

# 스마트폰 프로그래밍

## Assign #9

(제목 : SimpleAudioPlayer)

학번 : 2016305078

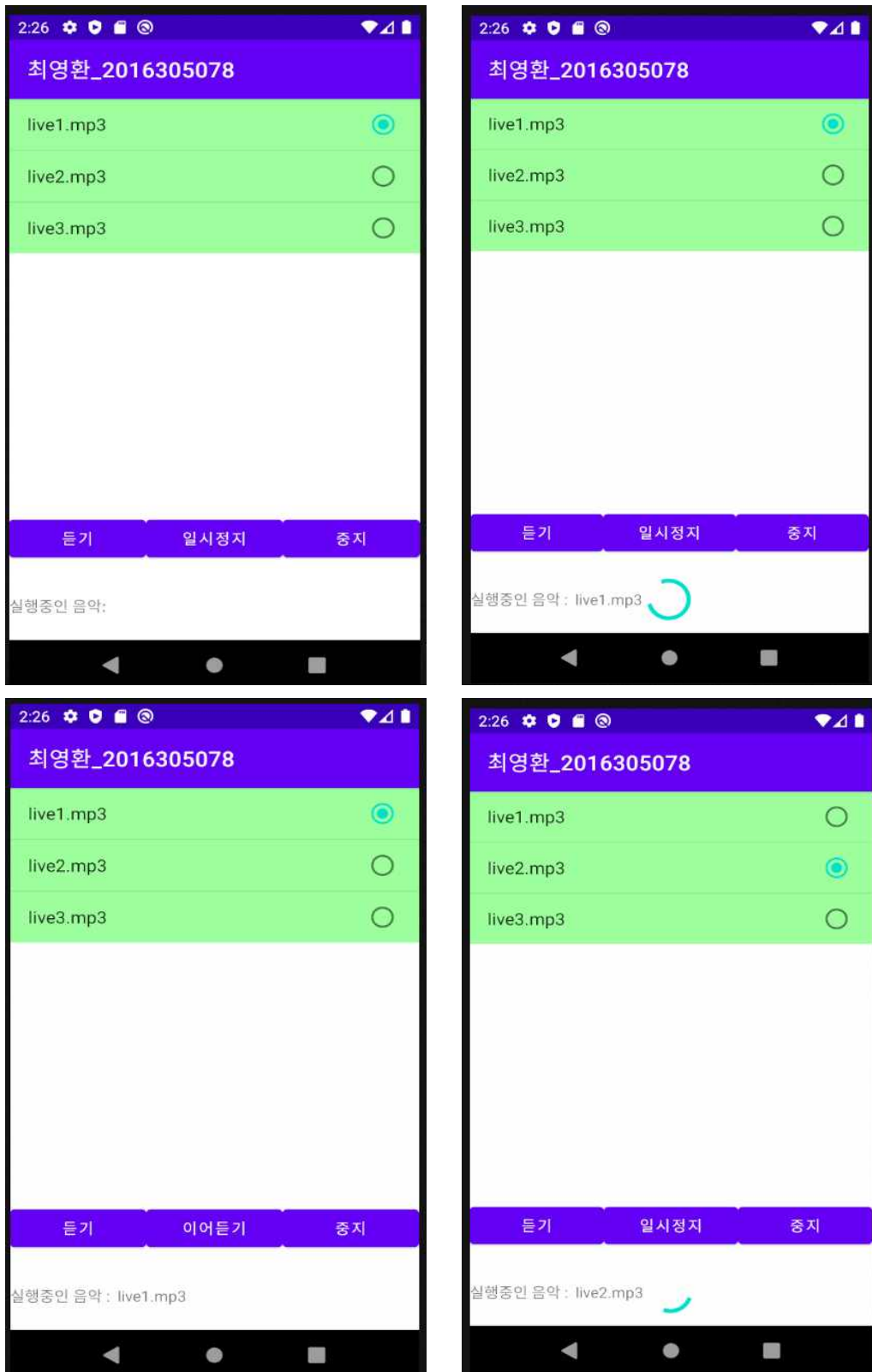
