스마트폰 프로그래밍
Assign #9

(제목 : SimpleAudioPlayer)

학번 : 2016305078
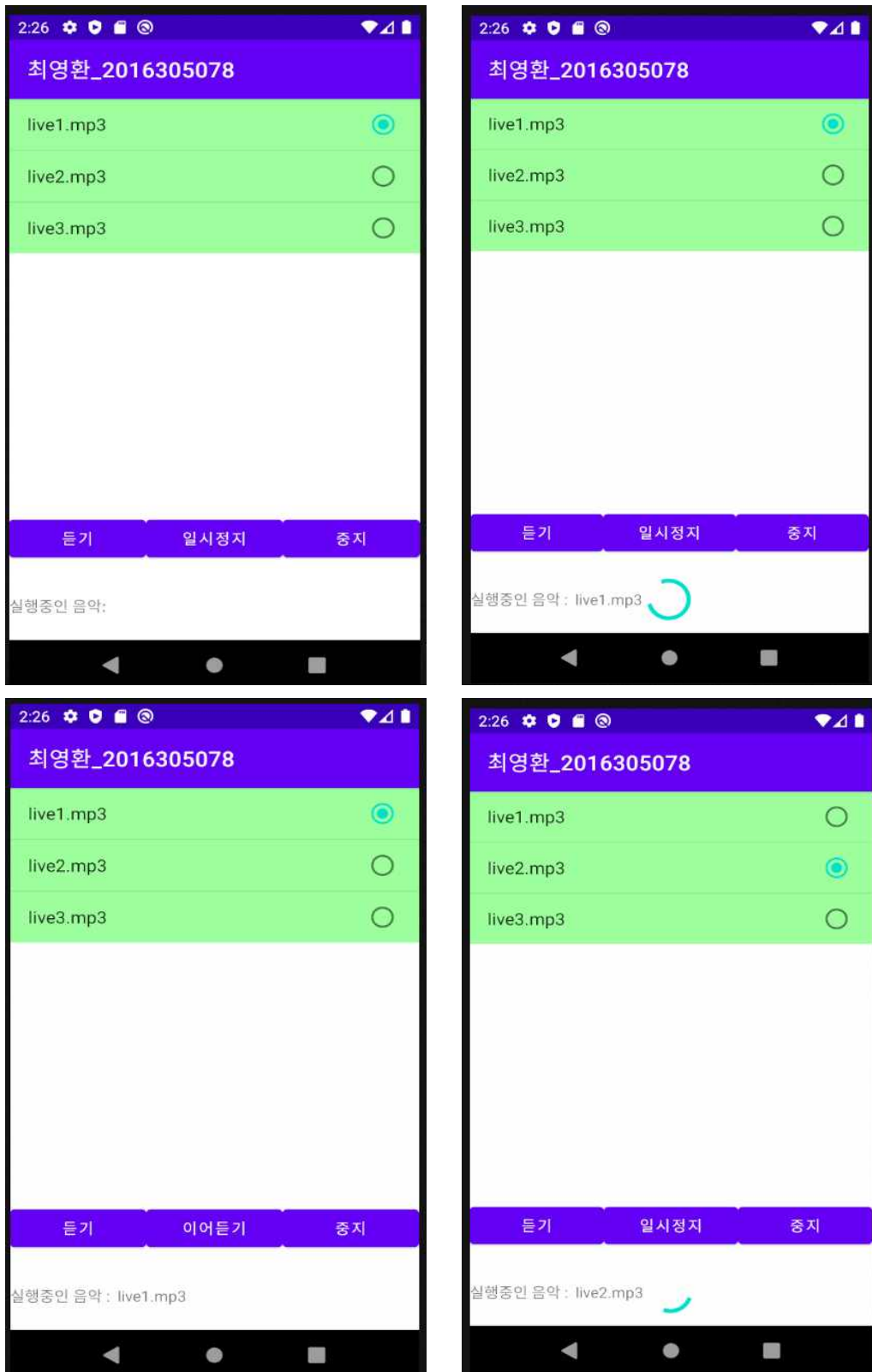
성명 : 최 영 환

제출일자 : 2021.11.24

본인은 타인이나 다른 매체를 도용하지 않았음을 확인합니다
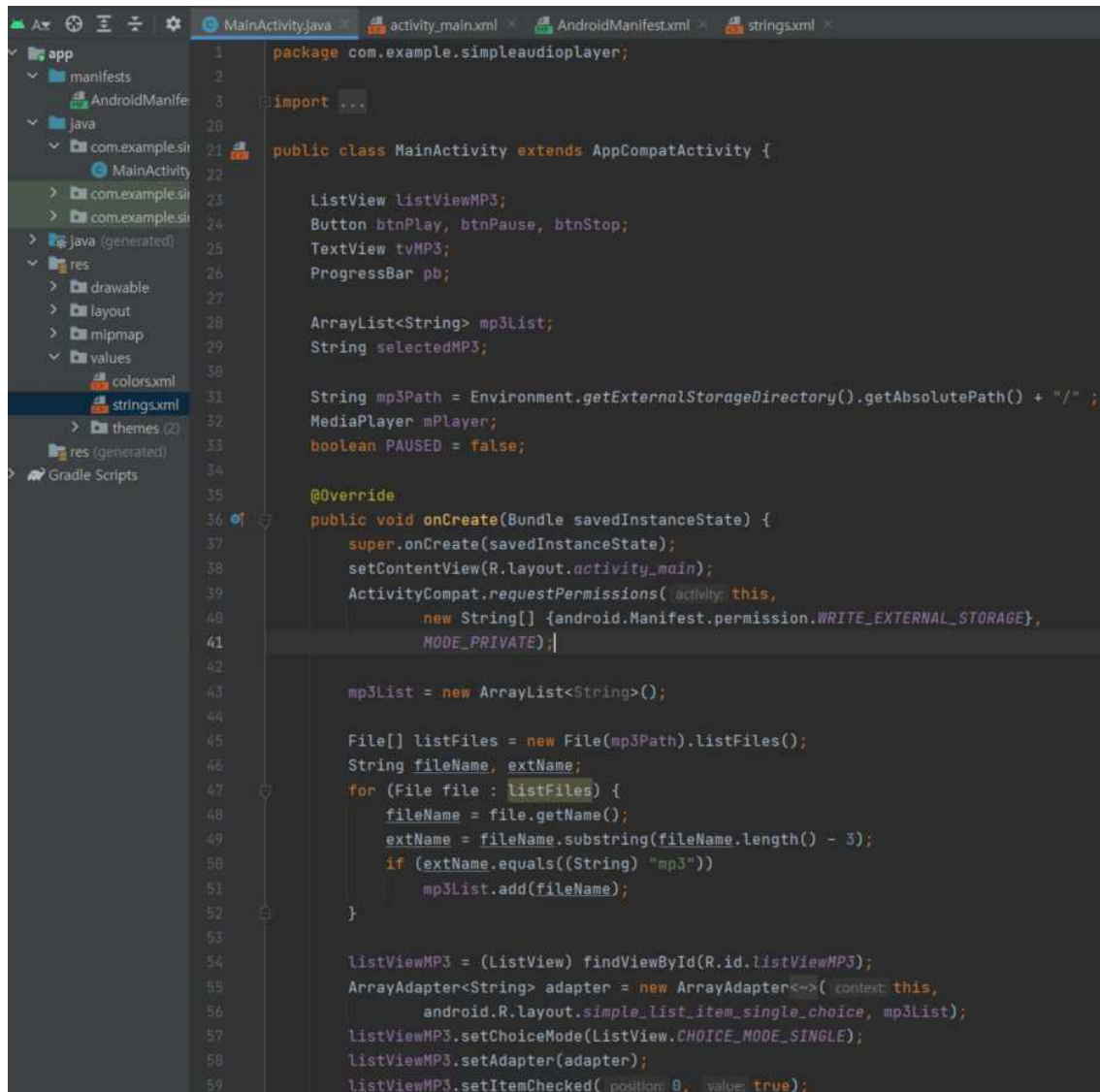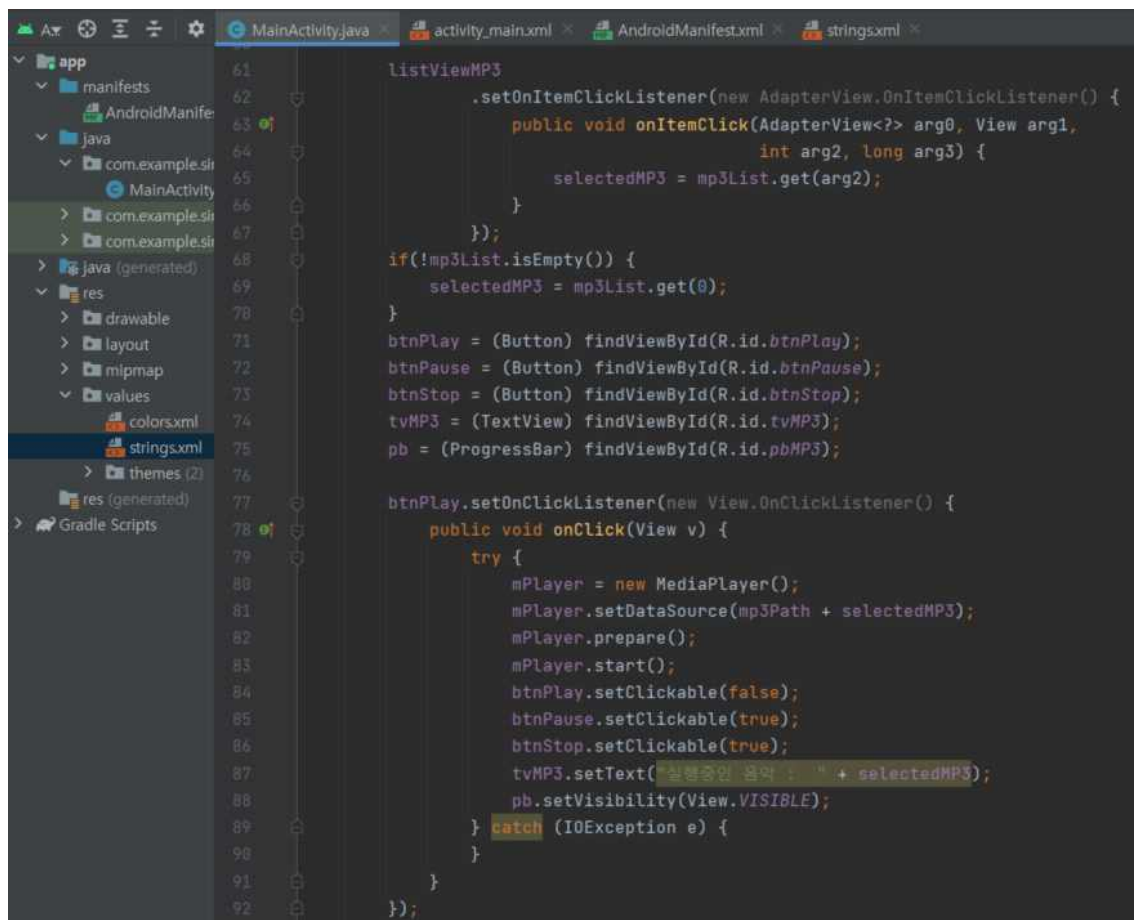
<본인사인 : 최영환>

<実행화면>

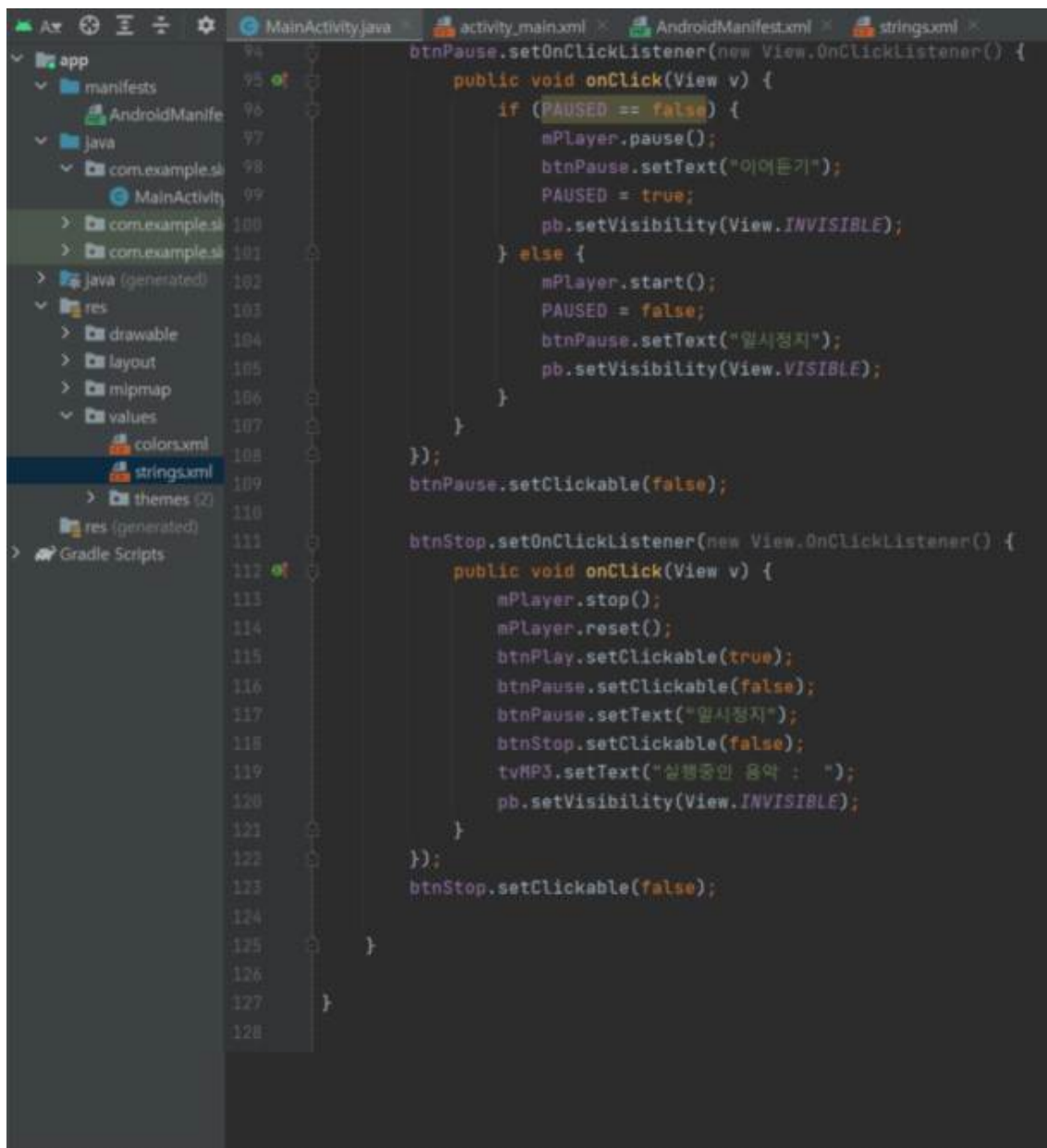재생, 일시정지, 이어듣기, 프로그레스바 동작 정상 작동을 확인하였습니다.

<MainActivity.java>

```java
package com.example.simpleaudioplayer;

import ...

public class MainActivity extends AppCompatActivity {

    ListView listViewMP3;
    Button btnPlay, btnPause, btnStop;
    TextView tvMP3;
    ProgressBar pb;

    ArrayList<String> mp3List;
    String selectedMP3;

    String mp3Path = Environment.getExternalStorageDirectory().getAbsolutePath() + "/" ;
    MediaPlayer mPlayer;
    boolean PAUSED = false;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ActivityCompat.requestPermissions( activity: this,
                new String[] {android.Manifest.permission.WRITE_EXTERNAL_STORAGE},
                MODE_PRIVATE);

        mp3List = new ArrayList<String>();

        File[] listFiles = new File(mp3Path).listFiles();
        String fileName, extName;
        for (File file : listFiles) {
            fileName = file.getName();
            extName = fileName.substring(fileName.length() - 3);
            if (extName.equals((String) "mp3"))
                mp3List.add(fileName);
        }

