**Media Player**

Activitymain.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"

tools:context=".MainActivity"

android:background="#7712"

android:orientation="vertical">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Astronomia"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintLeft\_toLeftOf="parent"

app:layout\_constraintRight\_toRightOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

android:layout\_margin="30dp"

android:fontFamily="cursive"

android:textSize="30dp"

android:id="@+id/songname"/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginRight="30dp"

android:layout\_marginLeft="30dp"

android:text="Play"

android:id="@+id/play"

/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginRight="30dp"

android:layout\_marginLeft="30dp"

android:text="Pause"

android:id="@+id/pause"

/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginRight="30dp"

android:layout\_marginLeft="30dp"

android:text="Forward"

android:id="@+id/forward"

/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginRight="30dp"

android:layout\_marginLeft="30dp"

android:text="Rewind"

android:id="@+id/rewind"

/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginRight="30dp"

android:layout\_marginLeft="30dp"

android:text="Stop"

android:id="@+id/stop"

/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginRight="30dp"

android:layout\_marginLeft="30dp"

android:text="Restart"

android:id="@+id/restart"

/>

</LinearLayout>

MainActivity.java

package com.example.mediaplayer;

import androidx.appcompat.app.AppCompatActivity;

import android.media.MediaPlayer;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

Button play, forward, rewind, pause, stop, reset;

MediaPlayer mediaPlayer ;

int starttime = 0 ; // startime is 0s

int stopttime = 0; // stoptime is 0s by default

int forwardtime = 5000 ; // 5s for forward

int backwardtime = 5000 ; // 5s for backwardtime

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_main*);

play = findViewById(R.id.*play*);

forward = findViewById(R.id.*forward*);

rewind = findViewById(R.id.*rewind*);

pause = findViewById(R.id.*pause*);

stop = findViewById(R.id.*stop*);

reset = findViewById(R.id.*restart*);

play.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

mediaPlayer = MediaPlayer.*create*(MainActivity.this,

R.raw.*astronomia*) ;

Toast.*makeText*(MainActivity.this, "playing",

Toast.*LENGTH\_SHORT*).show();

mediaPlayer.start();

}

});

pause.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Toast.*makeText*(MainActivity.this, "pause",

Toast.*LENGTH\_SHORT*).show();

mediaPlayer.pause();

}

});

stop.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Toast.*makeText*(MainActivity.this, "Stop",

Toast.*LENGTH\_SHORT*).show();

mediaPlayer.stop();

}

});

reset.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Toast.*makeText*(MainActivity.this, "Resting",

Toast.*LENGTH\_SHORT*).show();

mediaPlayer.seekTo(starttime);

mediaPlayer.start();

}

});

forward.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Toast.*makeText*(MainActivity.this, "Forward",

Toast.*LENGTH\_SHORT*).show();

int currentpos = mediaPlayer.getCurrentPosition() ;

if((currentpos+forwardtime) <= (stopttime =

mediaPlayer.getDuration())){

mediaPlayer.seekTo(currentpos+forwardtime);

}

}

});

rewind.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Toast.*makeText*(MainActivity.this, "Rewind",

Toast.*LENGTH\_SHORT*).show();

int currentpos = mediaPlayer.getCurrentPosition() ;

if((currentpos-backwardtime) >= starttime)

{

mediaPlayer.seekTo(currentpos-backwardtime);

}

}

});