성명 : 최 영 환

제출일자 : 2021.11.24

본인은 타인이나 다른 매체를 도용하지 않았음을 확인합니다

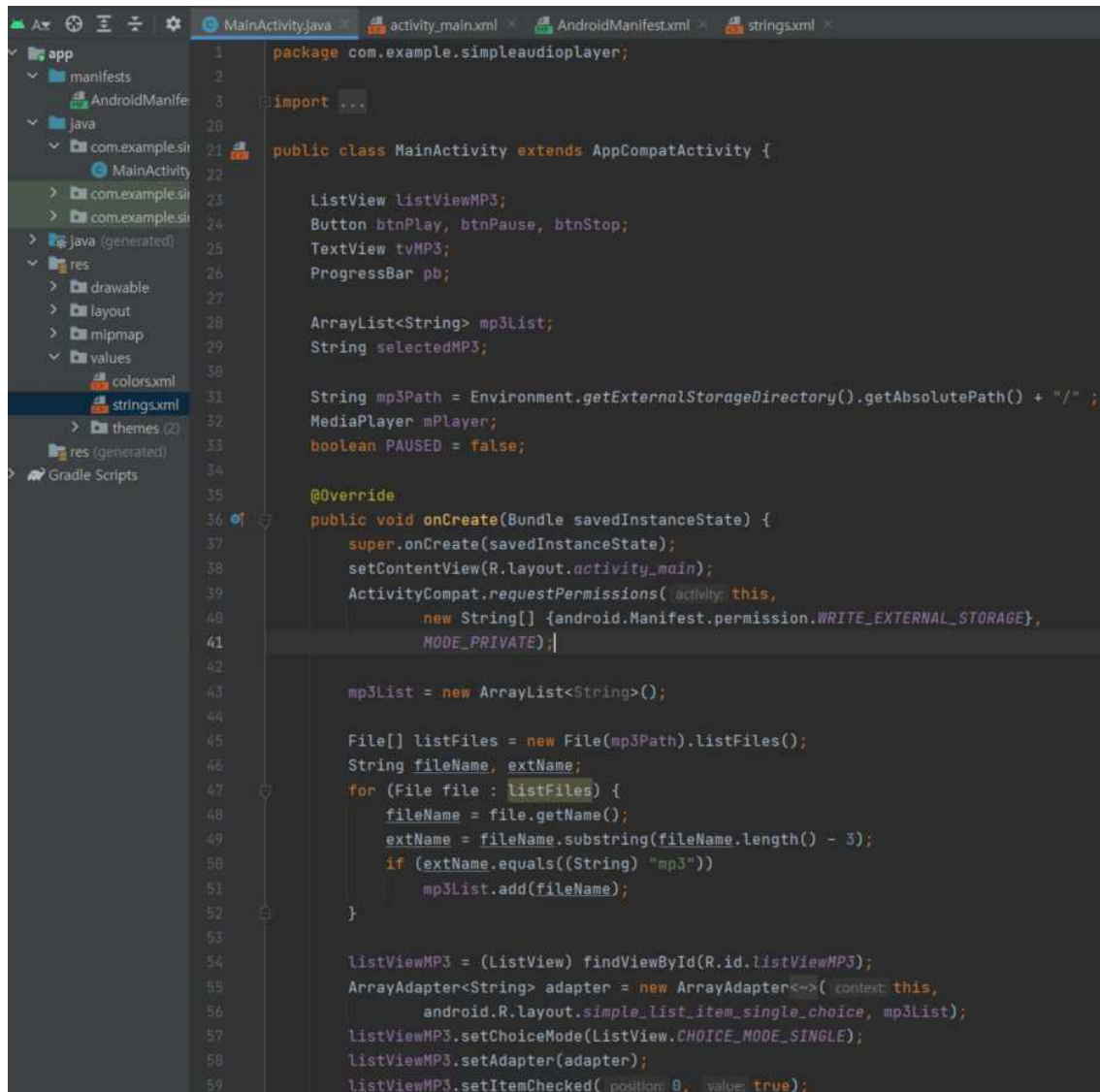
