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SMD

TASK 03

**Java Files**

# **AudioPlayerMainActivity.java**

package com.example.assignments.Task3;  
  
import android.annotation.SuppressLint;  
import android.content.Context;  
import android.content.Intent;  
import android.media.AudioManager;  
import android.media.MediaPlayer;  
import android.os.Bundle;  
import android.os.Handler;  
import android.os.Message;  
import android.view.View;  
import android.widget.ImageView;  
import android.widget.SeekBar;  
  
import androidx.annotation.Nullable;  
import androidx.appcompat.app.AppCompatActivity;  
  
import com.example.assignments.R;  
  
import java.util.ArrayList;  
  
public class AudioPlayerMainActivity extends AppCompatActivity  
{  
 *//public AudioPlayer audioPlayer;  
 //public boolean myPlayerFlag = false;* ArrayList<Integer> songsList = new ArrayList<>();  
 ImageView play, previous, next;  
 SeekBar timeseekBar;  
 MediaPlayer mediaPlayer;  
 AudioManager audioManager;  
  
 int currentIndex = 0;  
  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_audio\_player\_main*);  
  
 *//setting up service* audioManager = (AudioManager) getSystemService(Context.*AUDIO\_SERVICE*);  
  
 previous = findViewById(R.id.*prev*);  
 play = findViewById(R.id.*play*);  
 next = findViewById(R.id.*next*);  
 timeseekBar = findViewById(R.id.*seekbar*);  
  
 songsList.add(0, R.raw.*song1*);  
 songsList.add(1, R.raw.*song2*);  
 songsList.add(2, R.raw.*song3*);  
  
 *//starting mediaplayer* mediaPlayer = MediaPlayer.*create*(getApplicationContext(), songsList.get(currentIndex));  
  
 *// setting up seekbar volume* int maxVolume = audioManager.getStreamMaxVolume(AudioManager.*STREAM\_MUSIC*);  
 int currVolume = audioManager.getStreamVolume(AudioManager.*STREAM\_MUSIC*);  
 timeseekBar.setMax(maxVolume);  
 timeseekBar.setProgress(currVolume);  
  
 *//seekbar action listener* timeseekBar.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {  
 @Override  
 public void onProgressChanged(SeekBar seekBar, int progress, boolean b) {  
 audioManager.setStreamVolume(AudioManager.*STREAM\_MUSIC*, progress, 0 );  
 }  
  
 @Override  
 public void onStartTrackingTouch(SeekBar seekBar) {  
  
 }  
  
 @Override  
 public void onStopTrackingTouch(SeekBar seekBar) {  
  
 }  
 });  
  
  
 *//play song action listener* play.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 timeseekBar.setMax(mediaPlayer.getDuration());  
 if(mediaPlayer!=null && mediaPlayer.isPlaying())  
 {  
 mediaPlayer.pause();  
 play.setImageResource(R.drawable.*play*);  
 }  
 else  
 {  
 if (mediaPlayer != null) {  
 mediaPlayer.start();  
 }  
 play.setImageResource(R.drawable.*pause*);  
 }  
 controlSeekBar();  
 }  
 });  
  
 *//next song action listener* next.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view)  
 {  
 if(mediaPlayer!=null)  
 {  
 play.setImageResource(R.drawable.*pause*);  
 }  
 if(currentIndex < songsList.size() - 1)  
 {  
 currentIndex++;  
 }  
 else  
 {  
 currentIndex = 0;  
 }  
 if (mediaPlayer != null && mediaPlayer.isPlaying()) {  
 mediaPlayer.stop();  
 }  
 mediaPlayer = MediaPlayer.*create*(getApplicationContext(), songsList.get(currentIndex));  
 mediaPlayer.start();  
 controlSeekBar();  
 }  
 });  
  
