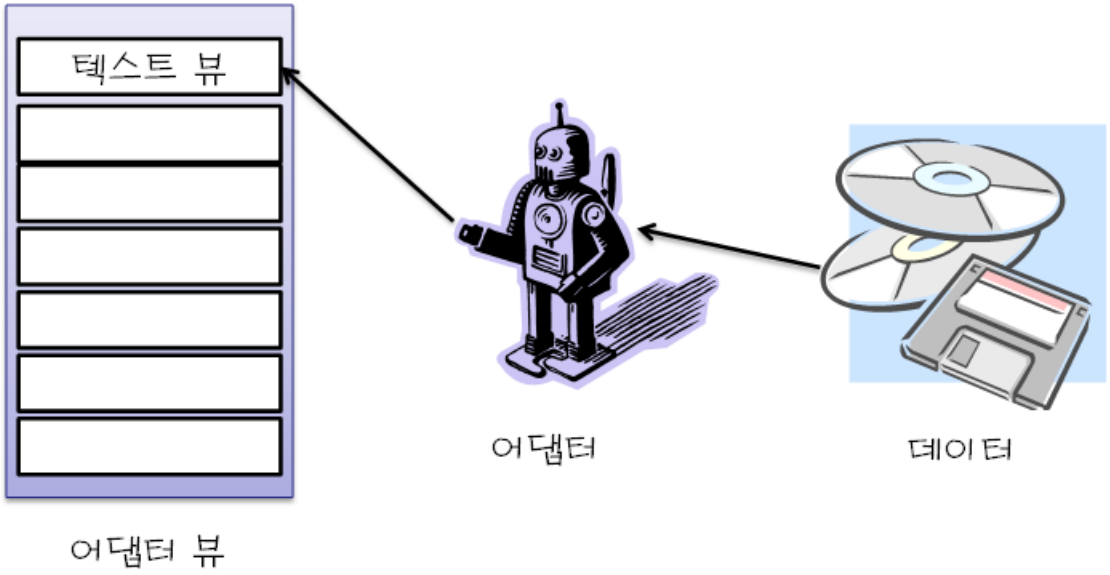
CHAP 7. 고급 위젯과 프래그먼트

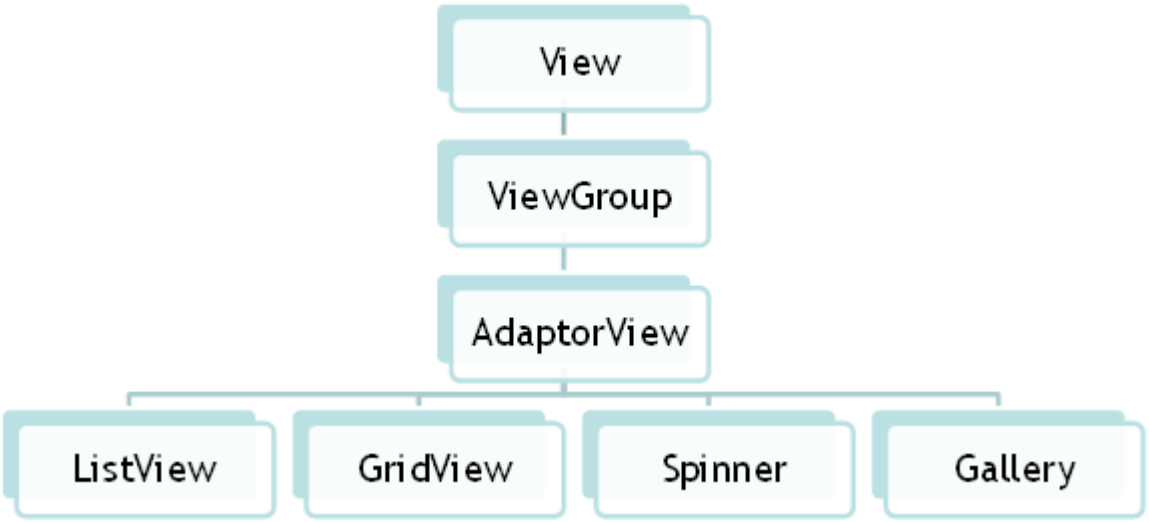
어댑터 뷰

- **어댑터 뷰(AdapterView)**는 배열이나 파일, 데이터베이스에 저장된 데이터를 화면에 표시할 때 유용한 뷰



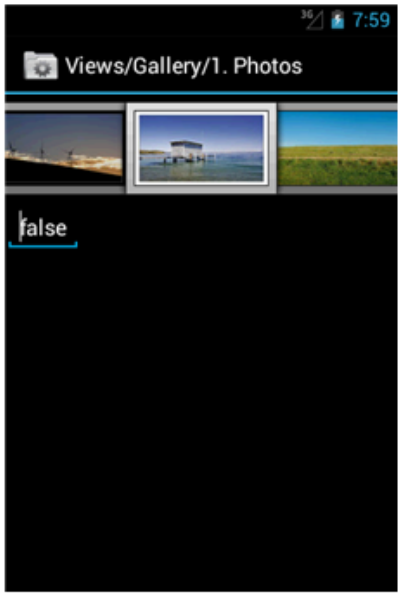
어댑터 뷰의 종류

- 리스트 뷰(ListView), 갤러리(Gallery), 스피너(Spinner), 그리드 뷰(GridView)

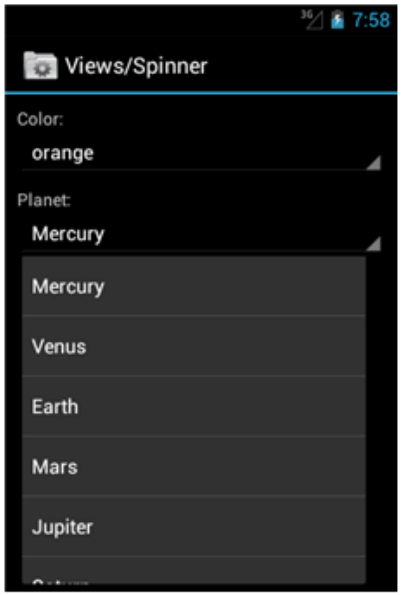


어댑터 뷰의 종류

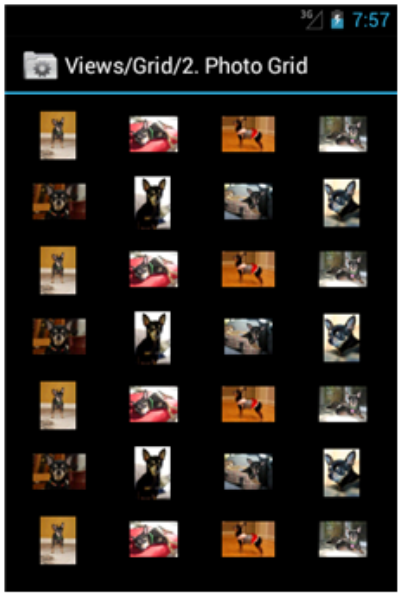
리스트 뷰



갤러리



스피너



그리드 뷰

리스트 뷰

- **리스트 뷰(ListView)**는 항목들을 수직으로 보여주는 어댑터 뷰로서 상하로 스크롤이 가능

리스트 뷰 예제

```
public class ListView01Activity extends ListActivity {

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      String[] values = { "Apple", "Apricot", "Avocado", "Banana", "Blackberry",
            "Blueberry", "Cherry", "Coconut", "Cranberry",
            "Grape Raisin", "Honeydew", "Jackfruit", "Lemon", "Lime",
            "Mango", "Watermelon" };

      ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
            android.R.layout.simple_list_item_1, values);
      setListAdapter(adapter);

   }

   @Override
   protected void onListItemClick(ListView l, View v, int position, long id) {
      String item = (String) getListAdapter().getItem(position);
      Toast.makeText(this, item + " selected", Toast.LENGTH_LONG).show();
   }

}
```

리스트 뷰의 표준 레이아웃

레이아웃 ID	설명
simple_list_item_1	하나의 텍스트 뷰 사용
simple_list_item_2	두개의 텍스트 뷰 사용
simple_list_item_checked	항목당 체크 표시
simple_list_item_single_choice	한 개의 항목만 선택
simple_list_item_multiple_choice	여러 개의 항목 선택 가능

리스트 뷰와 arrayAdapter

```
String[] values = { "Apple", "Apricot",
"Avocado", "Banana", "Blackberry",
"Blueberry", "Cherry", "Coconut",
"Cranberry", "Grape Raisin",
"Honeydew", "Jackfruit", "Lemon",
"Lime", "Mango", "Watermelon" };
```

```
setAdapter(adapter);
```

```
adapter = new ArrayAdapter<String>(this,
        android.R.layout.simple_list_item_1, values);
```

리스트 뷰에서 사용자가 특정한 항목을 선택하면 이벤트가 발생한다. 이벤트가 발생하면 onListItemClick()이 호출된다.

