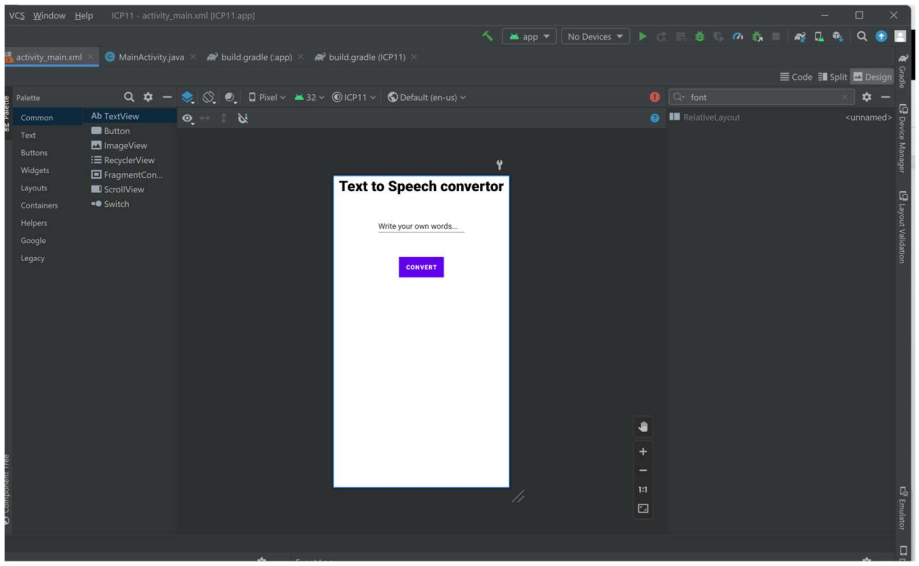
```
editText = findViewById(R.id.editText);
button = findViewById(R.id.button);
```

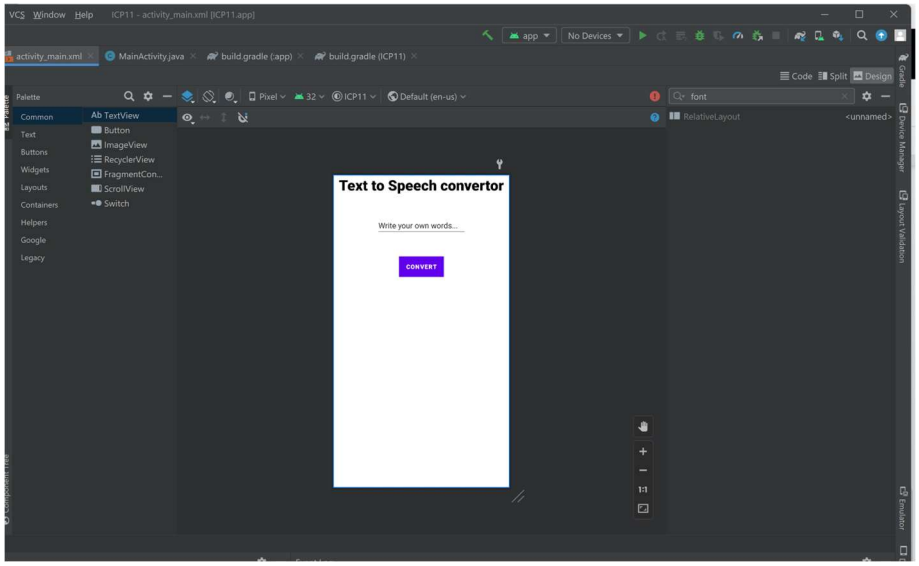
```
textToSpeech = new TextToSpeech( context: MainActivity.this, new TextToSpeech.OnInitListener() {
    @Override
    public void onInit(int status) {
        if(status==TextToSpeech.SUCCESS){
            int result =textToSpeech.setLanguage(Locale.ENGLISH);
        if(result==TextToSpeech.LANG_NOT_SUPPORTED || result == TextToSpeech.LANG_MISSING_DATA){
            Log.e( tag: "message", msg: "language is not supported");
        }
        else{
            textToSpeech.speak(String.valueOf(editText.getText()),TextToSpeech.QUEUE_ADD,  params: null);
        }

        }
        else{
            Log.e( tag: "message", msg: "TT's is not supported");
        }
    }
```

Outcome:

When we enter the text and click on convert , it will convert and produce the text to speech.


VCS Window Help
ICP11 - activity_main.xml [ICP11.app]
app
No Devices
activity_main.xml
MainActivity.java
build.gradle (:app)
build.gradle (ICP11)
Code Split Design
Palette
Pixel 32 ICP11 Default (en-us)
font
RelativeLayout
<unnamed>
Common
Text
Buttons
Widgets
Layouts
Containers
Helpers
Google
Legacy
Ab TextView
Button
ImageView
RecyclerView
FragmentCon...
ScrollView
Switch
Text to Speech convertor
Write your own words...
CONVERT
1:1
Gradle
Device Manager
Layout Validation
Emulator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