<본인사인 : 최영환>

<실행화면>

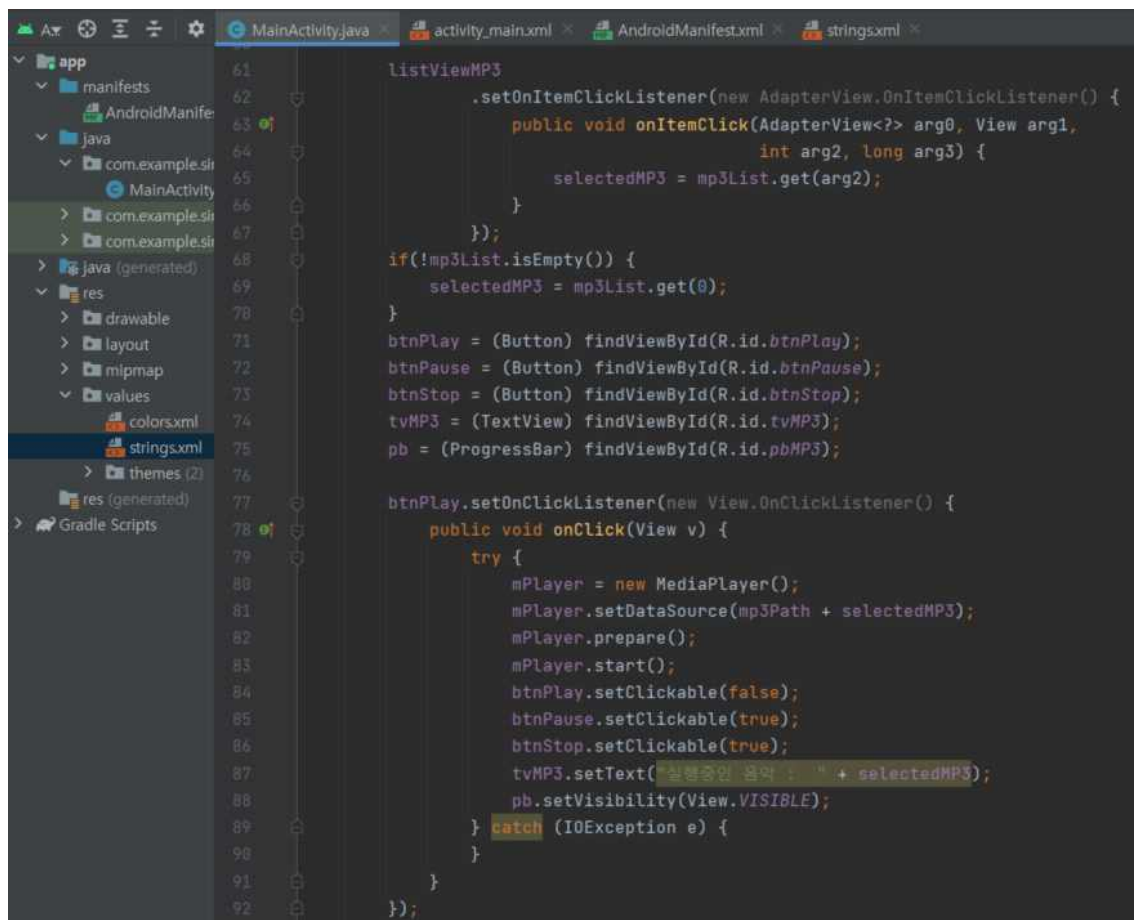


재생, 일시정지, 이어듣기, 프로그레스바 동작 정상 작동을 확인하였습니다.