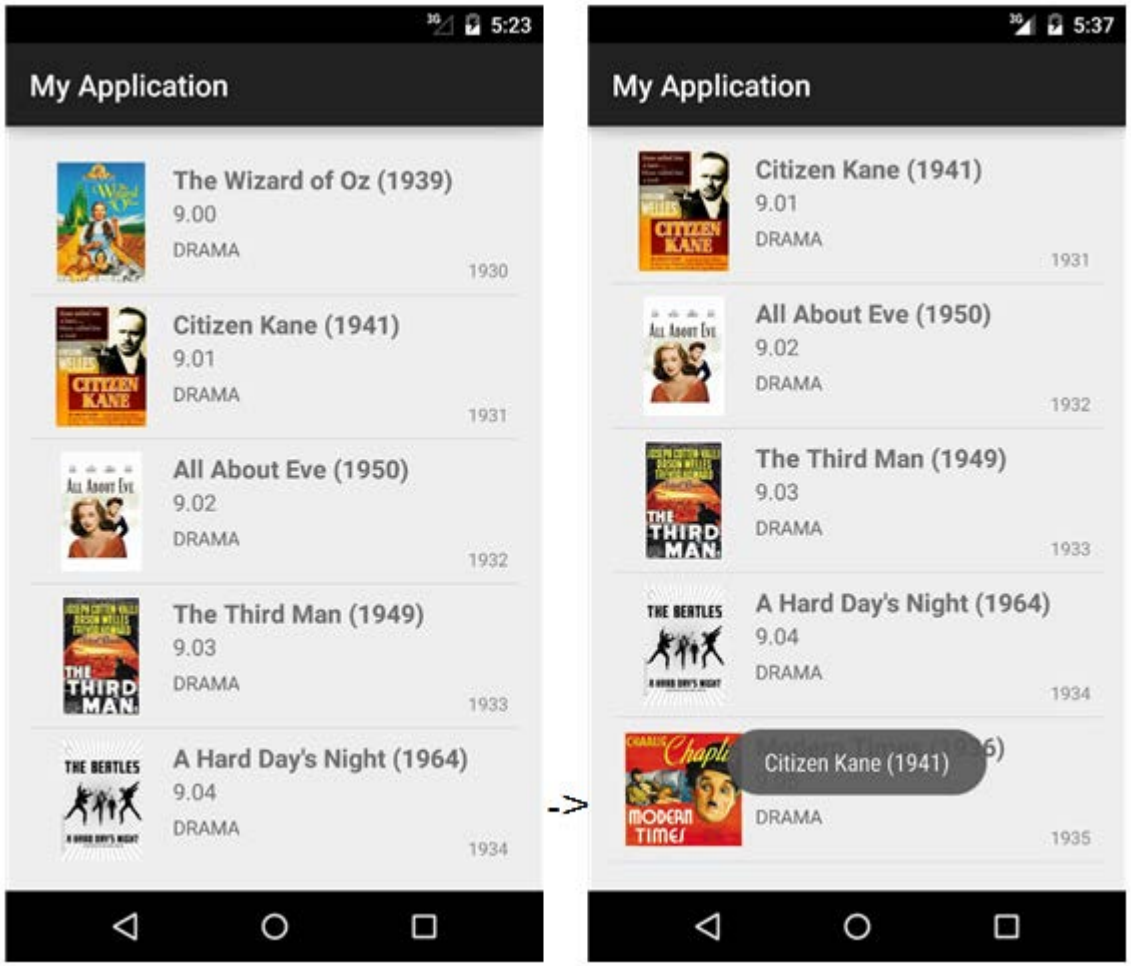
```
protected void onListItemClick(ListView l, View v, int position, long id) {
        String item = (String) getListAdapter().getItem(position);
        Toast.makeText(this, item + " selected", Toast.LENGTH_LONG).show();
}
```

XML에서 데이터를 가져오려면

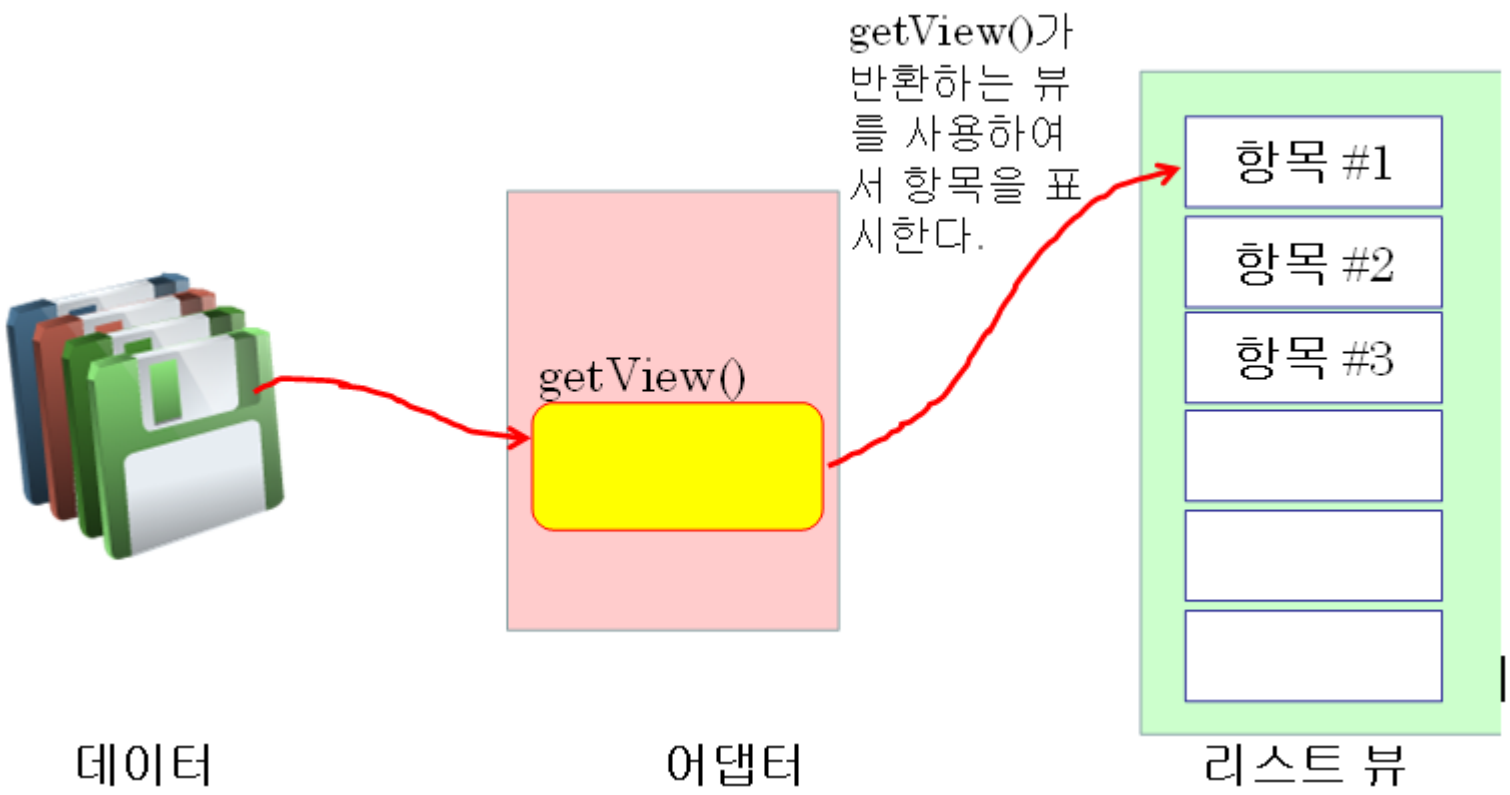
```
...
...
ArrayAdapter adapter =
ArrayAdapter.createFromResource(      this,
R.array.fruits,  R.layout.simple_list_item_1);
...
...
```