        listViewMP3 = (ListView) findViewById(R.id.listViewMP3);
        ArrayAdapter<String> adapter = new ArrayAdapter<>( context: this,
                android.R.layout.simple_list_item_single_choice, mp3List);
        listViewMP3.setChoiceMode(ListView.CHOICE_MODE_SINGLE);
        listViewMP3.setAdapter(adapter);
        listViewMP3.setItemChecked( position: 0,  value: true);
```

```java
        listViewMP3
                .setOnItemClickListener(new AdapterView.OnItemClickListener() {
                    public void onItemClick(AdapterView<?> arg0, View arg1,
                                            int arg2, long arg3) {
                        selectedMP3 = mp3List.get(arg2);
                    }
                });
        if(!mp3List.isEmpty()) {
            selectedMP3 = mp3List.get(0);
        }
        btnPlay = (Button) findViewById(R.id.btnPlay);
        btnPause = (Button) findViewById(R.id.btnPause);
        btnStop = (Button) findViewById(R.id.btnStop);
        tvMP3 = (TextView) findViewById(R.id.tvMP3);
        pb = (ProgressBar) findViewById(R.id.pbMP3);

        btnPlay.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                try {
                    mPlayer = new MediaPlayer();
                    mPlayer.setDataSource(mp3Path + selectedMP3);
                    mPlayer.prepare();
                    mPlayer.start();
                    btnPlay.setClickable(false);