}

}

**ListView**

**Activitymain.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"**

**tools:context=".MainActivity">**

**<ListView**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:id="@+id/list"/>**

**</LinearLayout>**

**Mainactivity.java**

**package com.example.listview1;**

**import androidx.appcompat.app.AppCompatActivity;**

**import android.os.Bundle;**

**import android.view.View;**

**import android.widget.AdapterView;**

**import android.widget.ArrayAdapter;**

**import android.widget.ListView;**

**import android.widget.Toast;**

**public class MainActivity extends AppCompatActivity {**

**ListView myList;**

**String countryList[];**

**@Override**

**protected void onCreate(Bundle savedInstanceState) {**

**super.onCreate(savedInstanceState);**

**setContentView(R.layout.*activity\_main*);**

**myList = findViewById(R.id.*list*);**

**countryList = getResources().getStringArray(R.array.*classmates*);**

**ArrayAdapter<String> myAdapter = new**

**ArrayAdapter<String>(this,R.layout.*textview\_layout*,countryList);**

**myList.setAdapter(myAdapter);**

**myList.setOnItemClickListener(new AdapterView.OnItemClickListener() {**

**@Override**

**public void onItemClick(AdapterView<?> adapterView, View view, int**

**i, long l) {**

**Toast.*makeText*(MainActivity.this, "You have clicked"**

**+adapterView.getItemAtPosition(i),**

**Toast.*LENGTH\_SHORT*).show();**

**}**

**});**

**}**

**}**

**Textview\_layout.xml**

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

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

**android:layout\_width="match\_parent"**

**android:layout\_height="match\_parent"**

**android:text="Content"**

**android:textSize="40dp">**

**</TextView>**

**Strings.xml**

**<resources>**

**<string name="app\_name">ListView1</string>**

**<string-array name="classmates">**

**<item>Nirmal</item>**

**<item>Bosss</item>**

**<item>Rodman</item>**

**<item>Raja</item>**

**</string-array>**

**</resources>**

IMPLICIT EXPLICIT

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"

tools:context=".MainActivity"

android:orientation="vertical">

<EditText

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/myphone"

android:hint="Enter the Phone Number"

android:layout\_margin="20dp"

/>

<Button

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:id="@+id/call"

android:text="CALL"

android:layout\_margin="20dp"/>

</LinearLayout>

androidManifest.xml

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

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

package="com.example.implicit\_explicit\_intent">

<uses-permission android:name="android.permission.CALL\_PHONE"/>

<application

android:allowBackup="true"

android:icon="@mipmap/ic\_launcher"

android:label="@string/app\_name"

android:roundIcon="@mipmap/ic\_launcher\_round"

android:supportsRtl="true"

android:theme="@style/Theme.Implicit\_explicit\_intent">

<activity

android:name=".MainActivity"

android:exported="true">

<intent-filter>

<action android:name="android.intent.action.MAIN" />

<category android:name="android.intent.category.LAUNCHER" />

</intent-filter>

</activity>

</application>

</manifest>

MainActivity.java

package com.example.implicit\_explicit\_intent;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

EditText phoneNumberToCall ;

Button call ;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_main*);

call = findViewById(R.id.*call*) ;

phoneNumberToCall = findViewById(R.id.*myphone*) ;

call.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

Uri myUri = Uri.*parse*("tel:"+phoneNumberToCall.getText().toString());

Intent it = new Intent(Intent.*ACTION\_DIAL*, myUri) ;

startActivity(it);

}

});

}

}

Output

CALC

package com.example.calculatar;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

public class MainActivity extends AppCompatActivity implements View.OnClickListener {

Button ONE,TWO,THREE,FOUR,FIVE,SIX,SEVEN,EIGHT,NINE,ZERO;

Button PLUS,MINUS,MULTIPLY,DIVIDE,CLEAR,ISEQUALTO;

EditText res;

String operator ="";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

ONE=findViewById(R.id.ONE);

TWO=findViewById(R.id.TWO);

THREE=findViewById(R.id.THREE);

FOUR=findViewById(R.id.FOUR);

FIVE=findViewById(R.id.FIVE);

SIX=findViewById(R.id.SIX);

SEVEN=findViewById(R.id.SEVEN);

EIGHT=findViewById(R.id.EIGHT);

NINE=findViewById(R.id.NINE);

ZERO=findViewById(R.id.ZERO);

PLUS=findViewById(R.id.PLUS);

MINUS=findViewById(R.id.MINUS);

MULTIPLY=findViewById(R.id.MULTIPLY);

DIVIDE=findViewById(R.id.DIVIDE);

CLEAR=findViewById(R.id.CLEAR);

ISEQUALTO=findViewById(R.id.ISEQUALTO);

res=findViewById(R.id.RESULT);

ONE.setOnClickListener(this);

TWO.setOnClickListener(this);

THREE.setOnClickListener(this);

FOUR.setOnClickListener(this);

FIVE.setOnClickListener(this);

SIX.setOnClickListener(this);

SEVEN.setOnClickListener(this);

EIGHT.setOnClickListener(this);

NINE.setOnClickListener(this);

ZERO.setOnClickListener(this);

PLUS.setOnClickListener(this);

MINUS.setOnClickListener(this);

DIVIDE.setOnClickListener(this);

MULTIPLY.setOnClickListener(this);

ISEQUALTO.setOnClickListener(this);

}

@Override

public void onClick(View v) {

switch(v.getId()) {

case R.id.ONE:

res.append("1");

break;

case R.id.TWO:

res.append("2");

break;

// case for rest of the button 3-9 here

case R.id.PLUS:

res.append("+");

operator = "+";

break;

case R.id.MINUS:

res.append("-");

operator = "-";

break;

case R.id.MULTIPLY:

res.append("\*");

operator = "\*";

break;

case R.id.DIVIDE:

res.append("/");

operator = "/";

break;

case R.id.ISEQUALTO:

double finalResult = evaluateExpression(res.getText().toString(), operator);

res.setText(String.valueOf(finalResult));

break;