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

    <string-array name="fruits">
        <item>Apple</item>
        <item>Apricot</item>
        <item>Avocado</item>
        <item>Banana</item>
        <item>Blackberry</item>
        <item>Blueberry</item>
        <item>Cherry</item>
        <item>Coconut</item>
        <item>Cranberry</item>
        <item>Grape Raisin</item>
        <item>Honeydew</item>
    </string-array>

</resources>
```

예제: 커스텀 Adapter



리스튜 뷰


getView()가 반환하는 뷰를 사용하여서 항목을 표시한다.
getView()
항목 #1
항목 #2
항목 #3
데이터
어댑터
리스트 뷰

뷰의 레이아웃 설계


<ImageView>
<<TextView>
The Wizard of Oz (1939)
9.00
DRAMA
1930
<RelativeLayout>

레이아웃 파일

activity_main.xml

```
<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="match_parent"
    tools:context=".MainActivity" >

    <ListView
        android:id="@+id/list"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content" >
    </ListView>

</RelativeLayout>
```

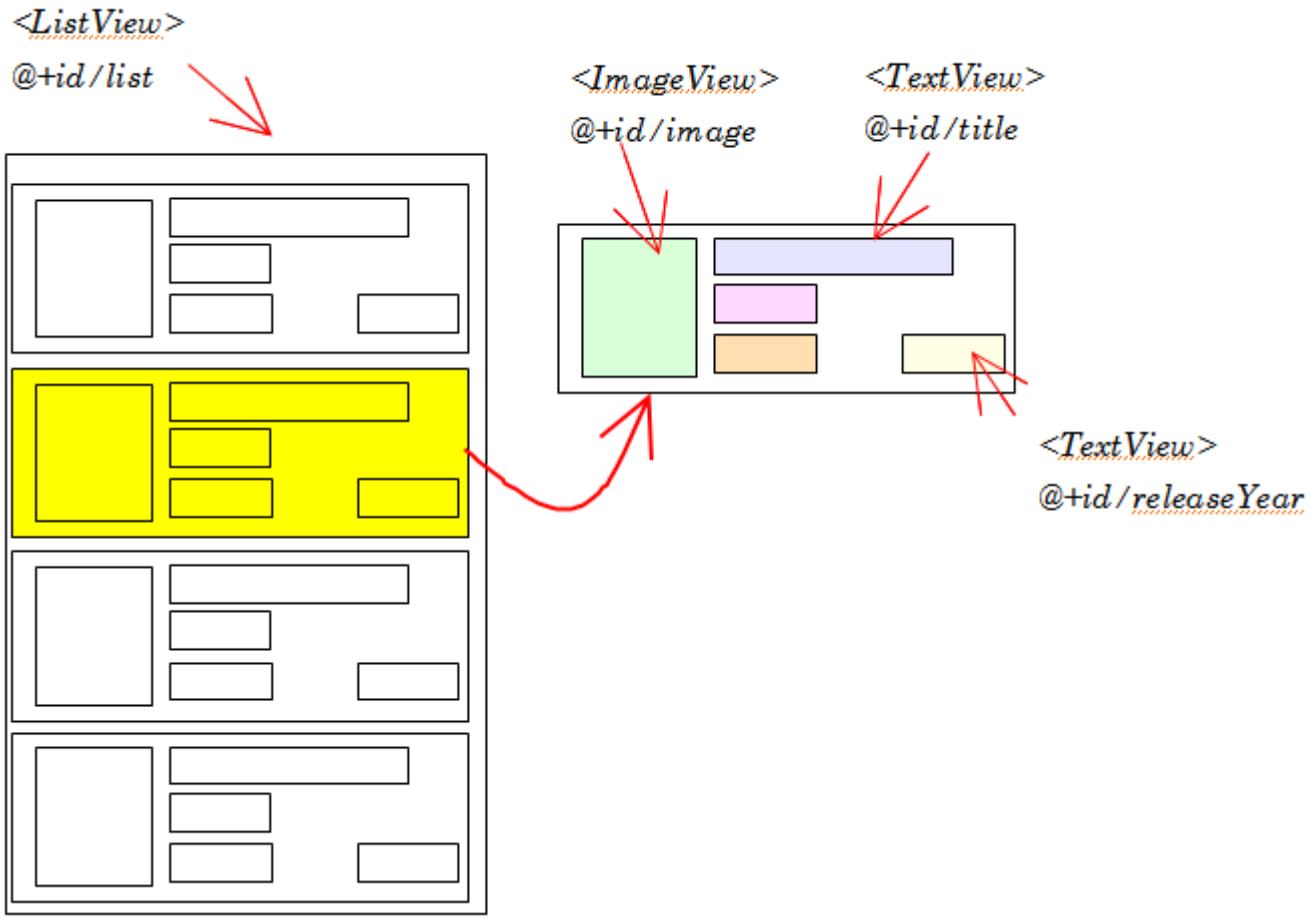
레이아웃에 리스트뷰를 배치한다.

리스트의 항목을 나타내는 뷰 설계

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_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="fill_parent"
        android:layout_height="wrap_content"
        android:layout_below="@id/title"
        android:layout_marginTop="1dip"
        android:layout_toRightOf="@+id/image"
        android:textSize="15dip" />
```

영화 포스터 이미지

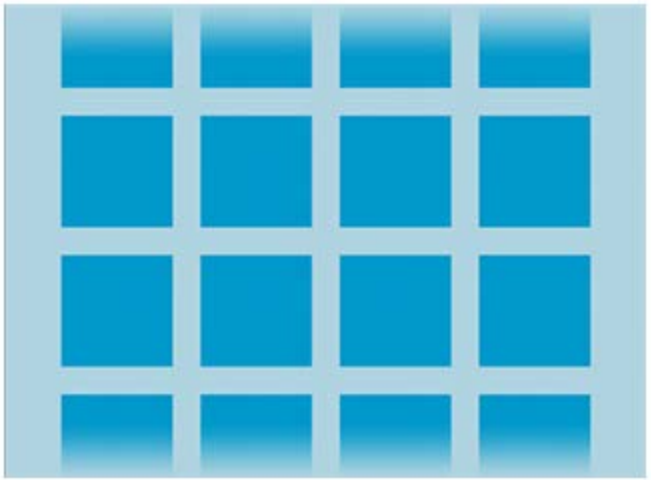
뷰의 id 부여


<ListView>
@+id/list
<ImageView>
@+id/image
<TextView>
@+id/title
<TextView>
@+id/releaseYear

```
    @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) {
                Toast.makeText(getBaseContext(), titles[+position],
Toast.LENGTH_SHORT).show();
            }
        });
    }
    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;
        }
    }

}
```

그리드 뷰

- 2차원의 그리드에 항목들을 표시하는 뷰그룹



그리드 뷰 예제

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<GridView xmlns:android="http://schemas.android.com/apk/res/android"
    android:id="@+id/GridView01"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:columnWidth="90dp"
    android:numColumns="auto_fit"
    android:verticalSpacing="10dp"
    android:horizontalSpacing="10dp"
    android:stretchMode="columnWidth"
    android:gravity="center"
/>
```

그리드 뷰가 전체 화면을 다 채우도록 레이아웃이 설정되었다. 그리드 뷰의 속성은 이름만 가지고도 의미를 파악할 수 있다. 좀 더 자세한 것은 레퍼런스를 참조하도록 하자.

그리드 뷰 예제

MainActivity.java

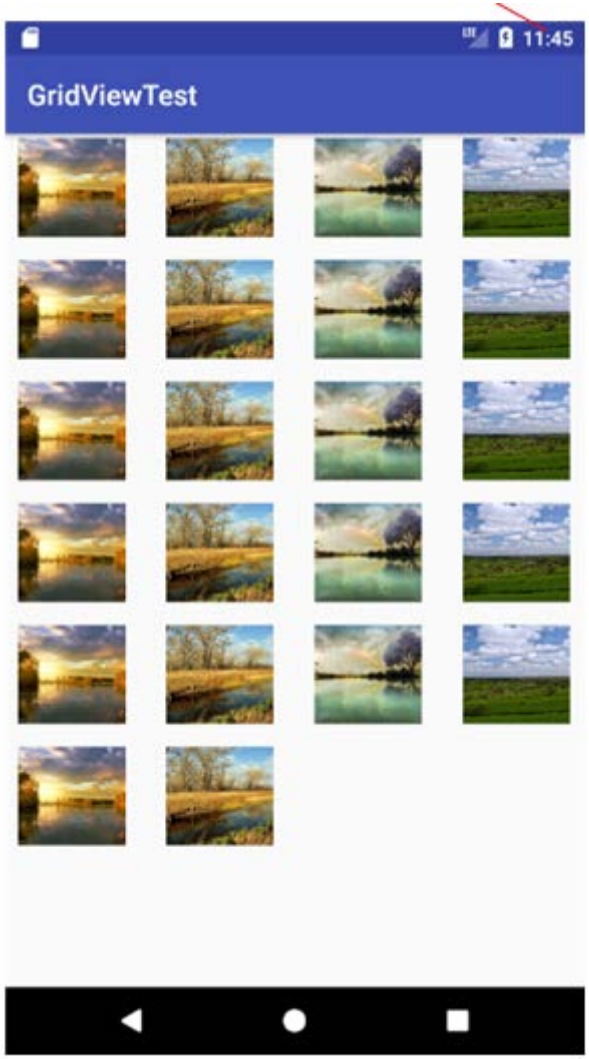
```
package kr.co.company.gridviewtest;
// 소스만 입력하고 Alt+Enter를 눌러서 import 문장을 자동으로 생성한다.