                    btnPause.setClickable(true);
                    btnStop.setClickable(true);
                    tvMP3.setText("실행중인 음악 :  " + selectedMP3);
                    pb.setVisibility(View.VISIBLE);
                } catch (IOException e) {
                }
            }
        });
```

```java
            btnPause.setOnClickListener(new View.OnClickListener() {
                public void onClick(View v) {
                    if (PAUSED == false) {
                        mPlayer.pause();
                        btnPause.setText("이어듣기");
                        PAUSED = true;
                        pb.setVisibility(View.INVISIBLE);
                    } else {
                        mPlayer.start();
                        PAUSED = false;
                        btnPause.setText("일시정지");
                        pb.setVisibility(View.VISIBLE);
                    }
                }
            });
            btnPause.setClickable(false);

            btnStop.setOnClickListener(new View.OnClickListener() {
                public void onClick(View v) {
                    mPlayer.stop();
                    mPlayer.reset();
                    btnPlay.setClickable(true);
                    btnPause.setClickable(false);
                    btnPause.setText("일시정지");
                    btnStop.setClickable(false);
                    tvMP3.setText("실행중인 음악 :    ");
                    pb.setVisibility(View.INVISIBLE);
                }
            });
            btnStop.setClickable(false);

        }

    }
```

```java
package com.example.simpleaudioplayer;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.os.Environment;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;
import android.widget.ProgressBar;
import android.widget.TextView;
import java.io.File;
```

```java
import java.io.IOException;
import java.util.ArrayList;
public class MainActivity extends AppCompatActivity {
    ListView listViewMP3;
    Button btnPlay, btnPause, btnStop;
    TextView tvMP3;
    ProgressBar pb;
    ArrayList<String> mp3List;
    String selectedMP3;
    String mp3Path = Environment.getExternalStorageDirectory().getAbsolutePath() +"/" ;
    MediaPlayer mPlayer;
    boolean PAUSED =false;
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ActivityCompat.requestPermissions(this,
                new String[] {android.Manifest.permission.WRITE_EXTERNAL_STORAGE},
                MODE_PRIVATE);
        mp3List =new ArrayList <String >();
        File[] listFiles =new File(mp3Path).listFiles();
        String fileName, extName;
        for (File file : listFiles) {
            fileName = file.getName();
            extName = fileName.substring(fileName.length() -3);
            if (extName.equals((String) "mp3"))