## <MainActivity.java>

A screenshot of an IDE window showing the MainActivity.java file. The left sidebar displays a project tree with folders like 'app', 'manifests', 'java', 'res', and 'values'. The main editor area shows the Java code for MainActivity, which extends AppCompatActivity. The code includes imports for ArrayList, File, and MediaPlayer, and declares variables for a ListView, buttons, a TextView, a ProgressBar, an ArrayList of Strings, and a boolean. The onCreate method is overridden, calling super.onCreate, setContentView, requestPermissions, and initializing the mp3List and listFiles. It also sets up an ArrayAdapter for the ListView and calls setItemChecked.

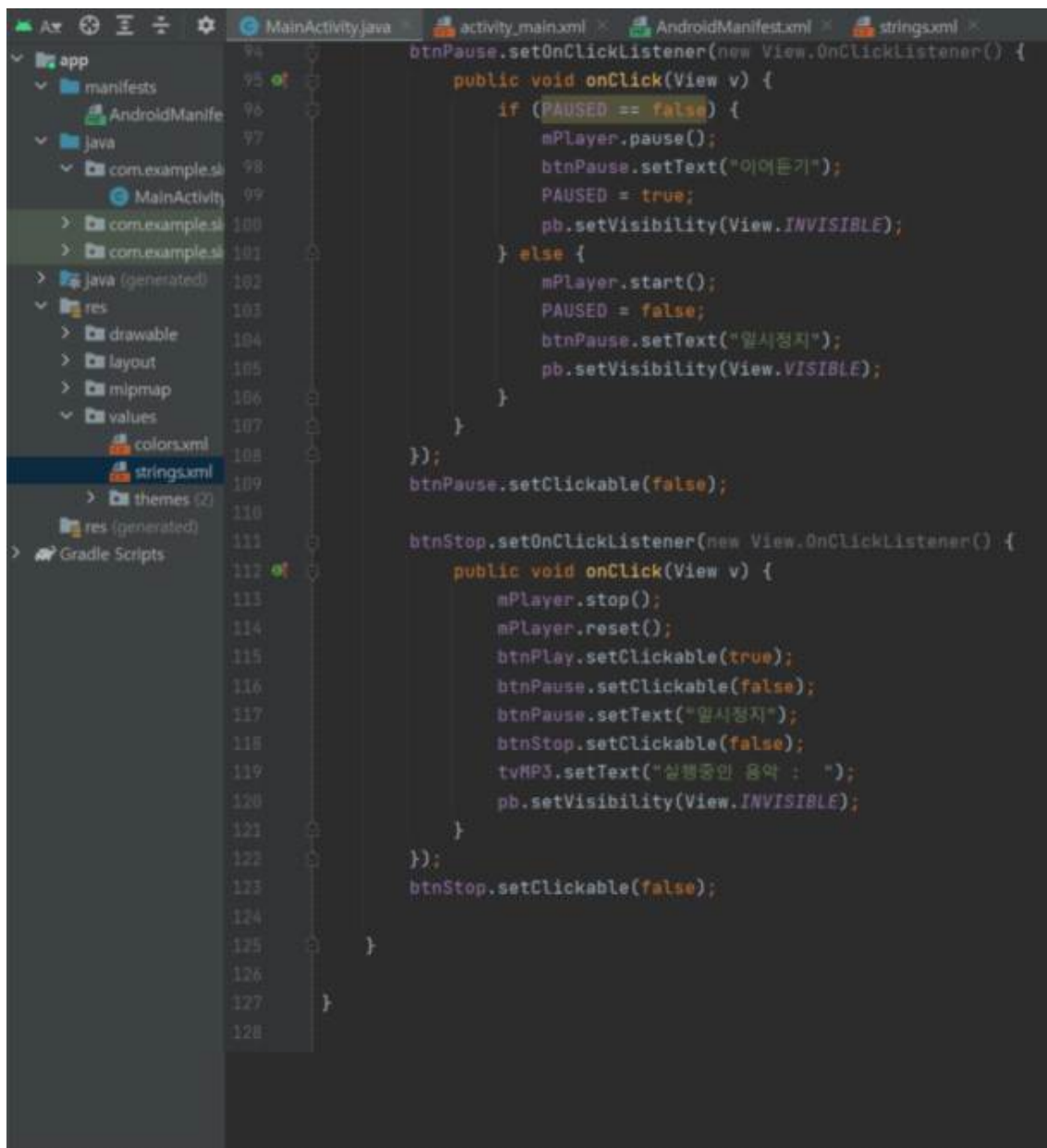
```
1 package com.example.simpleaudioplayer;
2
3 import ...
4
5 public class MainActivity extends AppCompatActivity {
6
7     ListView listViewMP3;
8     Button btnPlay, btnPause, btnStop;
9     TextView tvMP3;
10    ProgressBar pb;
11
12    ArrayList<String> mp3List;
13    String selectedMP3;
14
15    String mp3Path = Environment.getExternalStorageDirectory().getAbsolutePath() + "/" ;
16    MediaPlayer mPlayer;
17    boolean PAUSED = false;
18
19    @Override
20    public void onCreate(Bundle savedInstanceState) {
21        super.onCreate(savedInstanceState);
22        setContentView(R.layout.activity_main);
23        ActivityCompat.requestPermissions(this,
24            new String[] {android.Manifest.permission.WRITE_EXTERNAL_STORAGE},
25            MODE_PRIVATE);
26
27        mp3List = new ArrayList<String>();
28
29        File[] listFiles = new File(mp3Path).listFiles();
30        String fileName, extName;
31        for (File file : listFiles) {
32            fileName = file.getName();
33            extName = fileName.substring(fileName.length() - 3);
34            if (extName.equals((String) "mp3"))
35                mp3List.add(fileName);
36        }
37
38        listViewMP3 = (ListView) findViewById(R.id.listViewMP3);
39        ArrayAdapter<String> adapter = new ArrayAdapter<>(context this,
40            android.R.layout.simple_list_item_single_choice, mp3List);
41        listViewMP3.setChoiceMode(ListView.CHOICE_MODE_SINGLE);
42        listViewMP3.setAdapter(adapter);
43        listViewMP3.setItemChecked(position 0, value true);
44    }
45 }
```