public class MainActivity extends AppCompatActivity {

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        GridView gridview = (GridView) findViewById(R.id.GridView01);
        gridview.setAdapter(new ImageAdapter(this));
        gridview.setOnItemClickListener(new OnItemClickListener() {
            public void onItemClick(AdapterView<?> parent, View v,
                int position, long id) {
                Toast.makeText(MainActivity.this, "" + position,
                    Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

ImageAdapter.java

```
package kr.co.company.GridViewTest;
// 소스만 입력하고 Ctrl-Shift-O를 눌러서 import 문장을 자동으로 생성한다.
public class ImageAdapter extends BaseAdapter {
    private Context mContext;

    public ImageAdapter(Context c) {
        mContext = c;
    }

    public int getCount() {
        return mThumbIds.length;
    }

    public Object getItem(int position) {
        return null;
    }

    public long getItemId(int position) {
        return 0;
    }
```

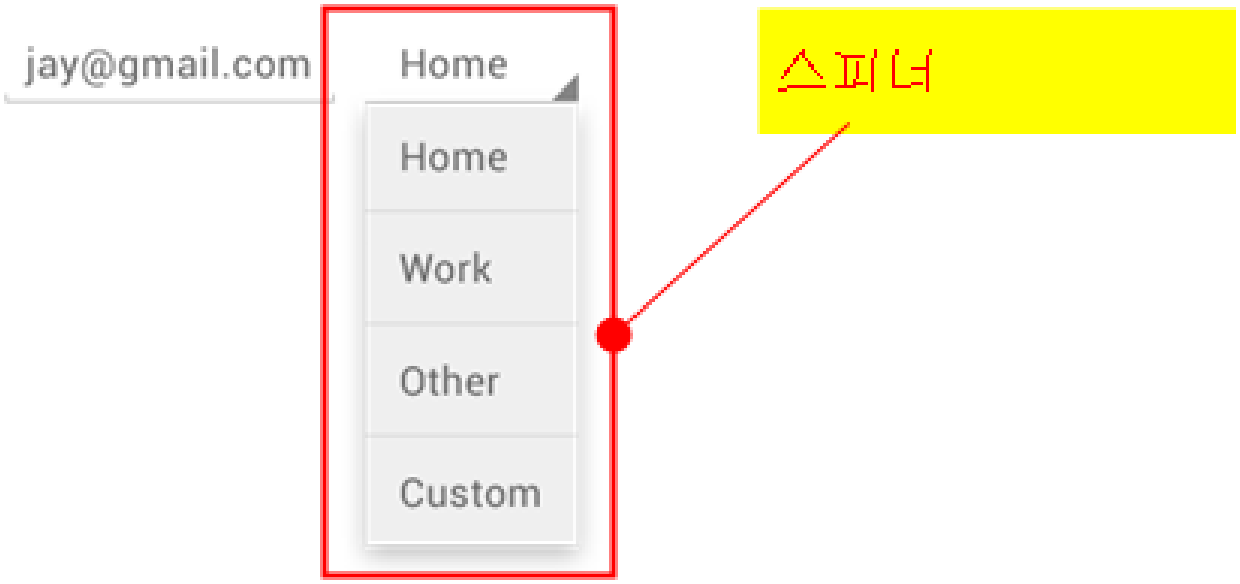
```
    public View getView(int position, View convertView, ViewGroup
parent) {
        ImageView imageView;
        if (convertView == null) {
            imageView = new ImageView(mContext);
            imageView.setLayoutParams(new GridView.LayoutParams(85, 85));
            imageView.setScaleType(ImageView.ScaleType.CENTER_CROP);
            imageView.setPadding(8, 8, 8, 8);
        } else {
            imageView = (ImageView) convertView;
        }

        imageView.setImageResource(mThumbIds[position]);
        return imageView;
    }

    // references to our images
    private Integer[] mThumbIds = {
            R.drawable.sample_1, R.drawable.sample_2,
            R.drawable.sample_3, R.drawable.sample_4,
            R.drawable.sample_1, R.drawable.sample_2,
            R.drawable.sample_3, R.drawable.sample_4,
            R.drawable.sample_1, R.drawable.sample_2,
            R.drawable.sample_3, R.drawable.sample_4,
            R.drawable.sample_1, R.drawable.sample_2,
            R.drawable.sample_3, R.drawable.sample_4,
            R.drawable.sample_1, R.drawable.sample_2,
            R.drawable.sample_3, R.drawable.sample_4,
            R.drawable.sample_1, R.drawable.sample_2,
    };
}
```

실행결과



스피너

- **스피너(Spinner)**는 항목을 선택하기 위한 드롭 다운 리스트



스피너 예제

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:padding="10dip"
    android:layout_width="match_parent"
    android:layout_height="wrap_content">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dip"
        android:text="@string/planet_prompt"
    />
    <Spinner
        android:id="@+id/spinner"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:prompt="@string/planet_prompt"
    />
</LinearLayout>
```

스피너 예제

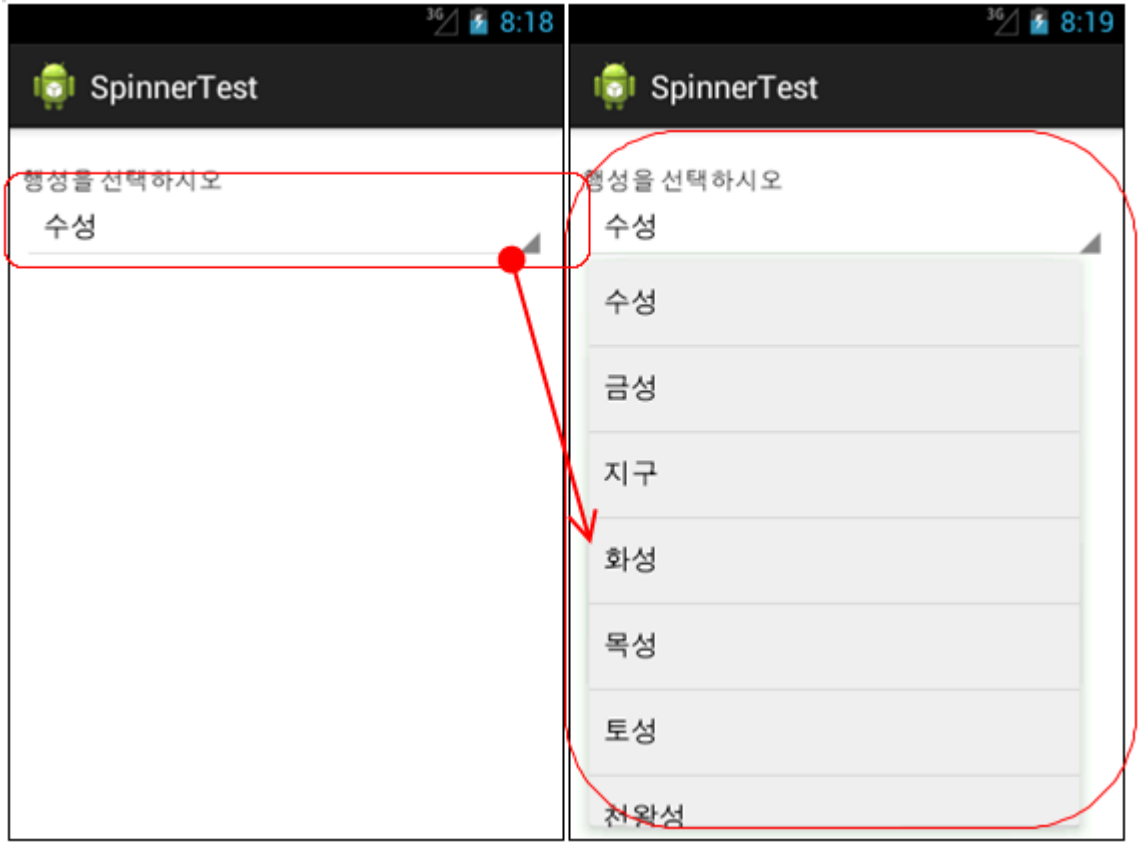
strings.xml

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

    <string name="app_name">SpinnerTest</string>
    <string name="action_settings">Settings</string>
    <string name="hello_world">Hello world!</string>
    <string name="planet_prompt">행성을 선택하시오</string>

    <string-array name="planets_array">
        <item>수성</item>
        <item>금성</item>
        <item>지구</item>
        <item>화성</item>
        <item>목성</item>
        <item>토성</item>
        <item>천왕성</item>
        <item>해왕성</item>
    </string-array>

</resources>
```