                mp3List.add(fileName);
        }
        listViewMP3 = (ListView) findViewById(R.id.listViewMP3);
        ArrayAdapter<String > adapter =new ArrayAdapter <String >(this,
                android.R.layout.simple_list_item_single_choice, mp3List);
        listViewMP3.setChoiceMode(ListView.CHOICE_MODE_SINGLE);
        listViewMP3.setAdapter(adapter);
        listViewMP3.setItemChecked(0, true);
        listViewMP3
                .setOnItemClickListener(new AdapterView.OnItemClickListener() {
                    public void onItemClick(AdapterView <?> arg0, View arg1,
                                            int arg2, long arg3) {
                        selectedMP3 = mp3List.get(arg2);
                    }
                });
        if(!mp3List.isEmpty()) {
            selectedMP3 = mp3List.get(0);
        }
        btnPlay = (Button) findViewById(R.id.btnPlay);
        btnPause = (Button) findViewById(R.id.btnPause);
        btnStop = (Button) findViewById(R.id.btnStop);
        tvMP3 = (TextView) findViewById(R.id.tvMP3);
        pb = (ProgressBar) findViewById(R.id.pbMP3);
        btnPlay.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                try {
                    mPlayer =new MediaPlayer();
                    mPlayer.setDataSource(mp3Path + selectedMP3);
```

```java
                    mPlayer.prepare();
                    mPlayer.start();