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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) {
        }
    }
});
```



```
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.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.ListView;
import android.widget.ProgressBar;
import android.widget.TextView;
import java.io.File;
```

```

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);

```

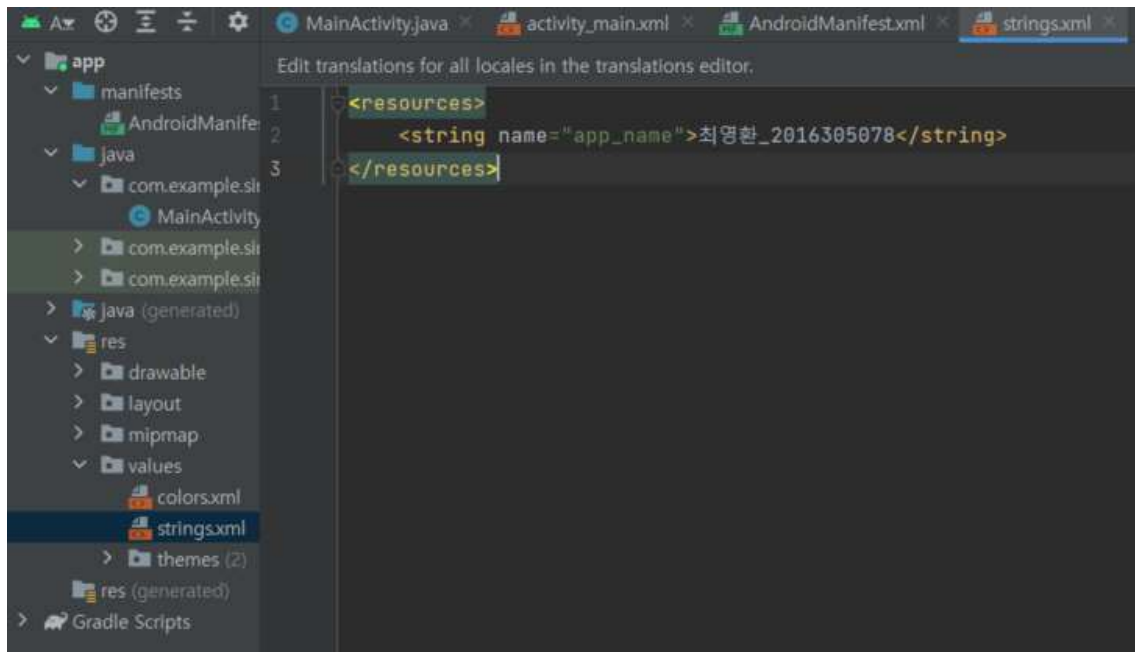
```

