

# 스마트폰 프로그래밍

## Assign #06

(XML Parsing & Adapter 작성)

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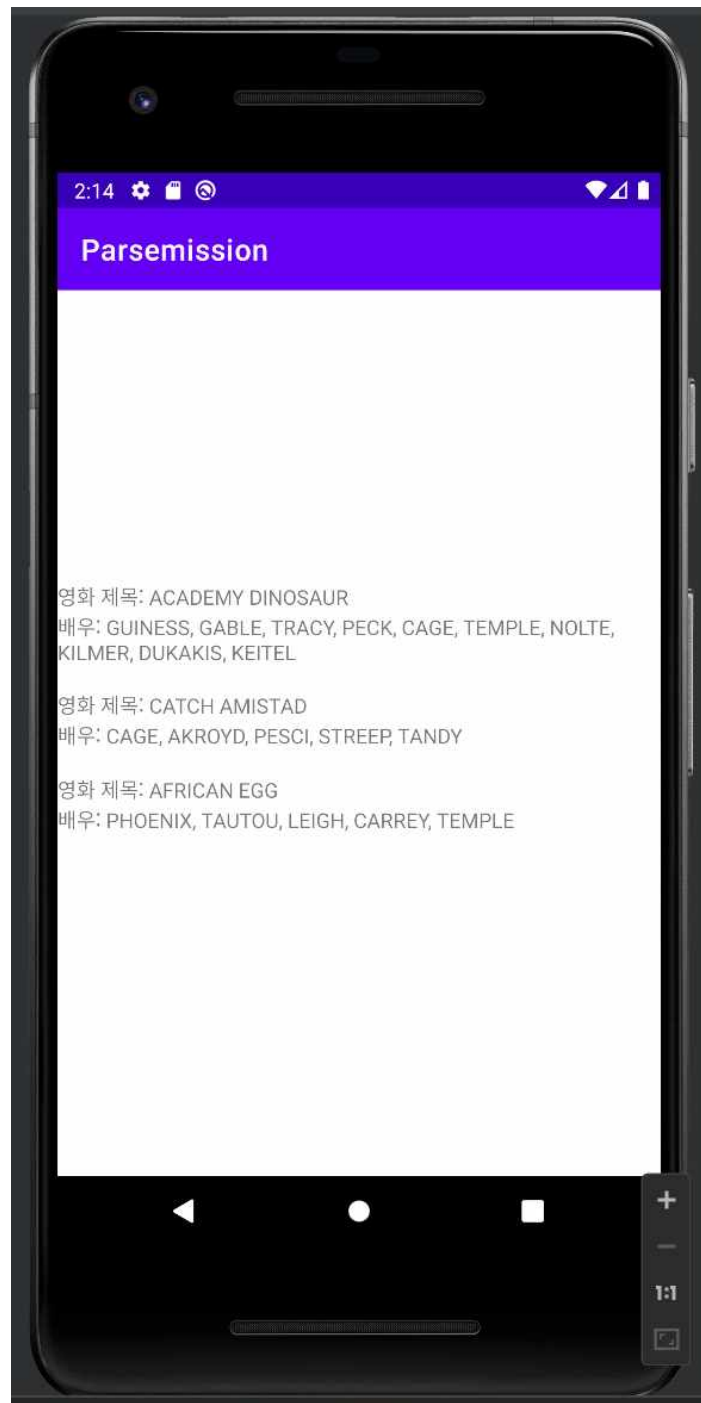
성명 : 정 동 기

제출일자 : 2022.12.03

본인은 타인이나 다른 매체를 도용하지 않았음을 확인합니다 <정동기>

1. 첨부한 “film\_actor.xml” 을 Parsing하여 영화 제목<title>과 그 영화에 출연한 배우의 성 <actor\_last\_name>을 추출하여 그 내용을 아래와 같이 TextView로 출력하는 프로그램을 작성하시오.