 *//previous song action listener* previous.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view)  
 {  
 if(mediaPlayer != null)  
 {  
 play.setImageResource(R.drawable.*pause*);  
 }  
 if(currentIndex > 0)  
 {  
 currentIndex--;  
 }  
 else  
 {  
 currentIndex = songsList.size()-1;  
 }  
 if (mediaPlayer != null && mediaPlayer.isPlaying()) {  
 mediaPlayer.stop();  
 }  
 mediaPlayer = MediaPlayer.*create*(getApplicationContext(), songsList.get(currentIndex));  
 mediaPlayer.start();  
 controlSeekBar();  
 }  
 });  
  
 }  
  
 @Override  
 protected void onStart() {  
 super.onStart();  
 *//Intent intent = new Intent(this, AudioPlayer.class);  
 // bindService(intent, serviceConnection, BIND\_AUTO\_CREATE);* }  
  
 */\*@Override  
 protected void onStop() {  
 super.onStop();  
 if(myPlayerFlag == true)  
 {  
 //unbindService(serviceConnection);  
 }  
 }\*/  
  
 /\*public void Play(View view) {  
 if(myPlayerFlag == true)  
 {  
 if(!audioPlayer.isPlaying()) {  
 audioPlayer.Play();  
 }  
  
 }  
  
 }  
  
 public void Pause(View view) {  
 if(myPlayerFlag == true)  
 {  
 if(audioPlayer.isPlaying()) {  
 audioPlayer.Pause();  
 }  
 }  
  
 }\*/  
 /\* public void Play\_Pause(View view) {  
 if(myPlayerFlag == true)  
 {  
 if(audioPlayer.isPlaying())  
 {  
 audioPlayer.Pause();  
 }  
 else  
 {  
 audioPlayer.Play();  
 }  
 }  
 }\*/* private void controlSeekBar()  
 {  
 *//set seekbar duration* mediaPlayer.setOnPreparedListener(new MediaPlayer.OnPreparedListener() {  
 @Override  
 public void onPrepared(MediaPlayer mediaPlayer) {  
 timeseekBar.setMax(mediaPlayer.getDuration());  
 mediaPlayer.start();  
 }  
 });  
  
 timeseekBar.setOnSeekBarChangeListener(new SeekBar.OnSeekBarChangeListener() {  
 @Override  
 public void onProgressChanged(SeekBar seekBar, int progress, boolean b) {  
 if (b)  
 {  
 mediaPlayer.seekTo(progress);  
 timeseekBar.setProgress(progress);  
 }  
 }  
  
 @Override  
 public void onStartTrackingTouch(SeekBar seekBar) {  
  
 }  
  
 @Override  
 public void onStopTrackingTouch(SeekBar seekBar) {  
  
 }  
 });  
  
 new Thread(new Runnable() {  
 @Override  
 public void run() {  
 while(mediaPlayer != null)  
 {  
 try {  
 if(mediaPlayer.isPlaying())  
 {  
 Message message = new Message();  
 message.what = mediaPlayer.getCurrentPosition();  
 handler.sendMessage(message);  
 Thread.*sleep*(1000);  
 }  
 } catch (InterruptedException e){  
 e.printStackTrace();  
 }  
 }  
 }  
 }).start();  
 }  
  
 @SuppressLint({"Handler Leak", "HandlerLeak"})  
 Handler handler = new Handler(){  
 @Override  
 public void handleMessage(Message msg){  
 timeseekBar.setProgress(msg.what);  
 }  
  
 };  
  
 public void SelectSong(View view) {  
 Intent intent = new Intent();  
 intent.setType(getString(R.string.*audio*));  
 intent.setAction(Intent.*ACTION\_GET\_CONTENT*);  
 intent.addCategory(Intent.*CATEGORY\_OPENABLE*);  
 startActivityForResult(intent, 101);  
  
 }  
  
 @Override  
 protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {  
 super.onActivityResult(requestCode, resultCode, data);  
 }  
}