        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);
}
}

```

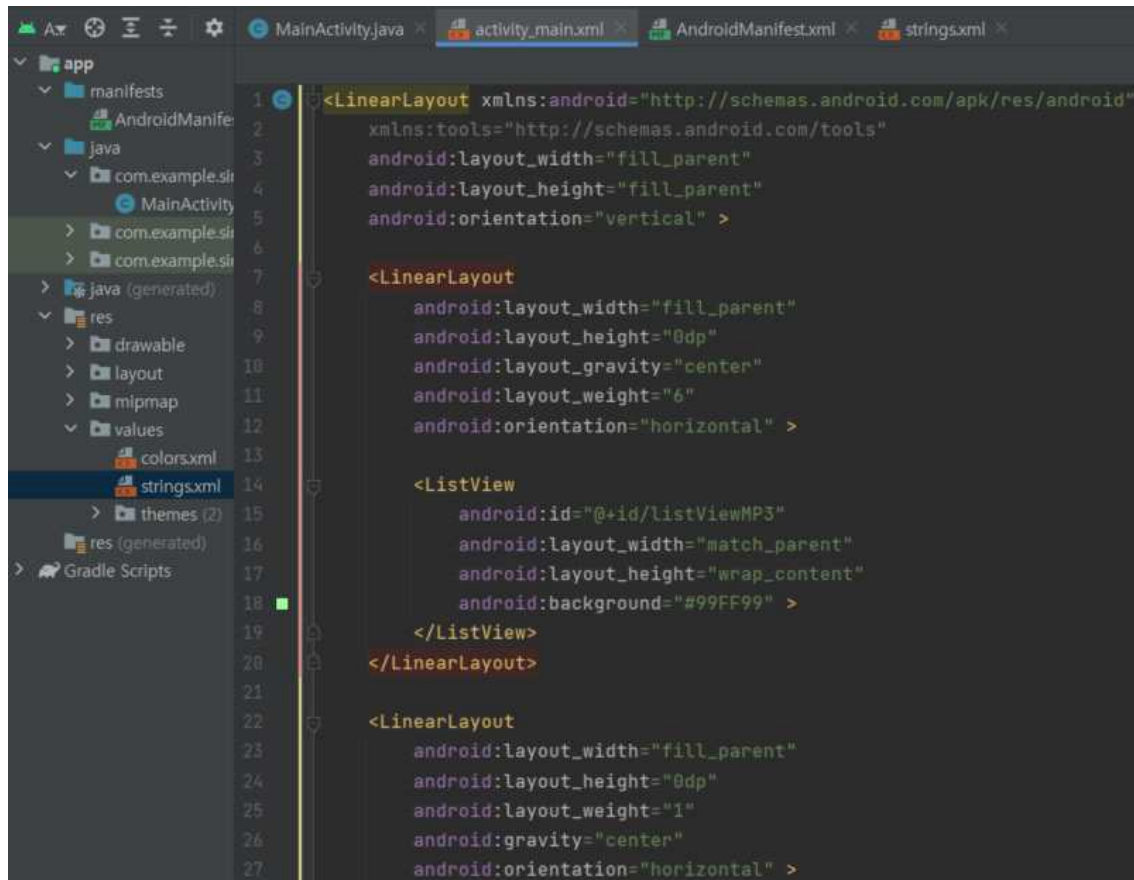
<string.xml>