### <실행화면>



## <MainActivity.java>

```
1 package kr.ac.skuniv.ce;
2
3 import androidx.appcompat.app.AppCompatActivity;
4
5 import android.os.Bundle;
6 import android.widget.TextView;
7
8 import org.xmlpull.v1.XmlPullParser;
9 import org.xmlpull.v1.XmlPullParserException;
10 import org.xmlpull.v1.XmlPullParserFactory;
11
12 import java.io.IOException;
13 import java.io.InputStream;
14 import java.util.ArrayList;
15
16 public class MainActivity extends AppCompatActivity {
17
18     private TextView txt;
19
20     @Override
21     protected void onCreate(Bundle savedInstanceState) {
22         super.onCreate(savedInstanceState);
23         setContentView(R.layout.activity_main);
24         txt = (TextView) findViewById(R.id.txt);
25         parseXML();
26     }
27
28     private void parseXML() {
29         XmlPullParserFactory parseFactory;
30         try {
31             parseFactory = XmlPullParserFactory.newInstance();
32             XmlPullParser parser = parseFactory.newPullParser();
33             InputStream is = getAssets().open("film_actor.xml");
34             parser.setFeature(XmlPullParser.FEATURE_PROCESS_NAMESPACES, false);
35             parser.setInput(is, null);
36             processParsing(parser);
37         } catch (XmlPullParserException e) {
38         } catch (IOException e) {
39         }
40     }
41
42     private void processParsing(XmlPullParser parser) throws IOException, XmlPullParserException {
43         ArrayList<Movie> movie_actor = new ArrayList<>();
44         int eventType = parser.getEventType(); //event type 얻어오기
45         Movie title_actor = null;
46
47         while (eventType != XmlPullParser.END_DOCUMENT) { //xml 문서의 끝까지 읽기
48             String eltName = null;
49
50             switch(eventType) { //태그 시작 부분
51                 case XmlPullParser.START_TAG:
52                     eltName = parser.getName();
53                     if("film".equals(eltName)) { //필름일 때
54                         title_actor = new Movie();
55                         title_actor.actor = ""; //스트림 문자열에 더하면서 받아주기 때문에 null을 지워줘야됨
56                         movie_actor.add(title_actor);
57                     } else if (title_actor != null) {
58                         if("title".equals(eltName)) {
59                             title_actor.title = parser.nextText(); //값 넣고 넘겨주기
60                         }
61                         else if ("actor_last_name".equals(eltName)) {
62                             title_actor.actor += parser.nextText() + ", "; //스트림에 이름 넣어주기
63                         }
64                     }
65                     break;
66             }
67             eventType = parser.next();
68         }
69         printMovies(movie_actor);
70     }
71
72     private void printMovies(ArrayList<Movie> movie_actor) {
```

```

73     StringBuilder bulider = new StringBuilder();
74
75     for(Movie movie : movie_actor){
76         bulider.append("영화 제목: ").append(movie.title).append("\n").
77             append("배우: ").append(movie.actor.substring(0, movie.actor.length()-2)).append("\n\n");
78     }
79     txt.setText(bulider.toString());
80 }
81 }

```

```
package kr.ac.skuniv.ce;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
import android.os.Bundle;
```

```
import android.widget.TextView;
```

```
import org.xmlpull.v1.XmlPullParser;
```

```
import org.xmlpull.v1.XmlPullParserException;
```

```
import org.xmlpull.v1.XmlPullParserFactory;
```

```
import java.io.IOException;
```

```
import java.io.InputStream;
```

```
import java.util.ArrayList;
```

```
public class MainActivity extends AppCompatActivity {
```

```
    private TextView txt;
```

```
    @Override
```

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

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        txt = (TextView) findViewById(R.id.txt);
```

```
        parseXML();
```

```
    }
```

```
    private void parseXML() {
```

```
        XmlPullParserFactory parseFactory;
```

```
        try {
```

```
            parseFactory = XmlPullParserFactory.newInstance();
```

```
            XmlPullParser parser = parseFactory.newPullParser();
```

```
            InputStream is = getAssets().open("film_actor.xml");
```

```
            parser.setFeature(XmlPullParser.FEATURE_PROCESS_NAMESPACES, false);
```

```
            parser.setInput(is, null);
```

```
            processParsing(parser);
```

```
        } catch (XmlPullParserException e) {
```

```
        } catch (IOException e) {
```

```
        }
```

```
    }
```

```
    private void processParsing(XmlPullParser parser) throws IOException,
```