                    btnPlay.setClickable(false);
                    btnPause.setClickable(true);
                    btnStop.setClickable(true);
                    tvMP3.setText("실행중인 음악 :   "+ selectedMP3);
                    pb.setVisibility(View.VISIBLE);
                } catch (IOException e) {
                }
            }
        });
        btnPause.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                if (PAUSED ==false) {
                    mPlayer.pause();
                    btnPause.setText("이어듣기");
                    PAUSED =true;
                    pb.setVisibility(View.INVISIBLE);
                } else {
                    mPlayer.start();
                    PAUSED =false;
                    btnPause.setText("일시정지");
                    pb.setVisibility(View.VISIBLE);
                }
            }
        });
        btnPause.setClickable(false);
        btnStop.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                mPlayer.stop();
                mPlayer.reset();
                btnPlay.setClickable(true);
                btnPause.setClickable(false);
                btnPause.setText("일시정지");
                btnStop.setClickable(false);
                tvMP3.setText("실행중인 음악 :   ");
                pb.setVisibility(View.INVISIBLE);
            }
        });
        btnStop.setClickable(false);
    }
}
```
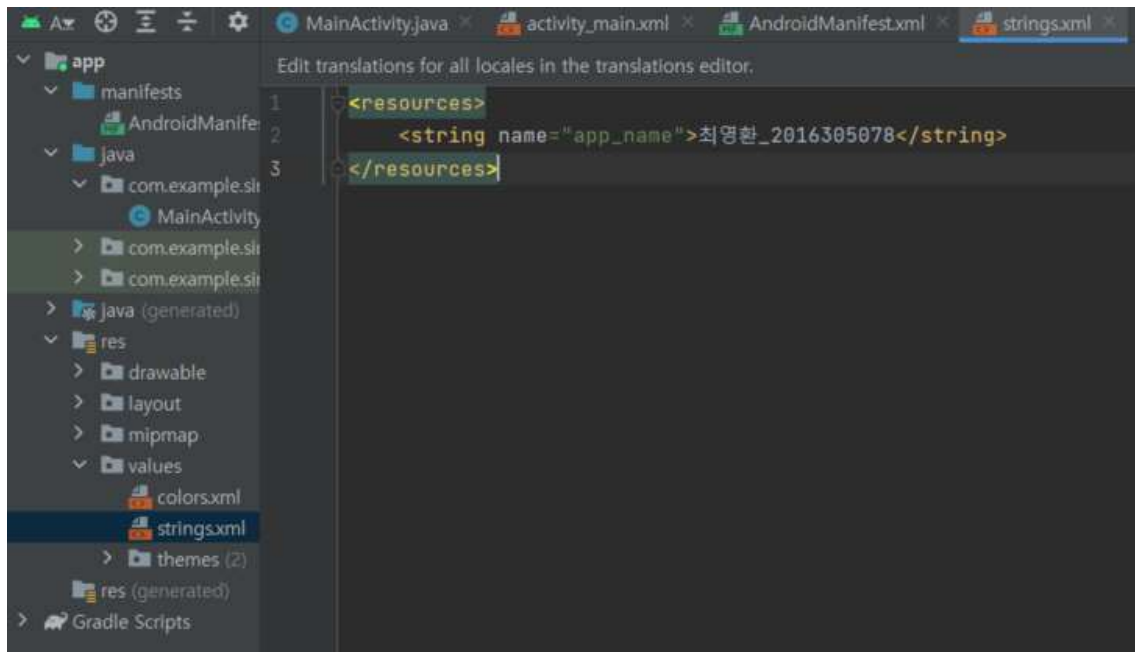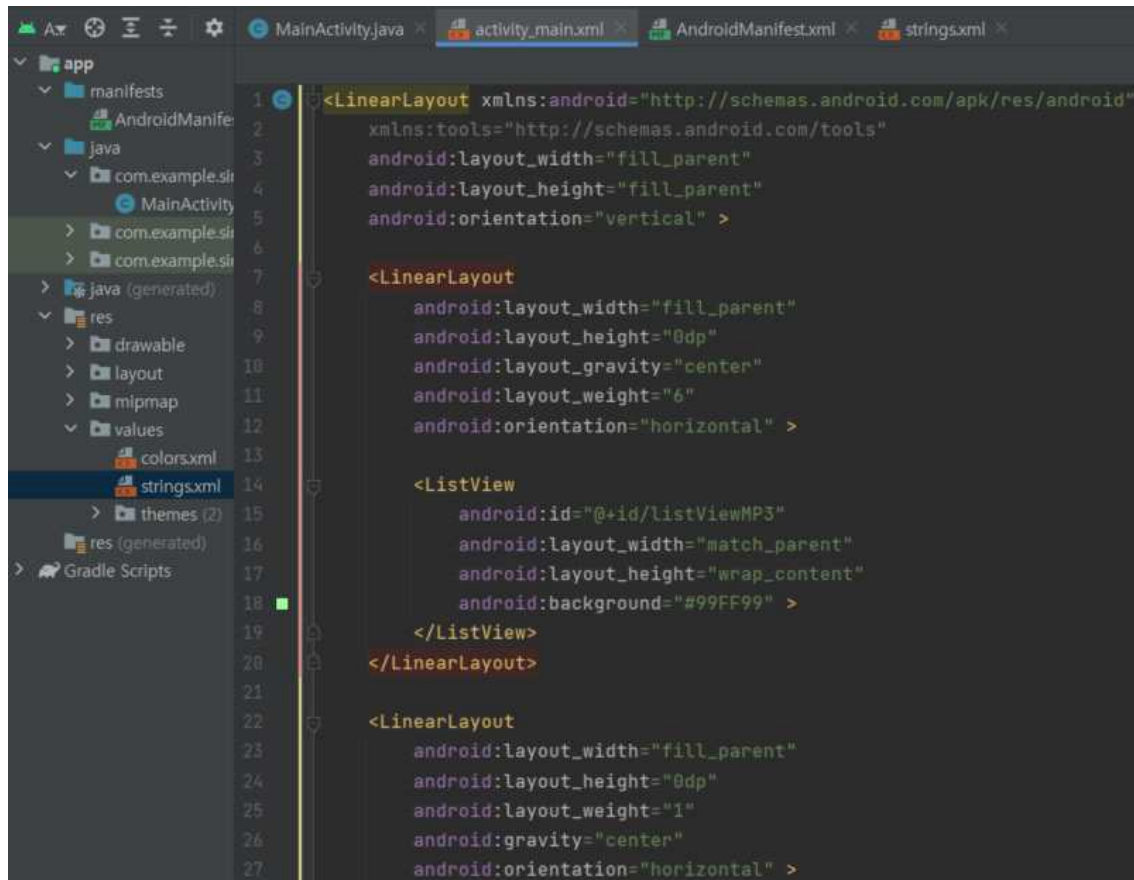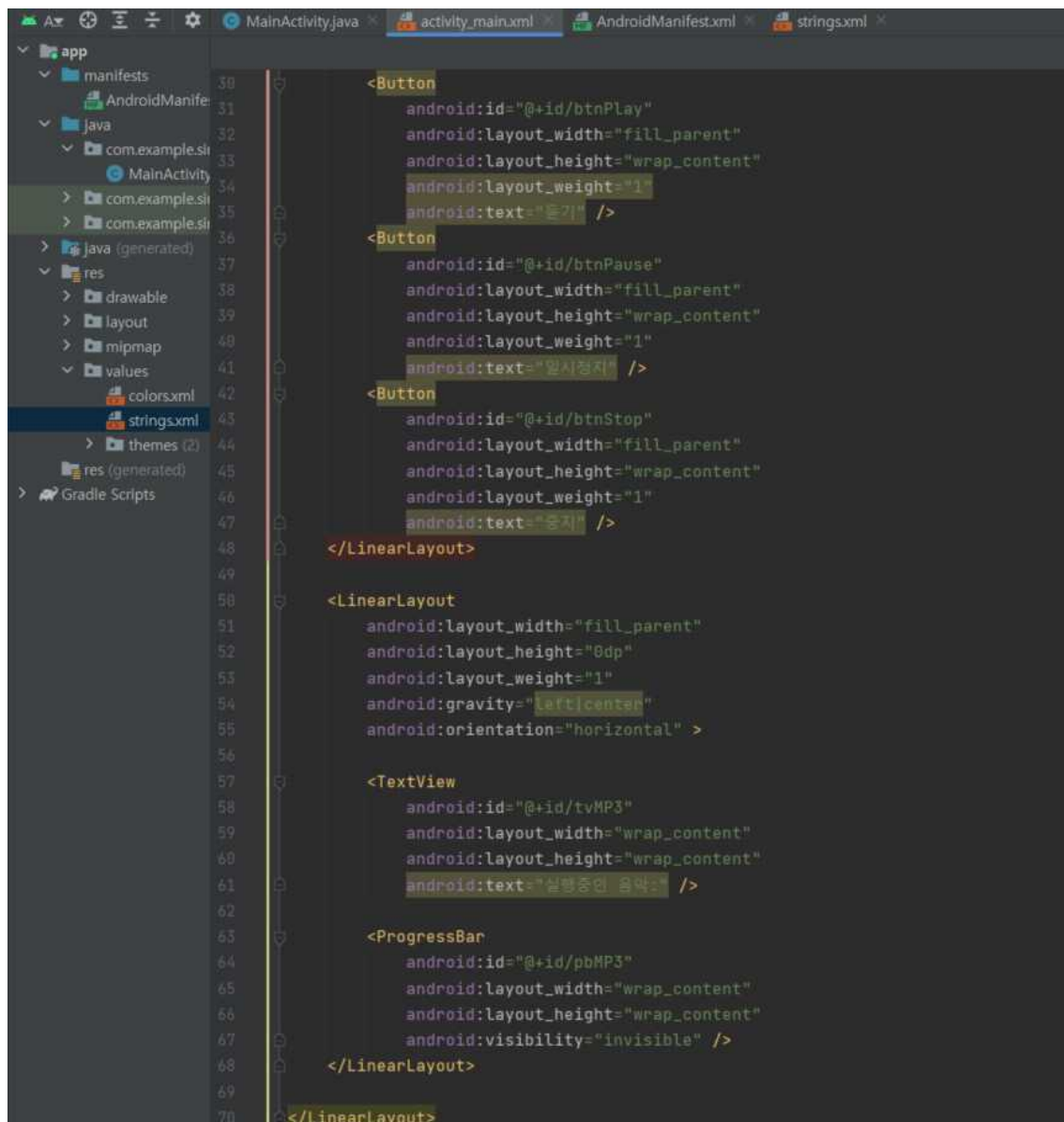
```
<resources >
    <string name ="app_name">최영환_2016305078 </string >
</resources >
```

```xml
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_gravity="center"
        android:layout_weight="6"
        android:orientation="horizontal" >

        <ListView
            android:id="@+id/listViewMP3"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:background="#99FF99" >
        </ListView>
    </LinearLayout>

    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:gravity="center"
        android:orientation="horizontal" >
```

```xml
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical">
    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_gravity="center"
        android:layout_weight="6"
        android:orientation="horizontal">
        <ListView
            android:id="@+id/listViewMP3"
```

```xml
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="#99FF99">
        </ListView >
    </LinearLayout >
    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:gravity="center"
        android:orientation="horizontal">
        <Button
                android:id="@+id/btnPlay"
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="듣기"/>
        <Button
                android:id="@+id/btnPause"
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="일시정지"/>