스피너 예제

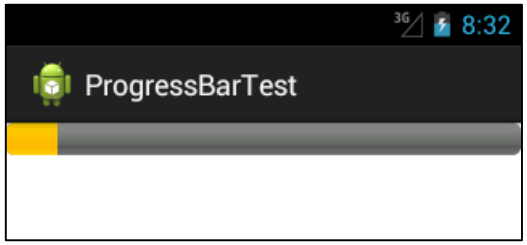
```
@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.main);
    Spinner spinner = (Spinner) findViewById(R.id.spinner);
    ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(
        this, R.array.planets_array, android.R.layout.simple_spinner_item);
    adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
    spinner.setAdapter(adapter);
    spinner.setOnItemSelectedListener(new OnItemSelectedListener() {
            public void onItemSelected(AdapterView<?> parent, View view,
                                       int pos, long id) {
                Toast.makeText(parent.getContext(),
                        "선택된 행성은 " +
                        parent.getItemAtPosition(pos).toString(),
                        Toast.LENGTH_LONG).show();
            }
            public void onNothingSelected(AdapterView<?> arg0) {
            }
    });

}
```

실행 결과


8:18
SpinnerTest
행성을 선택하시오
수성
8:19
SpinnerTest
행성을 선택하시오
수성
수성
금성
지구
화성
목성
토성
천왕성

프로그레스 바

- 작업의 진행 정도를 표시하는 위젯



레이아웃 파일

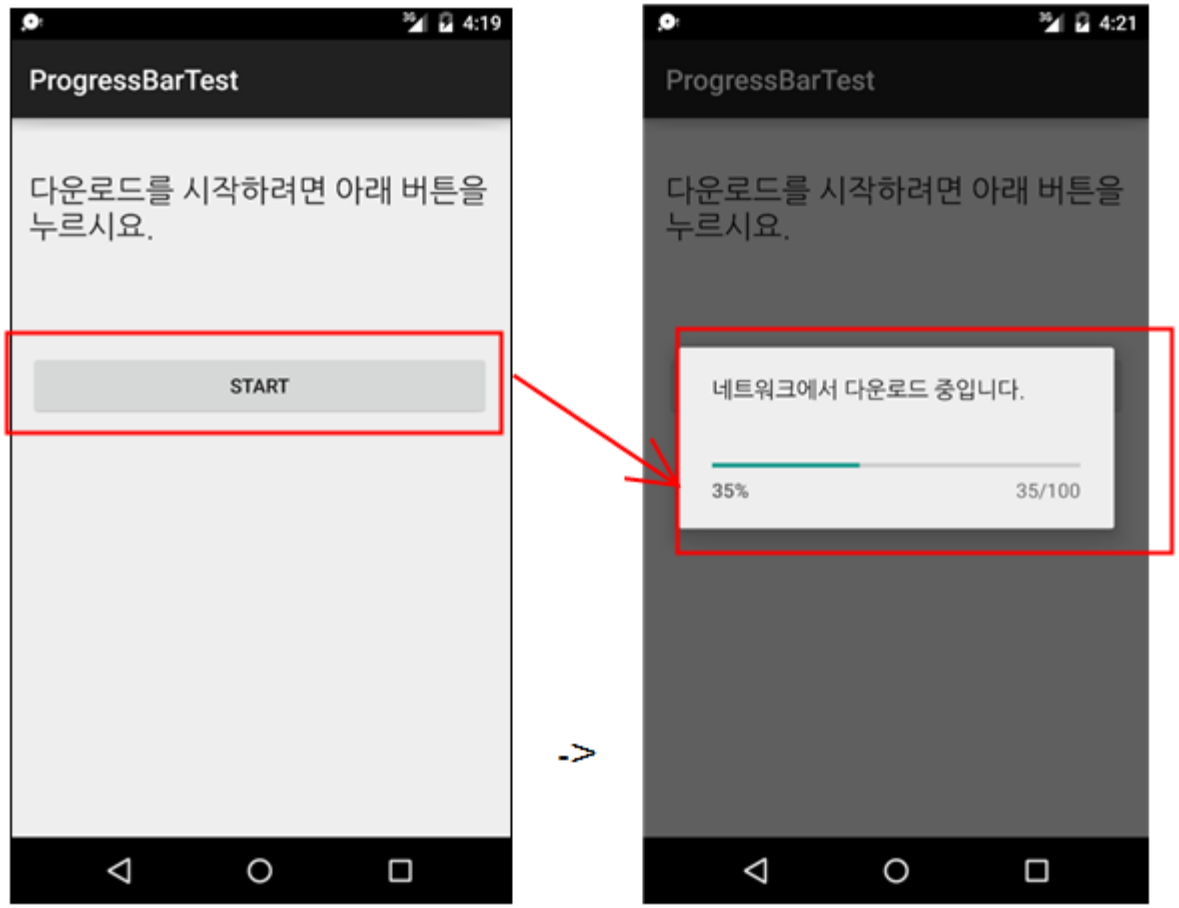
activity_main.xml

```
<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="match_parent"
    tools:context=".MainActivity">

        <Button
            android:id="@+id/button1"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_alignParentTop="true"
            android:layout_centerHorizontal="true"
            android:layout_marginTop="150dp"
            android:onClick="start"
            android:text="Start" />

        <TextView
            android:id="@+id/textView1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentRight="true"
            android:layout_alignParentTop="true"
            android:layout_marginTop="19dp"
            android:text="다운로드를 시작하려면 아래 버튼을 누르시요."
            android:textAppearance="?android:attr/textAppearanceLarge" />

</RelativeLayout>
```

코드

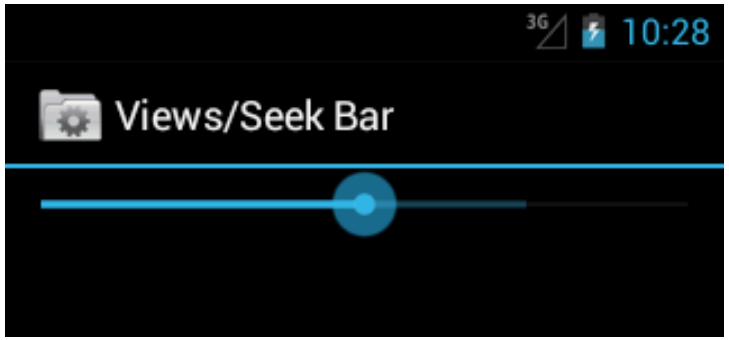
```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    progress = new ProgressDialog(this);
}

public void start(View view) {
    progress.setCancelable(true);
    progress.setMessage("네트워크에서 다운로드 중입니다. ");
    progress.setProgressStyle(ProgressDialog.STYLE_HORIZONTAL);
    progress.setProgress(0);
    progress.setMax(100);
    progress.show();

    final Thread t = new Thread() {
        @Override
        public void run() {
            int time = 0;
            while (time < 100) {
                try {
                    sleep(200);
                    time += 5;
                    progress.setProgress(time);
                } catch (InterruptedException e) {
                    e.printStackTrace();
                }
            }
        }
    };
    t.start();
}
```