```
        XmlPullParserException{
```

```
        ArrayList<Movie> movie_actor = new ArrayList<>();
```

```
        int eventType = parser.getEventType(); //event type 얻어오기
```

```
        Movie title_actor = null;
```

```
        while (eventType != XmlPullParser.END_DOCUMENT){ //xml문서의 끝까지 읽기
```

```
            String eltName = null;
```

```
            switch(eventType){ //태그 시작 부분
```

```
            case XmlPullParser.START_TAG:
```

```
                eltName = parser.getName();
```

```
                if("film".equals(eltName)){ //필름일 때
```

```
                    title_actor = new Movie();
```

```
                    title_actor.actor = ""; //스트링 문자열에 더하면서 받아주기 때문에 null을 지워줘야됨
```

```
                    movie_actor.add(title_actor);
```

```

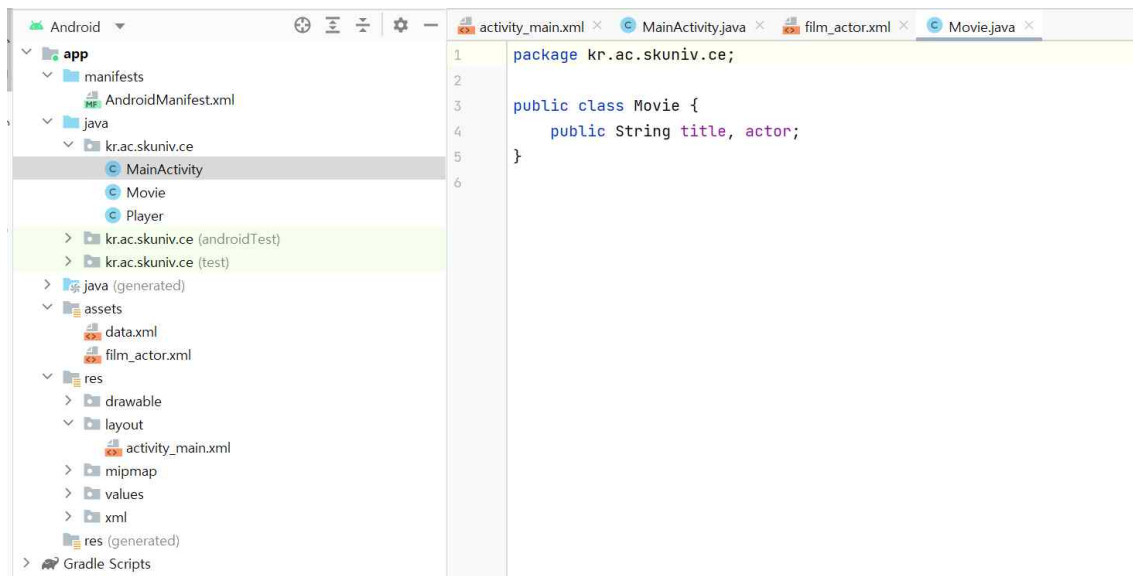
    } else if (title_actor != null){
    if("title".equals(eltName)){
    title_actor.title = parser.nextText(); //값 넣고 넘겨주기
    }
    else if ("actor_last_name".equals(eltName)) {
    title_actor.actor += parser.nextText() + ", "; //스트링에 이름 넣어주기
    }
    }
    break;
    }
    eventType = parser.next();
    }
    printMovies(movie_actor);
    }

private void printMovies(ArrayList<Movie> movie_actor){
    StringBuilder bulider = new StringBuilder();

    for(Movie movie : movie_actor){
    bulider.append("영화 제목: ").append(movie.title).append("\n").
    append("배우: ").append(movie.actor.substring(0,movie.actor.length()-2)).append("\n\n");
    }
    txt.setText(bulider.toString());
    }
    }

```

### <Movie.java>



```

package kr.ac.skuniv.ce;

public class Movie {
    public String title, actor;
}

```

## <string.xml>

```
Edit translations for all locales in the translations editor.