        <Button
                android:id="@+id/btnStop"
                android:layout_width="fill_parent"
                android:layout_height="wrap_content"
                android:layout_weight="1"
                android:text="중지"/>
    </LinearLayout >
    <LinearLayout
        android:layout_width="fill_parent"
        android:layout_height="0dp"
        android:layout_weight="1"
        android:gravity="left|center"
        android:orientation="horizontal">
        <TextView
                android:id="@+id/tvMP3"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="실행중인 음악:"/>
        <ProgressBar
                android:id="@+id/pbMP3"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:visibility="invisible"/>
    </LinearLayout >
</LinearLayout >
```
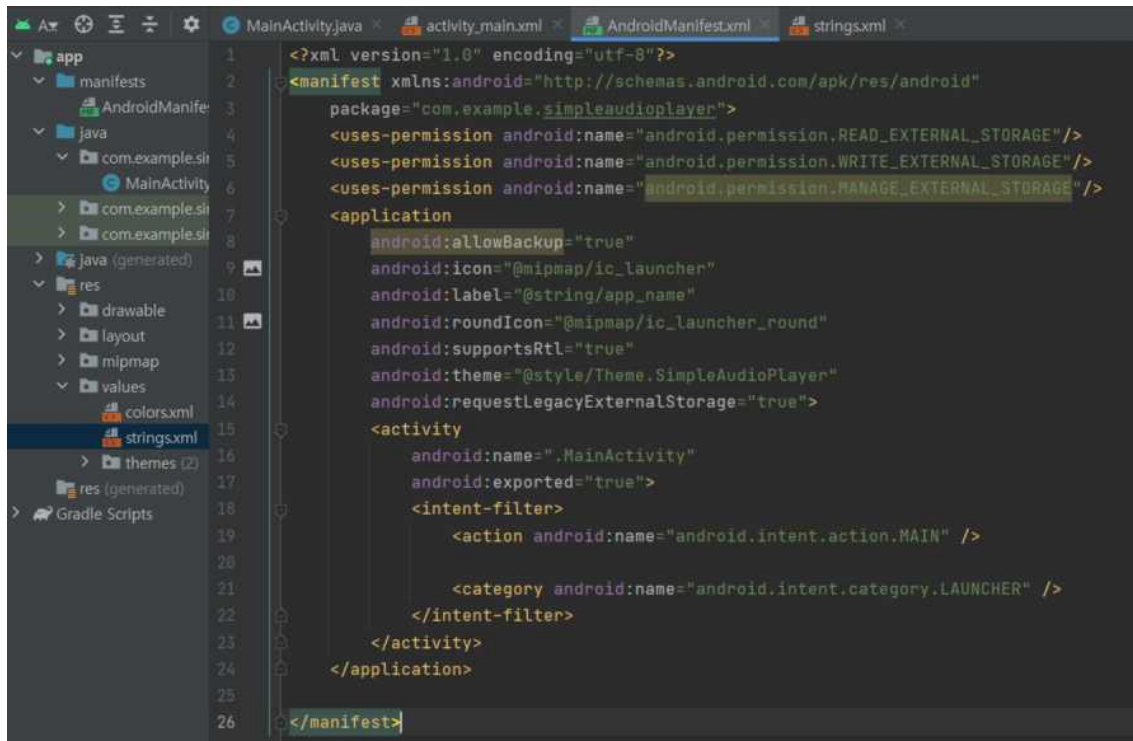
<AndroidManifest.xml>


```xml
<?xml version="1.0"encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.example.simpleaudioplayer">
    <uses-permission android:name="android.permission.READ_EXTERNAL_STORAGE"/>
    <uses-permission
        android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>
    <uses-permission
        android:name="android.permission.MANAGE_EXTERNAL_STORAGE"/>
    <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.SimpleAudioPlayer"
android:requestLegacyExternalStorage="true">
        <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 >
```