}

}

private double evaluateExpression(String toString, String operator) {

String[] tokens = toString.split("\\+|-|\\\*|\\/");

double firstOperand = Double.parseDouble(tokens[0]);

double secondOperand = Double.parseDouble(tokens[1]);

switch(operator)

{

case "+": return firstOperand + secondOperand;

case "-": return firstOperand - secondOperand;

case "\*": return firstOperand \* secondOperand;

case "/": return firstOperand / secondOperand;

default: return 0;

}

}

}

**Xylophone:**

**Main.dart:**

**import 'dart:typed\_data';**

**import 'package:flutter/material.dart';**

**import 'package:audioplayers/audioplayers.dart';**

**import 'package:audioplayers/src/audio\_cache.dart';**

**import 'package:flutter/services.dart';**

**void main() {**

**runApp(MaterialApp(**

**home: Scaffold(**

**appBar: AppBar(**

**title: Text('XYLOPHONE'),**

**centerTitle: true,**

**),**

**body: XyloPage(),**

**),**

**));**

**}**

**class XyloPage extends StatefulWidget {**

**@override**

**\_XyloPageState createState() => \_XyloPageState();**

**}**

**class \_XyloPageState extends State<XyloPage> {**

**void PlayAudio(int i) {**

**final player = AudioCache();**

**player.play("note$i.wav");**

**}**

**void playSound(int i) async {**

**AudioPlayer player = AudioPlayer();**

**String audioasset = 'assets/note$i.wav';**

**ByteData bytes = await rootBundle.load(audioasset);**

**Uint8List audioBytes =**

**bytes.buffer.asUint8List(bytes.offsetInBytes,**

**bytes.lengthInBytes);**

**int result = await player.playBytes(audioBytes);**

**if (result == 1) {**

**print("Audio Playing");**

**} else {**

**print("error");**

**}**

**}**

**@override**

**Widget build(BuildContext context) {**

**return Column(**

**crossAxisAlignment: CrossAxisAlignment.stretch,**

**children: [**

**Expanded(**

**child: TextButton(**

**style: TextButton.*styleFrom*(backgroundColor:**

**Colors.*red*),**

**onPressed: () {**

**playSound(1);**

**},**

**child: Text("First"),**

**),**

**),**

**Expanded(**

**child: TextButton(**

**style: TextButton.*styleFrom*(backgroundColor:**

**Colors.*yellow*),**

**onPressed: () {**

**playSound(2);**

**},**

**child: Text("Second"),**

**),**

**),**

**Expanded(**

**child: TextButton(**

**style: TextButton.*styleFrom*(backgroundColor:**

**Colors.*pink*),**

**onPressed: () {**

**playSound(3);**

**},**

**child: Text("Third"),**

**),**

**),**

**Expanded(**

**child: TextButton(**

**style: TextButton.*styleFrom*(backgroundColor:**

**Colors.*brown*),**

**onPressed: () {**

**PlayAudio(4);**

**},**

**child: Text("Fourth"),**

**),**

**),**

**Expanded(**

**child: TextButton(**

**style: TextButton.*styleFrom*(backgroundColor:**

**Colors.*black*),**

**onPressed: () {**

**playSound(5);**

**},**

**child: Text("Fifth"),**

**),**

**),**

**Expanded(**

**child: TextButton(**

**style: TextButton.*styleFrom*(backgroundColor:**

**Colors.*purple*),**

**onPressed: () {**

**playSound(6);**

**},**

**child: Text("Sixth"),**

**),**

**),**

**Expanded(**

**child: TextButton(**

**style: TextButton.*styleFrom*(backgroundColor:**

**Colors.*blueGrey*),**

**onPressed: () {**

**PlayAudio(7);**

**},**

**child: Text("Seventh"),**

**),**

**),**

**],**

**);**

**}**

**}**

**Output:**

**QUIZ:**

**Question.dart**

**class Question {**

**final String questionText; // Question**

**final bool answer; // Answer**

**Question({required this.questionText, required this.answer});**

**// making it as named arguments for the Question Constructor**

**}**

**Main.dart**

**import 'package:flutter/material.dart';**

**import 'package:quiz/question.dart'; // add the question class**

**class Questions {**

**List<Question> questionBank = [ // create a list of Questions using default**

**constructor of Question()**

**Question(questionText: "5+9 = 14", answer: true), // set the Question and**

**Answer**

**Question(questionText: "There is no railway system in Iceland.", answer:**

**true),**

**Question(questionText: "Is Venus the closest planet to the Sun?", answer:**

**false),**

**Question(questionText: "Do you need oxygen for breathing?", answer: true),**

**Question(questionText: "Honeybees are the fastest flying insect.", answer:**

**false),**

**Question(questionText: "Humans have 4 senses.", answer: false),**

**Question(questionText: "A group of crows is called a ‘murder’.", answer:**

**true),**

**];**

**}**

**class QuizPage extends StatefulWidget {**

**const QuizPage({Key? key}) : super(key: key);**

**@override**

**\_QuizPageState createState() => \_QuizPageState();**

**}**

**class \_QuizPageState extends State<QuizPage> {**

**int questionNumber = 0; // stores the questionNumber, default = first**

**int currentScore = 0; // final score initialized to 0**

**Questions questions = Questions(); // Create an object of the Question Class**

**void updateQuestionNumber() {**

**setState(() {**

**questionNumber = questionNumber + 1; // Increments the Question Number**

**print('$questionNumber');**

**});**

**}**

**void udpateCurrentScore(bool choice, int question\_number) {**

**// based on the choice (T/F button) score will be updated**

**if (questions.questionBank.length == question\_number) {**

**print("End of questions");**

**} else {**

**// checks the current user input against the list answer, if true increments**

**the count**

**if (questions.questionBank[question\_number].answer == choice) {**

**setState(() {**

**currentScore++;**

**});**

**}**

**}**

**}**

**bool checkquestionNumber(int questionNumber) {**

**return questionNumber < questions.questionBank.length ? true : false;**

**}**

**@override**

**Widget build(BuildContext context) {**

**return Container(**

**child: Column(**

**crossAxisAlignment: CrossAxisAlignment.stretch,**

**children: [**

**Center(**

**c hild: Text(**

**checkquestionNumber(questionNumber)?questions.questionBank[questionNumber].qu**

**estionText.toString(): "End",**

**style: TextStyle(fontSize: 40.0),**

**),**

**),**

**SizedBox(height: 20.0,),**

**if (checkquestionNumber(questionNumber))**

**ElevatedButton(onPressed:(){**

**setState(() {**

**print('True is pressed');**

**if (questionNumber == questions.questionBank.length) { //**

**check the boundof the list**

**print("End of questions");**

**}**

**else{**

**// check the user answer against the answer in the list**

**udpateCurrentScore(true, questionNumber);**

**// increment the Question Number**

**updateQuestionNumber();**

**}**

**});**

**}, child: Text("True")),**

**SizedBox(width: 20.0,),**

**if (checkquestionNumber(questionNumber))**

**ElevatedButton(onPressed:(){**

**setState(() {**

**print('False is pressed');**

**if (questionNumber == questions.questionBank.length) { //**

**check the boundof the list**

**print("End of questions");**

**}**

**else{**

**// check the user answer against the answer in the list**

**udpateCurrentScore(false, questionNumber);**

**// increment the Question Number**

**updateQuestionNumber();**

**}**

**});**

**}, child: Text("False")),**

**SizedBox(height: 100.0,),**

**SizedBox(height: 50.0,),**

**if(checkquestionNumber(questionNumber))**

**Padding(**

**padding: const EdgeInsets.all(30.0),**

**child: Center(**

**child: Text(**

**"Current Score is:",**

**style: TextStyle(fontSize: 30.0),**

**),**

**),**

**),**

**if(!checkquestionNumber(questionNumber))**

**Padding(**

**padding: const EdgeInsets.all(30.0),**

**child: Center(**

**child: Text(**

**"Total Score is:",**

**style: TextStyle(fontSize: 30.0),**

**),**

**),**

**),**

**if(checkquestionNumber(questionNumber))**

**Padding(**

**padding: const EdgeInsets.all(30.0),**

**child: Center(**

**child: Text(**

**'${currentScore}',**

**style: TextStyle(fontSize: 30.0),**

**),**

**),**

**),**

**if(!checkquestionNumber(questionNumber))**

**Padding(**

**padding: const EdgeInsets.all(30.0),**

**child: Center(**

**c hild: Text(**

**'${currentScore}'+'/'+questions.questionBank.length.toString(),**

**style: TextStyle(fontSize: 30.0),**

**),**

**),**

**),**

**],**

**),**

**); // Build the Widget Tree here**

**}**

**}**

**void main() {**

**runApp(MaterialApp(**

**home: SafeArea(**

**child: Scaffold(**

**body:QuizPage(),**

**),**

**),**

**));**

**}**

**Output:**