1  <resources>
2   <string name="app_name">Parsemission</string>
3  </resources>

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

## <activity\_main.xml>

```
1  <?xml version="1.0" encoding="utf-8"?>
2  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      android:layout_width="match_parent"
4      android:layout_height="match_parent"
5      android:gravity="center"
6      android:orientation="vertical">
7
8      <TextView android:id="@+id/txt"
9          android:layout_width="wrap_content"
10         android:layout_height="wrap_content"
11         android:text="Hello World!" />
12
13 </LinearLayout>

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:gravity="center"
android:orientation="vertical">

<TextView android:id="@+id/txt"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:text="Hello World!" />

</LinearLayout>
```

## 2. 수업 시간에 부여한 Adapter 예제.

### <실행화면>

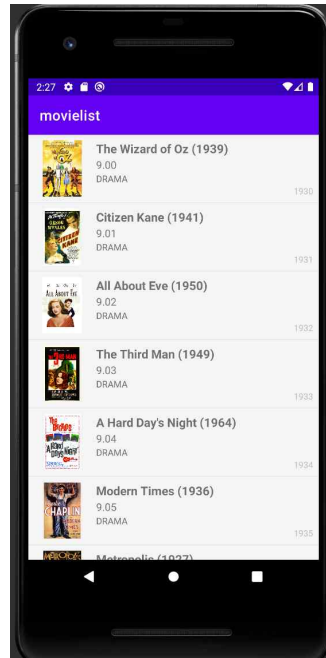


그림 10 1. 초기 화면

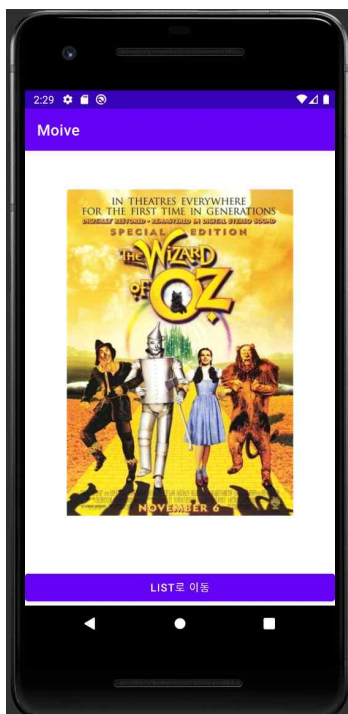


그림 11 2. 리스트 눌렀을 때 포스터 보여줌

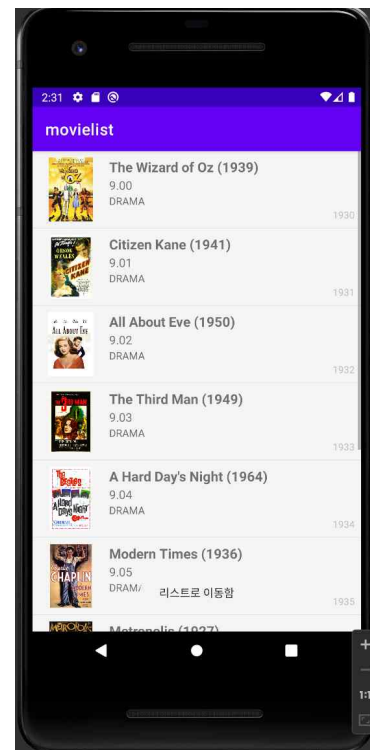
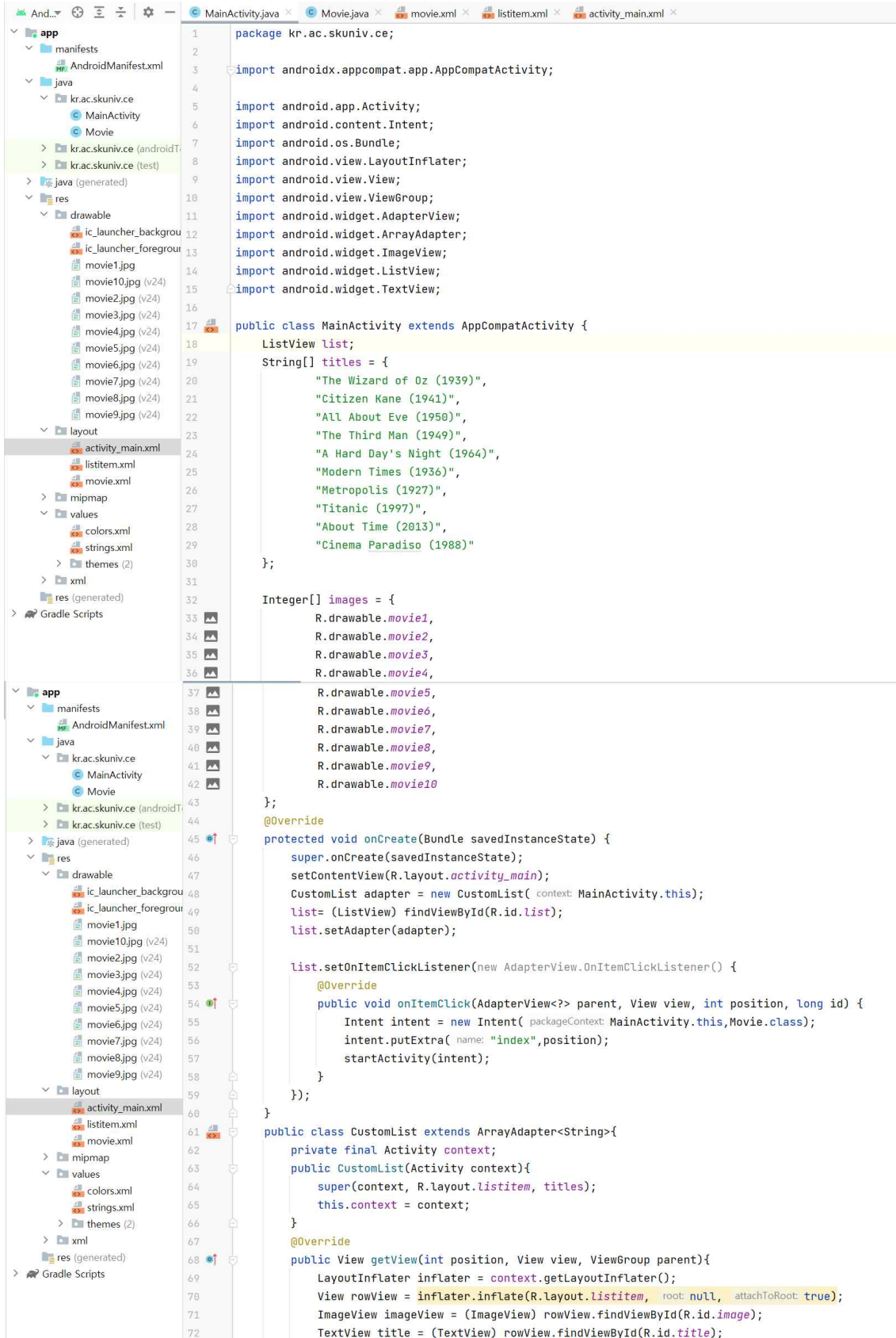