실행 결과


4:19
ProgressBarTest
다운로드를 시작하려면 아래 버튼을 누르시요.
START
->
4:21
ProgressBarTest
다운로드를 시작하려면 아래 버튼을 누르시요.
네트워크에서 다운로드 중입니다.
35%
35/100

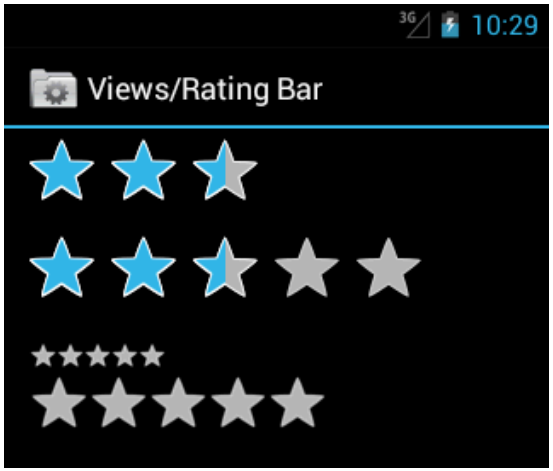
시크바

- **시크 바(SeekBar)**는 프로그레스 바의 확장판
- 사용자가 드래그할 수 있는 썸(thumb)이 추가



레이팅 바

- 레이팅 바는 별을 사용하여서 점수를 표시하는 위젯



레이아웃 파일

activity_main.xml

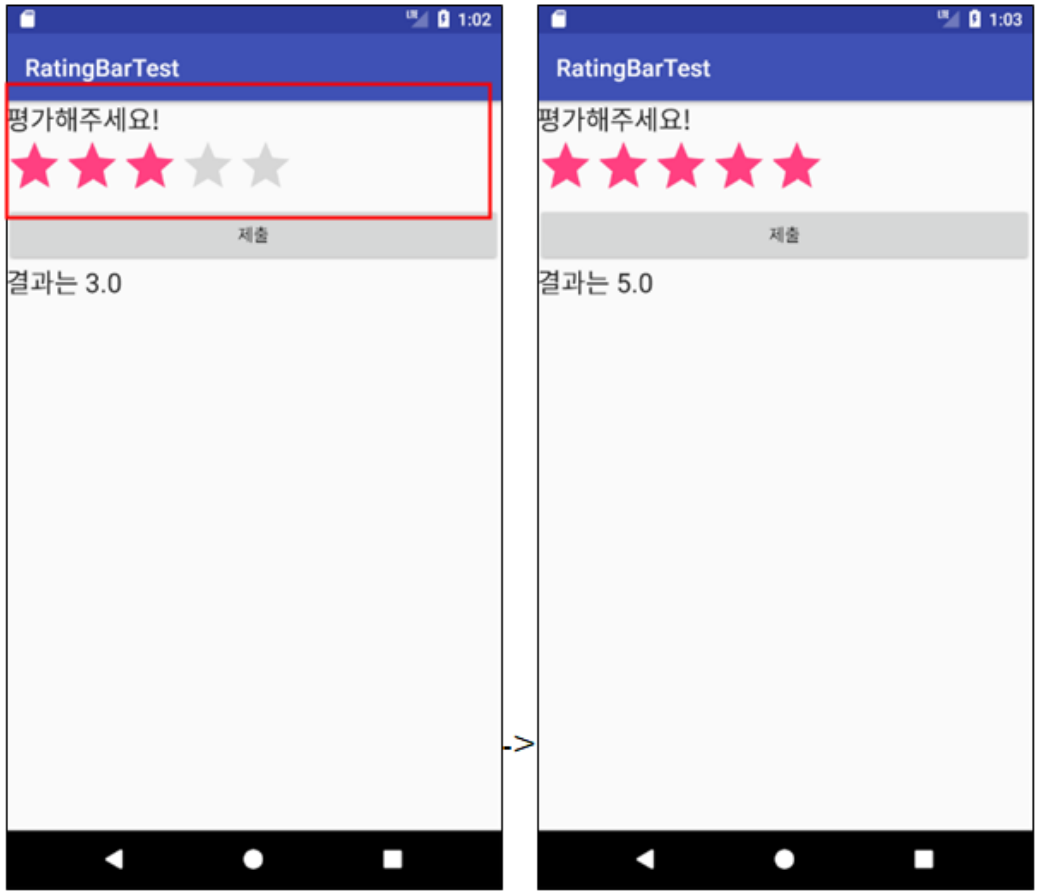
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <TextView
        android:id="@+id/lblRateMe"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="평가해주세요!"
        android:textAppearance="?android:attr/textAppearanceLarge" />

    <RatingBar
        android:id="@+id/ratingBar"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:numStars="5"
        android:rating="2.0"
        android:stepSize="1.0" />

    <Button
        android:id="@+id/button"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="제출" />
```

```
public class MainActivity extends AppCompatActivity {

    private RatingBar ratingBar;
    private TextView value;
    private Button button;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        SetupRatingBar();
        SetupButton();

    }

    public void SetupRatingBar() {

        ratingBar = (RatingBar) findViewById(R.id.ratingBar);
        value = (TextView) findViewById(R.id.value);

        ratingBar.setOnRatingBarChangeListener(new
                RatingBar.OnRatingBarChangeListener() {