# **AudioPlayer.java**

package com.example.assignments.Task3;  
  
import android.app.Service;  
import android.content.Intent;  
import android.media.MediaPlayer;  
import android.os.Binder;  
import android.os.IBinder;  
import android.util.Log;  
  
import androidx.annotation.Nullable;  
  
import com.example.assignments.R;  
  
public class AudioPlayer extends Service  
{  
 private final Binder myBinder = new Binder();  
 public static String *TAG* = "TAG";  
 public MediaPlayer mediaPlayer;  
  
 @Override  
 public void onCreate()  
 {  
 super.onCreate();  
 mediaPlayer = MediaPlayer.*create*(this, R.raw.*song1*);  
 Log.*d*(*TAG*,"onCreate method is called..");  
 }  
  
 @Nullable  
 @Override  
 public IBinder onBind(Intent intent)  
 {  
 Log.*d*(*TAG*, "iBinder called...");  
 return myBinder;  
 }  
  
 @Override  
 public boolean onUnbind(Intent intent)  
 {  
 return super.onUnbind(intent);  
 }  
  
 public class MyBinder extends Binder  
 {  
 AudioPlayer getPlayerMethod()  
 {  
 return AudioPlayer.this;  
 }  
 }  
  
 public void Play()  
 {  
 mediaPlayer.start();  
 }  
  
 public void Pause()  
 {  
 mediaPlayer.pause();  
 }  
  
 public boolean isPlaying()  
 {  
 return mediaPlayer.isPlaying();  
 }  
  
 @Override  
 public void onDestroy()  
 {  
 super.onDestroy();  
 mediaPlayer.release();  
 }  
}

XML Code

*<?*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:id="@+id/songtitle"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".Task3.AudioPlayerMainActivity">  
  
 <ImageView  
 android:id="@+id/imageView"  
 android:layout\_width="355dp"  
 android:layout\_height="378dp"  
 android:layout\_gravity="center"  
 android:layout\_marginTop="36dp"  
 android:contentDescription="@string/todo"  
 android:src="@drawable/background"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 tools:ignore="ImageContrastCheck"  
 tools:srcCompat="@tools:sample/avatars" />  
  
 <SeekBar  
 android:id="@+id/seekbar"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="15dp"  
 android:layout\_marginTop="76dp"  
  
 android:layout\_marginRight="15dp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.482"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/imageView" />  
  
 <LinearLayout  
 android:id="@+id/linearLayout"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="15dp"  
 android:gravity="center"  
 android:orientation="horizontal"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/seekbar" />  
  
 <ImageView  
 android:id="@+id/prev"  
 android:layout\_width="60dp"  
 android:layout\_height="40dp"  
 android:layout\_marginStart="68dp"  
 android:layout\_marginTop="20dp"  
 android:contentDescription="@string/todo1"  
 android:src="@drawable/prev"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="@+id/linearLayout"  
 app:layout\_constraintVertical\_bias="0.055"  
 tools:ignore="ContentDescription" />  
  
 <ImageView  
 android:id="@+id/next"  
 android:layout\_width="60dp"  
 android:layout\_height="40dp"  
 android:layout\_marginTop="40dp"  
 android:layout\_marginEnd="64dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.576"  
 app:layout\_constraintStart\_toEndOf="@+id/play"  
 app:layout\_constraintTop\_toBottomOf="@+id/seekbar"  
 app:layout\_constraintVertical\_bias="0.021"  
 app:srcCompat="@drawable/frwd"  
 tools:ignore="ContentDescription" />  
  
 <ImageView  
 android:id="@+id/play"  
 android:layout\_width="60dp"  
 android:layout\_height="40dp"  
 android:layout\_marginStart="40dp"  
 android:layout\_marginTop="20dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintStart\_toEndOf="@+id/prev"  
 app:layout\_constraintTop\_toTopOf="@+id/linearLayout"  
 app:layout\_constraintVertical\_bias="0.055"  
 app:srcCompat="@drawable/play"  
 tools:ignore="ContentDescription,NotSibling" />  
  
  
</androidx.constraintlayout.widget.ConstraintLayout>

**Output**

A screenshot of a cell phone

Description automatically generated with medium confidence