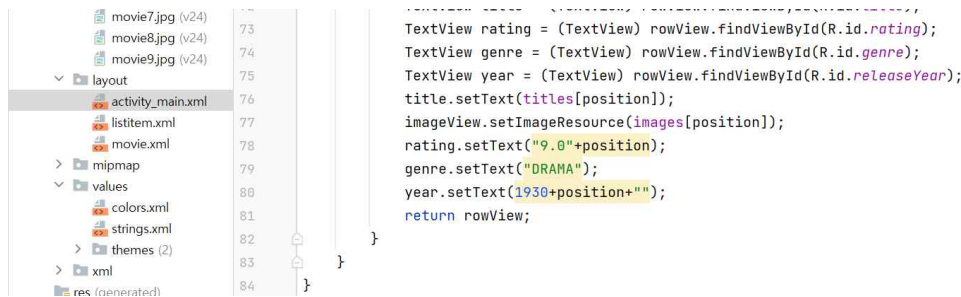
그림 12 3. 버튼 누르고 리스트로 이동

## <MainActivity.java>



```
1 package kr.ac.skuniv.ce;
2
3 import androidx.appcompat.app.AppCompatActivity;
4
5 import android.app.Activity;
6 import android.content.Intent;
7 import android.os.Bundle;
8 import android.view.LayoutInflater;
9 import android.view.View;
10 import android.view.ViewGroup;
11 import android.widget.AdapterView;
12 import android.widget.AdapterView.OnItemClickListener;
13 import android.widget.ArrayAdapter;
14 import android.widget.ImageView;
15 import android.widget.ListView;
16 import android.widget.TextView;
17
18 public class MainActivity extends AppCompatActivity {
19     ListView list;
20     String[] titles = {
21         "The Wizard of Oz (1939)",
22         "Citizen Kane (1941)",
23         "All About Eve (1950)",
24         "The Third Man (1949)",
25         "A Hard Day's Night (1964)",
26         "Modern Times (1936)",
27         "Metropolis (1927)",
28         "Titanic (1997)",
29         "About Time (2013)",
30         "Cinema Paradiso (1988)"
31     };
32     Integer[] images = {
33         R.drawable.movie1,
34         R.drawable.movie2,
35         R.drawable.movie3,
36         R.drawable.movie4,
37         R.drawable.movie5,
38         R.drawable.movie6,
39         R.drawable.movie7,
40         R.drawable.movie8,
41         R.drawable.movie9,
42         R.drawable.movie10
43     };
44     @Override
45     protected void onCreate(Bundle savedInstanceState) {
46         super.onCreate(savedInstanceState);
47         setContentView(R.layout.activity_main);
48         CustomList adapter = new CustomList(this);
49         list = (ListView) findViewById(R.id.list);
50         list.setAdapter(adapter);
51
52         list.setOnItemClickListener(new AdapterView.OnItemClickListener() {
53             @Override
54             public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
55                 Intent intent = new Intent(MainActivity.this, Movie.class);
56                 intent.putExtra("index", position);
57                 startActivity(intent);
58             }
59         });
60     }
61     public class CustomList extends ArrayAdapter<String>{
62         private final Activity context;
63         public CustomList(Activity context){
64             super(context, R.layout.listitem, titles);
65             this.context = context;
66         }
67         @Override
68         public View getView(int position, View view, ViewGroup parent){
69             LayoutInflater inflater = context.getLayoutInflater();
70             View rowView = inflater.inflate(R.layout.listitem, null, attachToRoot: true);
71             ImageView imageView = (ImageView) rowView.findViewById(R.id.image);
72             TextView title = (TextView) rowView.findViewById(R.id.title);
```





`package` kr.ac.skuniv.ce;

`import` androidx.appcompat.app.AppCompatActivity;

`import` android.app.Activity;  
`import` android.content.Intent;  
`import` android.os.Bundle;  
`import` android.view.LayoutInflater;  
`import` android.view.View;  
`import` android.view.ViewGroup;  
`import` android.widget.AdapterView;  
`import` android.widget.AdapterView.OnItemClickListener;  
`import` android.widget.ArrayAdapter;  
`import` android.widget.ImageView;  
`import` android.widget.ListView;  
`import` android.widget.TextView;

`public class` MainActivity `extends` AppCompatActivity {  
 ListView list;  
 String[] titles = {  
 "The Wizard of Oz (1939)",  
 "Citizen Kane (1941)",  
 "All About Eve (1950)",  
 "The Third Man (1949)",  
 "A Hard Day's Night (1964)",  
 "Modern Times (1936)",  
 "Metropolis (1927)",  
 "Titanic (1997)",  
 "About Time (2013)",  
 "Cinema Paradiso (1988)"  
 };

Integer[] images = {  
 R.drawable.movie1,  
 R.drawable.movie2,  
 R.drawable.movie3,  
 R.drawable.movie4,  
 R.drawable.movie5,  
 R.drawable.movie6,  
 R.drawable.movie7,  
 R.drawable.movie8,  
 R.drawable.movie9,  
 R.drawable.movie10  
};

`@Override`  
`protected void` onCreate(Bundle savedInstanceState) {  
`super`.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
 CustomList adapter = `new` CustomList(MainActivity.this);  
 list = (ListView) findViewById(R.id.list);  
 list.setAdapter(adapter);

list.setOnItemClickListener(`new` AdapterView.OnItemClickListener() {  
`@Override`  
`public void` onItemClick(AdapterView<?> parent, View view, int position, long id) {

```

Intent intent = new Intent(MainActivity.this,Movie.class);
intent.putExtra("index",position);
startActivity(intent);
}
});
}

public class CustomList extends ArrayAdapter<String>{
private final Activity context;
public CustomList(Activity context){
super(context, R.layout.listitem, titles);
this.context = context;
}
@Override
public View getView(int position, View view, ViewGroup parent){
LayoutInflater inflater = context.getLayoutInflater();
View rowView = inflater.inflate(R.layout.listitem, null, true);
ImageView imageView = (ImageView) rowView.findViewById(R.id.image);
TextView title = (TextView) rowView.findViewById(R.id.title);
TextView rating = (TextView) rowView.findViewById(R.id.rating);
TextView genre = (TextView) rowView.findViewById(R.id.genre);
TextView year = (TextView) rowView.findViewById(R.id.releaseYear);
title.setText(titles[position]);
imageView.setImageResource(images[position]);
rating.setText("9.0"+position);
genre.setText("DRAMA");
year.setText(1930+position+"");
return rowView;
}
}
}