                    public void onRatingChanged(RatingBar ratingBar,
                            float rating, boolean fromUser) {
                        value.setText(String.valueOf(rating));
                    }
                });
    }
```

코드

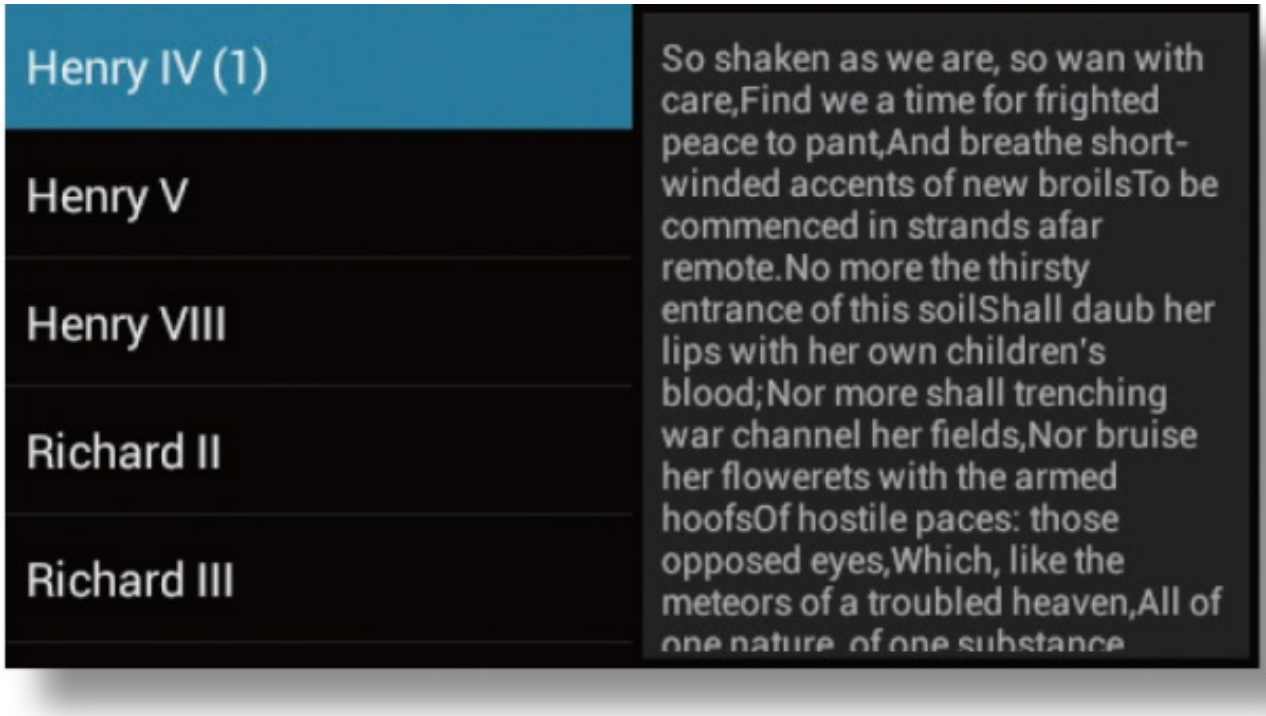
```
    public void SetupButton() {
        ratingBar = (RatingBar) findViewById(R.id.ratingBar);
        button = (Button) findViewById(R.id.button);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(getBaseContext(),
                        String.valueOf(ratingBar.getRating()),
                        Toast.LENGTH_LONG).show();
            }
        });
    }
}
```

실행 결과

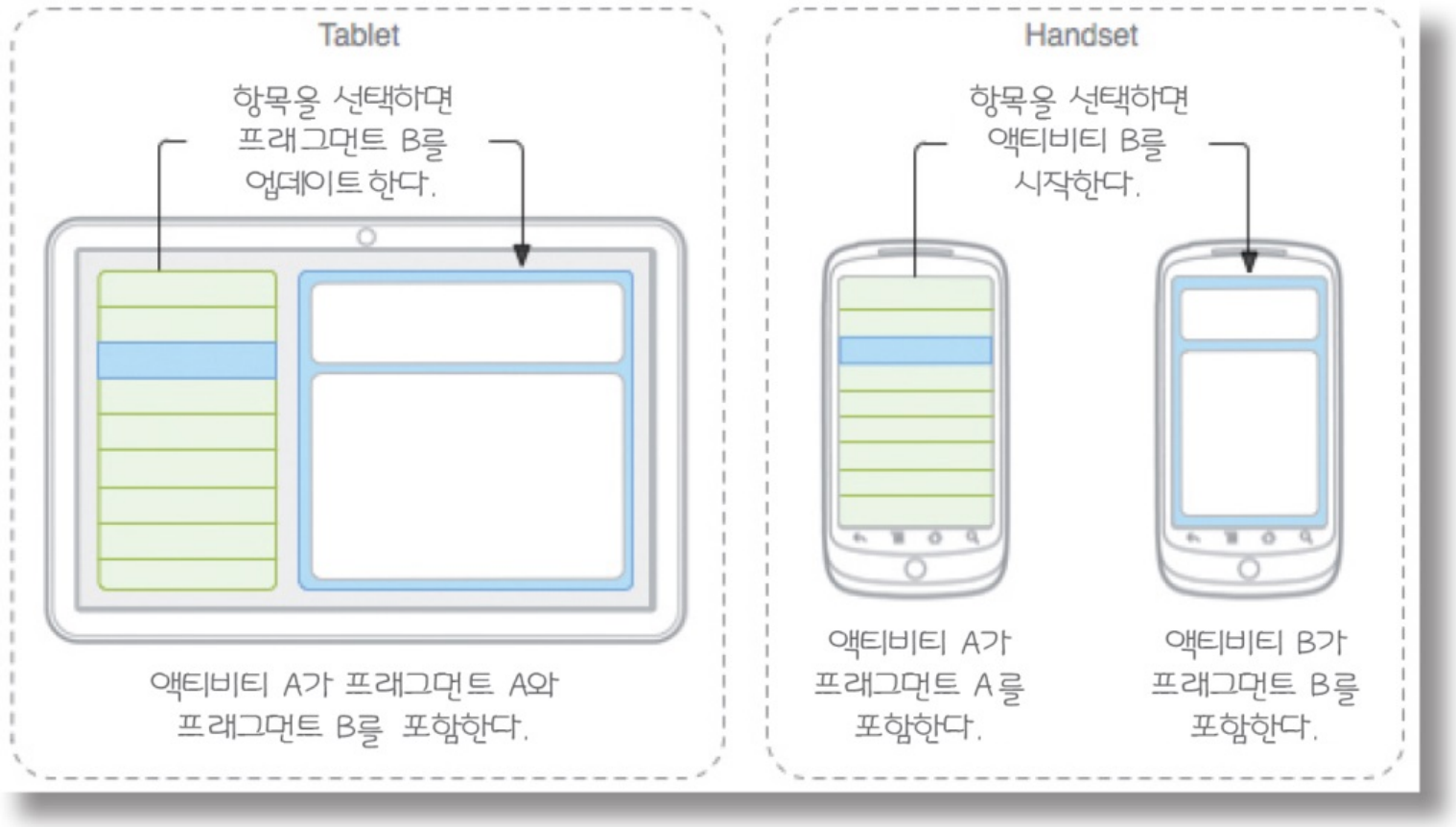

1:02
RatingBarTest
평가해주세요!
제출
결과는 3.0
->
1:03
RatingBarTest
평가해주세요!
제출
결과는 5.0

태블릿과 스마트폰에서 화면 다르게 하기

프래그먼트의 응용

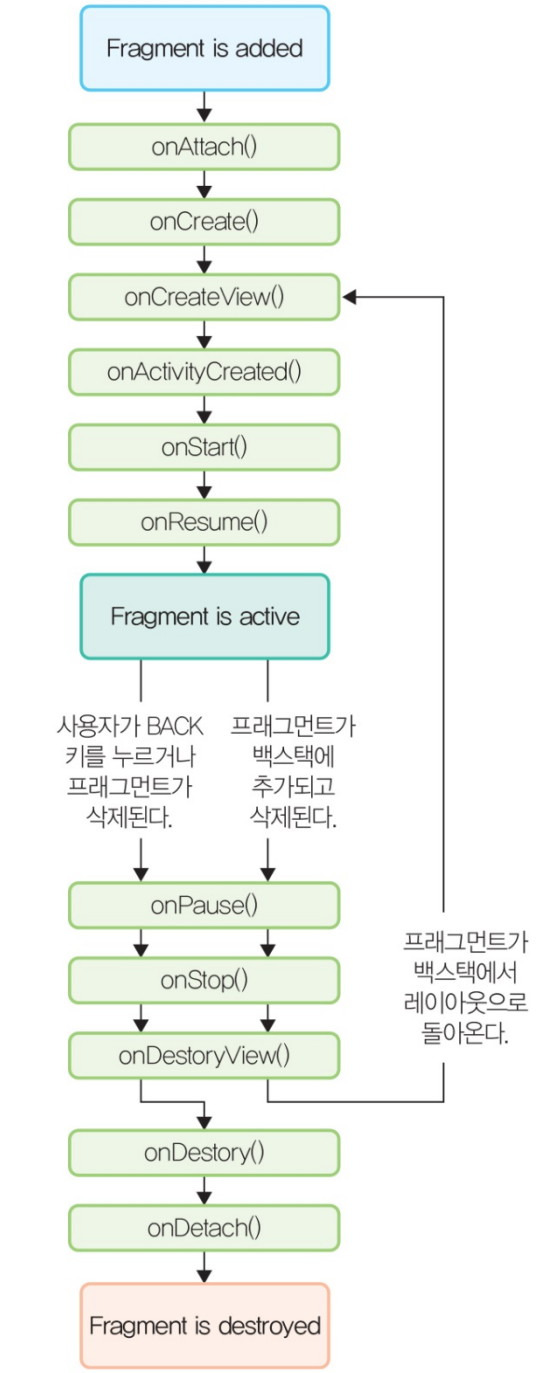

Henry IV (1)
Henry V
Henry VIII
Richard II
Richard III
So shaken as we are, so wan with care,Find we a time for frighted peace to pant,And breathe short-winded accents of new broilsTo be commenced in strands afar remote.No more the thirsty entrance of this soilShall daub her lips with her own children's blood;Nor more shall trenching war channel her fields,Nor bruise her flowerets with the armed hoofsOf hostile paces: those opposed eyes,Which, like the meteors of a troubled heaven,All of

전형적인 프래그먼트 응용



* 그림 출처 : developer.android.com

프래그먼트의 생애 주기


Fragment is added
onAttach()
onCreate()
onCreateView()
onActivityCreated()
onStart()
onResume()
Fragment is active
사용자가 BACK 키를 누르거나 프래그먼트가 삭제된다.
프래그먼트가 백스택에 추가되고 삭제된다.
onPause()
onStop()
onDestoryView()
프래그먼트가 백스택에서 레이아웃으로 돌아온다.
onDestory()
onDetach()
Fragment is destroyed

Fragment 클래스의 서브 클래스

- DialogFragment
- ListFragment
- PreferenceFragment

프래그먼트 A 생성

FragmentA.java

```
package kr.co.company.fragmenttest1;
// 소스만 입력하고 Alt+Enter를 눌러서 import 문장을 자동으로 생성한다.

public class FragmentA extends Fragment {
    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
        Bundle savedInstanceState) {
        // 프래그먼트의 레이아웃을 팽창한다.
        return inflater.inflate(R.layout.fragment_a, container, false);
    }
}
```

프래그먼트 B 레이아웃 정의

res/layout/fragment_a.xml