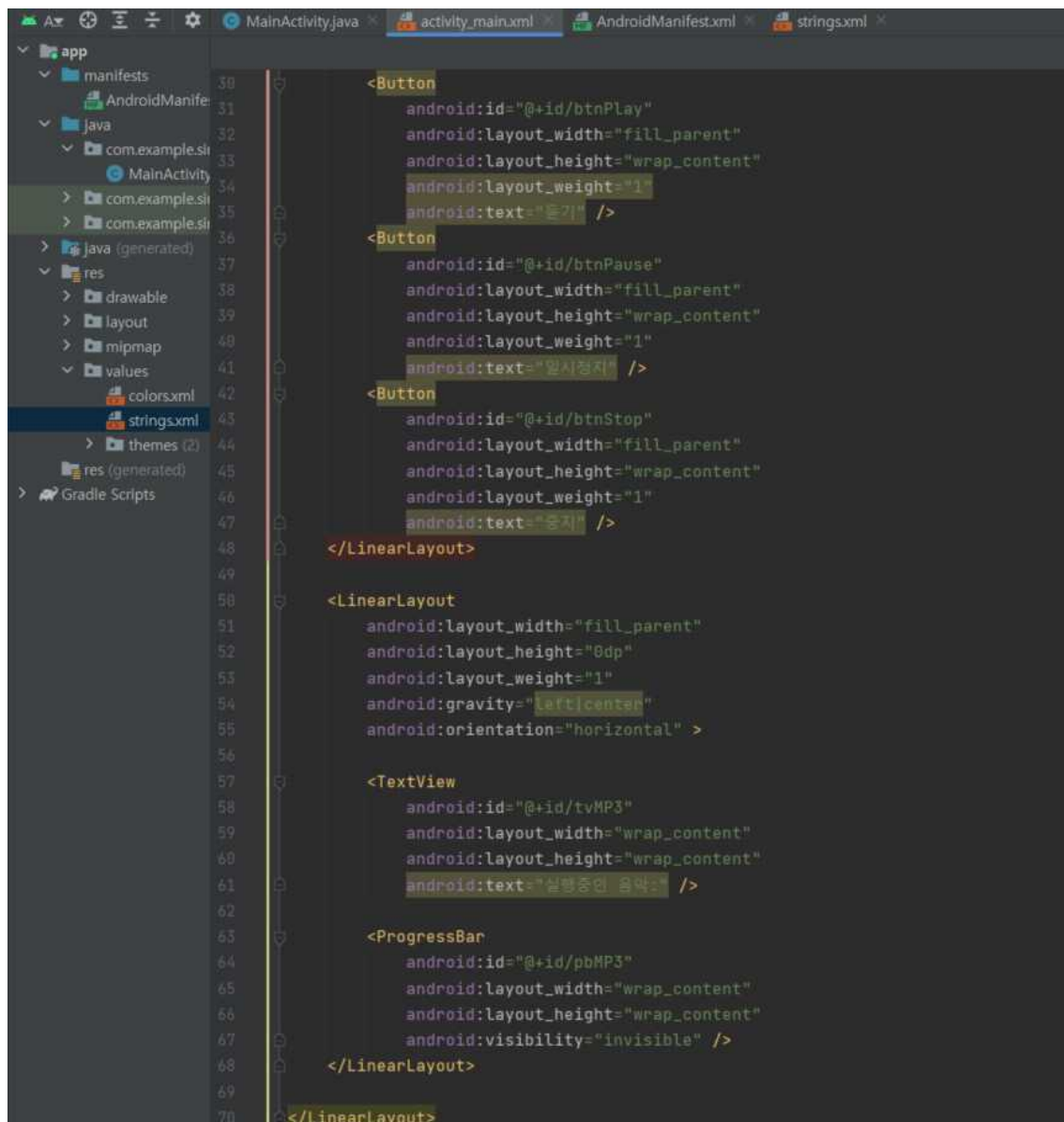
```
<resources >
    <string name ="app_name">최영환_2016305078 </string >
</resources >
```



## <activity\_main.xml>