```

## <Movie.java>

```
1 package kr.ac.skuniv.ce;
2
3 import android.content.Intent;
4 import android.os.Bundle;
5 import android.widget.Button;
6 import android.widget.ImageView;
7 import android.widget.Toast;
8
9 import androidx.appcompat.app.AppCompatActivity;
10
11 public class Movie extends AppCompatActivity {
12     ImageView image;
13     Button button;
14     public int number;
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.movie);
18
19         button = (Button) findViewById(R.id.button);
20         image = (ImageView) findViewById(R.id.poster);
21
22         number = getIntent().getIntExtra( name: "index", defaultValue: 0);
23         imageview(number);
24
25         button.setOnClickListener((e)->{
26             Toast.makeText(getApplicationContext(), text: "리스트로 이동함", Toast.LENGTH_SHORT).show();
27             Intent intent = new Intent( packageContext: Movie.this, MainActivity.class);
28             startActivity(intent);
29         });
30     }
31
32     public void imageview(int number){
33         if (number == 0) image.setImageResource(R.drawable.movie1);
34         else if (number == 1) image.setImageResource(R.drawable.movie2);
35         else if (number == 2) image.setImageResource(R.drawable.movie3);
36         else if (number == 3) image.setImageResource(R.drawable.movie4);
37         else if (number == 4) image.setImageResource(R.drawable.movie5);
38         else if (number == 5) image.setImageResource(R.drawable.movie6);
39         else if (number == 6) image.setImageResource(R.drawable.movie7);
40         else if (number == 7) image.setImageResource(R.drawable.movie8);
41         else if (number == 8) image.setImageResource(R.drawable.movie9);
42         else if (number == 9) image.setImageResource(R.drawable.movie10);
43     }
44 }
```

package kr.ac.skuniv.ce;

```
import android.content.Intent;
import android.os.Bundle;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.Toast;
```

```
import androidx.appcompat.app.AppCompatActivity;
```

```
public class Movie extends AppCompatActivity {
    ImageView image;
    Button button;
    public int number;
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```

```

setContentView(R.layout.movie);

button = (Button) findViewById(R.id.button);
image = (ImageView) findViewById(R.id.poster);

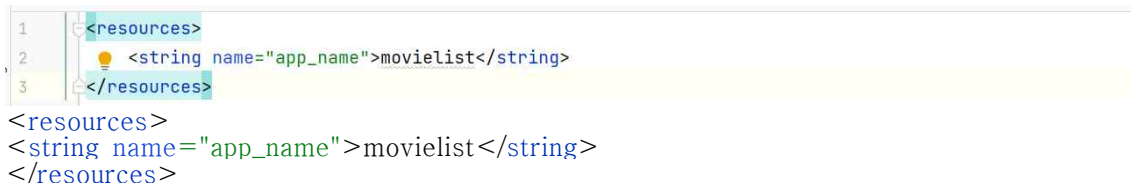
number = getIntent().getIntExtra("index",0);
imageview(number);

button.setOnClickListener((e)->{
    Toast.makeText(getApplicationContext(),"리스트로
이동함",Toast.LENGTH_SHORT).show();
    Intent intent = new Intent(Movie.this,MainActivity.class);
    startActivity(intent);
});
}

public void imageview(int number){
    if (number == 0) image.setImageResource(R.drawable.movie1);
    else if (number == 1) image.setImageResource(R.drawable.movie2);
    else if (number == 2) image.setImageResource(R.drawable.movie3);
    else if (number == 3) image.setImageResource(R.drawable.movie4);
    else if (number == 4) image.setImageResource(R.drawable.movie5);
    else if (number == 5) image.setImageResource(R.drawable.movie6);
    else if (number == 6) image.setImageResource(R.drawable.movie7);
    else if (number == 7) image.setImageResource(R.drawable.movie8);
    else if (number == 8) image.setImageResource(R.drawable.movie9);
    else if (number == 9) image.setImageResource(R.drawable.movie10);
}
}

```

<string.xml>



