Mobile Application Development

Practical 3: Input Text and Speak / View text

User login/ Password checkbox -> Show detials

1) Translator -> Text input and speak in German

CODE:

Andriod_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="260dp"
        android:layout_height="47dp"
        android:fontFamily="@font/aclonica"
        android:text="Translator"
        android:textColor="@color/teal_200"
        android:textSize="24sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.35"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.036" />

    <EditText
        android:id="@+id/text"
        android:layout_width="296dp"
        android:layout_height="47dp"
        android:ems="10"
        android:hint="Enter Text"
```

```xml
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.495"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView"
        app:layout_constraintVertical_bias="0.078" />

    <Button
        android:id="@+id/button"
        android:layout_width="143dp"
        android:layout_height="40dp"
        android:backgroundTint="?attr/colorAccent"
        android:text="Speak"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.395"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/text"
        app:layout_constraintVertical_bias="0.103" />

    <TextView
        android:id="@+id/answer"
        android:layout_width="254dp"
        android:layout_height="60dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.363"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/button"
        app:layout_constraintVertical_bias="0.134" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Andriod_manifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.andriodlab2">

    <uses-permission android:name="android.permission.INTERNET"/>
    <application
        android:allowBackup="true"
        android:icon="@drawable/images"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Andriodlab2"
        >
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />
```

```xml
                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <meta-data
            android:name="preloaded_fonts"
            android:resource="@array/preloaded_fonts" />
    </application>

</manifest>
```

MainActivity.java

```java
package com.example.andriodlab2;

import android.os.Bundle;
import android.speech.tts.TextToSpeech;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import java.util.Locale;


public class MainActivity extends AppCompatActivity {

    EditText Text;
    Button btnText;
    TextView answer;
    TextToSpeech textToSpeech;

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


        Text = findViewById(R.id.text);
        btnText = findViewById(R.id.button);
        answer = findViewById(R.id.answer);

        textToSpeech = new TextToSpeech(getApplicationContext(), new
TextToSpeech.OnInitListener() {
            @Override
            public void onInit(int i) {

                if(i!=TextToSpeech.ERROR){
```

```
                textToSpeech.setLanguage(Locale.GERMANY);
            }
        }
    });

    btnText.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            Toast.makeText(getApplicationContext(),"Speaking in
German!",Toast.LENGTH_SHORT).show();


textToSpeech.speak(Text.getText().toString(),TextToSpeech.QUEUE_FLUSH,null);
            answer.setText("Your Input : \n\n"+Text.getText());
        }
    });

    }
}
```
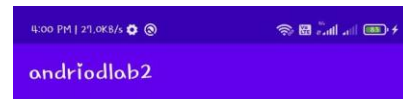
Output

2) User login/ Password checkbox -> Show details

CODE:

Andriod_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
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=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="109dp"
        android:layout_height="48dp"
        android:backgroundTint="@android:color/holo_blue_light"
        android:fontFamily="@font/allura"
        android:text="Login"
        android:textColor="@android:color/holo_red_light"
        android:textColorHighlight="@color/design_default_color_error"
        android:textSize="34sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.317"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.043" />

    <EditText
        android:id="@+id/user"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:backgroundTint="@color/design_default_color_error"
        android:ems="10"
        android:fontFamily="@font/allura"
        android:hint="Enter Name"
        android:inputType="textPersonName"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.298"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView"
        app:layout_constraintVertical_bias="0.103" />

    <EditText
        android:id="@+id/pass"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```xml
            android:backgroundTint="@color/design_default_color_error"
            android:ems="10"
            android:fontFamily="@font/allura"
            android:hint="Password"
            android:inputType="textPassword"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.298"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/user"
            app:layout_constraintVertical_bias="0.103" />

    <CheckBox
            android:id="@+id/checkBox"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:fontFamily="@font/allura"
            android:text="Show Password"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.215"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/pass"
            app:layout_constraintVertical_bias="0.092" />

    <Button
            android:id="@+id/button"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:backgroundTint="?android:attr/colorActivatedHighlight"
            android:fontFamily="@font/allura"
            android:text="Show Details"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.392"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/checkBox"
            app:layout_constraintVertical_bias="0.158" />

    <TextView
            android:id="@+id/output"
            android:layout_width="334dp"
            android:layout_height="121dp"
            android:fontFamily="@font/allura"
            android:textSize="20sp"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintHorizontal_bias="0.413"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toBottomOf="@+id/button"
            app:layout_constraintVertical_bias="0.458" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

AndriodManifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.andriodlab21">

    <application
        android:allowBackup="true"
        android:icon="@drawable/download"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Andriodlab21">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <meta-data
            android:name="preloaded_fonts"
            android:resource="@array/preloaded_fonts" />
    </application>

</manifest>
```

MainActivity.java

```java
package com.example.andriodlab21;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
import android.os.Bundle;
import android.text.InputType;
import android.text.method.HideReturnsTransformationMethod;
import android.text.method.PasswordTransformationMethod;
import android.view.View;
import android.view.inputmethod.InputMethodManager;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    EditText user,pass;
```

```java
TextView output;
CheckBox checkBox;
Button button;
private String Password;

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

    user = (EditText) findViewById(R.id.user);
    pass = (EditText) findViewById(R.id.pass);
    output = (TextView) findViewById(R.id.output);
    checkBox =  (CheckBox) findViewById(R.id.checkBox);
    button = (Button) findViewById(R.id.button);

    checkBox.setOnClickListener(new View.OnClickListener() {

        @Override
        public void onClick(View v) {
            if(checkBox.isChecked()){
                pass.setInputType(InputType.TYPE_CLASS_TEXT);

            }else{

pass.setInputType(InputType.TYPE_CLASS_TEXT|InputType.TYPE_TEXT_VARIATION_PASSWORD);
            }

        }
    });


        button.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            output.setText("User Name : \t "+user.getText() + "\n" +
"Password : \t " + pass.getText());
        }
    });
    }
}
```

Output:

Android APP