```
1 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
2   xmlns:tools="http://schemas.android.com/tools"
3   android:layout_width="fill_parent"
4   android:layout_height="fill_parent"
5   android:orientation="vertical" >
6
7   <LinearLayout
8     android:layout_width="fill_parent"
9     android:layout_height="0dp"
10    android:layout_gravity="center"
11    android:layout_weight="6"
12    android:orientation="horizontal" >
13
14    <ListView
15      android:id="@+id/listViewMP3"
16      android:layout_width="match_parent"
17      android:layout_height="wrap_content"
18      android:background="#99FF99" >
19
20    </ListView>
21  </LinearLayout>
22
23  <LinearLayout
24    android:layout_width="fill_parent"
25    android:layout_height="0dp"
26    android:layout_weight="1"
27    android:gravity="center"
28    android:orientation="horizontal" >
```



<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">
    <Button
        android:id="@+id/btnPlay"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="듣기"/>

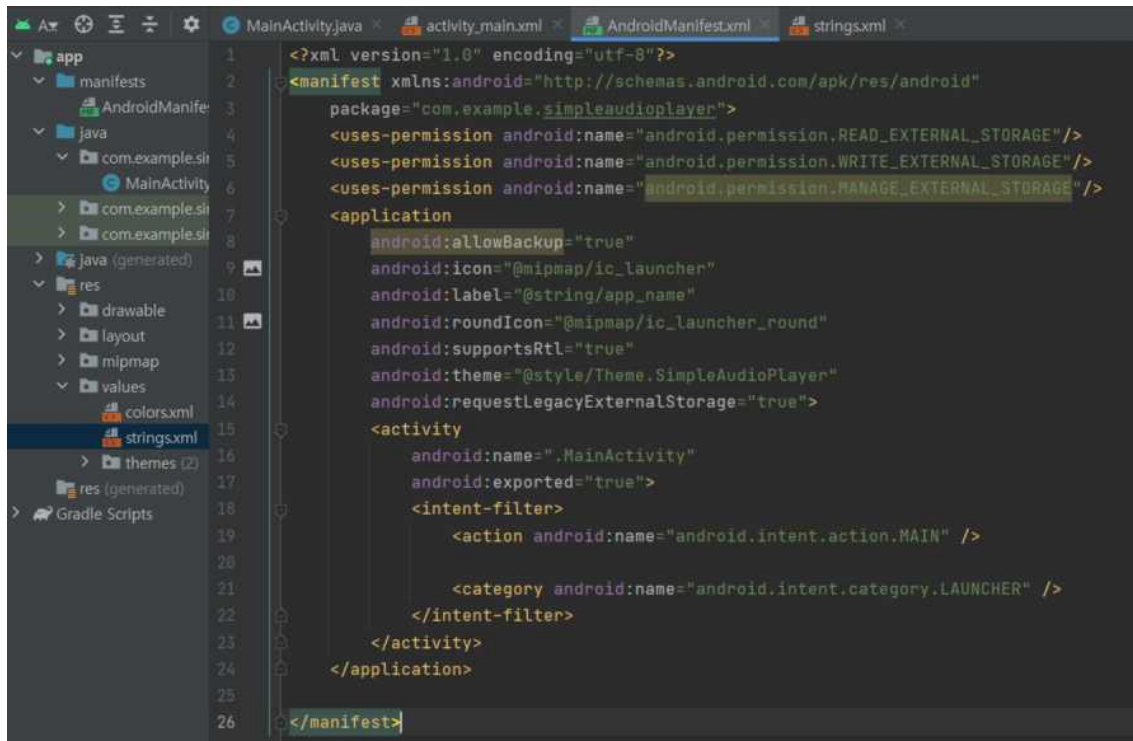
    <Button
        android:id="@+id/btnPause"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="일시정지"/>

    <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 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 >
```