```

1 <resources>
2   <string name="app_name">movielist</string>
3 </resources>

```

<resources>  
<string name="app\_name">movielist</string>  
</resources>

<activity\_main.xml>



```

1 <?xml version="1.0" encoding="utf-8"?>
2 <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
3   xmlns:tools="http://schemas.android.com/tools"
4   android:layout_width="match_parent"
5   android:layout_height="wrap_content"
6   tools:context=".MainActivity">
7
8   <ListView android:id="@+id/list"
9     android:layout_width="wrap_content"
10    android:layout_height="wrap_content"/>
11 </RelativeLayout>

```

<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
xmlns:tools="http://schemas.android.com/tools"  
android:layout\_width="match\_parent"  
android:layout\_height="wrap\_content"  
tools:context=".MainActivity">  
<ListView android:id="@+id/list"  
android:layout\_width="wrap\_content"  
android:layout\_height="wrap\_content"/>  
</RelativeLavout>

## <listitem.xml>

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     android:layout_width="match_parent"
4     android:layout_height="wrap_content"
5     android:background="#eeeeee"
6     android:padding="8dp">
7     <ImageView android:id="@+id/image"
8         android:layout_width="80dp"
9         android:layout_height="80dp"
10        android:layout_alignParentLeft="true"
11        android:layout_marginRight="8dp"/>
12     <TextView android:id="@+id/title"
13         android:layout_width="wrap_content"
14         android:layout_height="wrap_content"
15         android:layout_alignTop="@+id/image"
16         android:layout_toRightOf="@+id/image"
17         android:textSize="17dp"
18         android:textStyle="bold"/>
19     <TextView android:id="@+id/rating"
20         android:layout_width="match_parent"
21         android:layout_height="wrap_content"
22         android:layout_below="@id/title"
23         android:layout_marginTop="1dp"
24         android:layout_toRightOf="@+id/image"
25         android:textSize="15dp"/>
26     <TextView android:id="@+id/genre"
27         android:layout_width="match_parent"
28         android:layout_height="wrap_content"
29         android:layout_below="@id/rating"
30         android:layout_marginTop="1dp"
31         android:layout_toRightOf="@+id/image"
32         android:textColor="#666666"
33         android:textSize="13dp"/>
34     <TextView android:id="@+id/releaseYear"
35         android:layout_width="wrap_content"
36         android:layout_height="wrap_content"
37         android:layout_alignParentBottom="true"
38         android:layout_alignParentRight="true"
39         android:textColor="#88888888"
40         android:textSize="12dp"/>
41 </RelativeLayout>
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:background="#eeeeee"
    android:padding="8dp">
    <ImageView android:id="@+id/image"
        android:layout_width="80dp"
        android:layout_height="80dp"
        android:layout_alignParentLeft="true"
        android:layout_marginRight="8dp"/>
    <TextView android:id="@+id/title"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignTop="@+id/image"
        android:layout_toRightOf="@+id/image"
        android:textSize="17dp"
        android:textStyle="bold"/>
    <TextView android:id="@+id/rating"
```

```

android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_below="@id/title"
android:layout_marginTop="1dip"
android:layout_toRightOf="@+id/image"
android:textSize="15dip"/>
<TextView android:id="@+id/genre"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_below="@id/rating"
android:layout_marginTop="1dip"
android:layout_toRightOf="@+id/image"
android:textColor="#666666"
android:textSize="13dip"/>
<TextView android:id="@+id/releaseYear"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_alignParentBottom="true"
android:layout_alignParentRight="true"
android:textColor="#88888888"
android:textSize="12dip"/>
</RelativeLayout>

```

<movie.xml>

```

1  <?xml version="1.0" encoding="utf-8"?>
2  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      android:layout_width="match_parent"
4      android:layout_height="match_parent"
5      android:gravity="center"
6      android:orientation="vertical">
7      <ImageView android:id="@+id/poster"
8          android:layout_marginTop="30dp"
9          android:layout_width="300dp"
10         android:layout_height="300dp"
11         android:layout_weight="1"/>
12     <Button android:id="@+id/button"
13         android:layout_marginTop="50dp"
14         android:layout_width="match_parent"
15         android:layout_height="wrap_content"
16         android:text="list로 이동"/>
17 </LinearLayout>
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