```
<?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="match_parent"
    android:background="#ffff00" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:text="Fragment A"
        android:textSize="12pt"
        android:textStyle="italic" />
</RelativeLayout>
```

프래그먼트 B 생성

FragmentB.java

```
package kr.co.company.fragmenttest1;
// 소스만 입력하고 Alt+Enter를 눌러서 import 문장을 자동으로 생성한다.

public class FragmentB extends Fragment {
    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
        Bundle savedInstanceState) {
        // 프래그먼트의 레이아웃을 팽창한다.
        return inflater.inflate(R.layout.fragment_b, container, false);
    }
}
```

프래그먼트 B 레이아웃 정의

res/layout/fragment_b.xml

```
<?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="match_parent"
    android:background="#ff00ff" >

    <TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerInParent="true"
        android:text="Fragment B"
        android:textSize="12pt"
        android:textStyle="italic" />

</RelativeLayout>
```

액티비티의 레이아웃 파일

정적 프래그먼트
(static fragment)

res/layout-large/activity_main.xml

```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="horizontal"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <fragment android:name="kr.co.company.fragmenttest2.FragmentA"
              android:id="@+id/fragmentOne"
              android:layout_weight="1"
              android:layout_width="0dp"
              android:layout_height="match_parent" />

    <fragment android:name="kr.co.company.fragmenttest2.FragmentB"
              android:id="@+id/fragmentTwo
              android:layout_weight="1"
              android:layout_width="0dp"
              android:layout_height="match_parent" />

</LinearLayout>
```

name 속성에 클래스 이름을 적어준다.

첫 번째 프래그먼트

두 번째 프래그먼트

액티비티의 레이아웃 파일

정적 프래그먼트
(static fragment)

res/layout/activity_main.xml

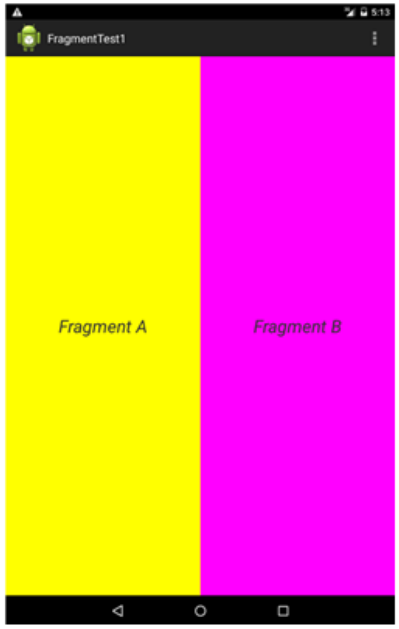
```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="horizontal"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <fragment android:name="kr.co.company.fragmenttest1.FragmentA"
              android:id="@+id/fragmentOne"
              android:layout_weight="1"
              android:layout_width="0dp"
              android:layout_height="match_parent" />

</LinearLayout>
```

name 속성에 클래스 이름을 적어준다.

프래그먼트

실행 결과

에뮬레이터가 스마트폰인 경우



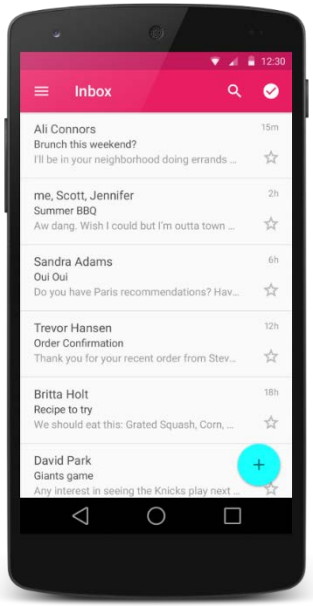
에뮬레이터가 태블릿인 경우

Dynamic Fragments in Java Code

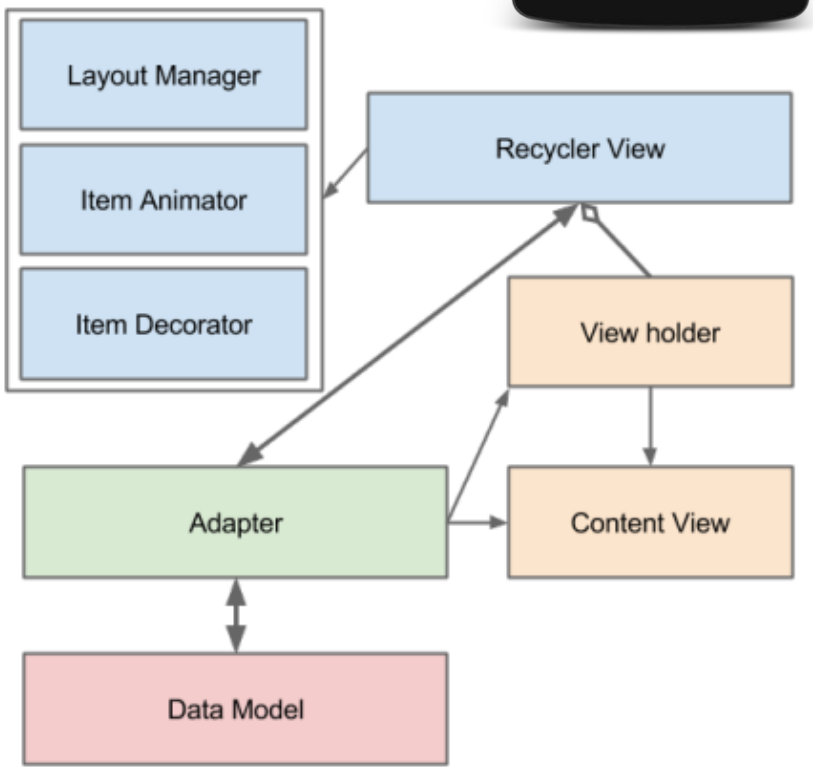
동적 프래그먼트
(dynamic fragment)

```
public void selectFragment(View view) {
    Fragment fr = null;
    switch (view.getId()) {
    case R.id.button1:
        fr = new FragmentA();
        break;
    case R.id.button2:
        fr = new FragmentB();
        break;
    }
    FragmentManager fm = getFragmentManager();    // < API 28
    FragmentManager fm = getSupportFragmentManager();  // >= API 28
    FragmentTransaction fragmentTransaction = fm.beginTransaction();
    fragmentTransaction.addToBackStack(null);
    fragmentTransaction.replace(R.id.fragment_container, fr);
    fragmentTransaction.commit();
}
```

RecyclerView



- More advanced and flexible version of ListView
- RecyclerView.ViewHolder
  - item view + metadata about its place within the RecylerView
  - View holders scrolling off-screen are **saved for reuse**
- Layout Manager
  - LinearLayoutManager
  - GridLayoutManager
  - Or custom layout manager



Steps to use RecyclerView

1. Add a RecyclerView to your layout file.

```
<?xml version="1.0" encoding="utf-8"?>
<!-- A RecyclerView with some commonly used attributes -->
<android.support.v7.widget.RecyclerView
    android:id="@+id/my_recycler_view"
    android:scrollbars="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"/>
```

Steps to use RecyclerView

2. Connect it to a layout manager, and attach an adapter.

```
public class MyActivity extends Activity {
    private RecyclerView mRecyclerView;
    private RecyclerView.Adapter mAdapter;
    private RecyclerView.LayoutManager mLayoutManager;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.my_activity);
        mRecyclerView = (RecyclerView) findViewById(R.id.my_recycler_view);

        // use this setting to improve performance if you know that changes
        // in content do not change the layout size of the RecyclerView
        mRecyclerView.setHasFixedSize(true);

        // use a linear layout manager
        mLayoutManager = new LinearLayoutManager(this);
        mRecyclerView.setLayoutManager(mLayoutManager);

        // specify an adapter (see also next example)
        mAdapter = new MyAdapter(myDataset);
        mRecyclerView.setAdapter(mAdapter);
    }
    // ...
}
```

Steps to use RecyclerView

3. Create a list adapter.

```
public class MyAdapter extends RecyclerView.Adapter<MyAdapter.ViewHolder>
{
  private String[] mDataset;

  public static class ViewHolder extends RecyclerView.ViewHolder {
        public TextView mTextView;
        public ViewHolder(TextView v) {
            super(v);
            mTextView = v;
        }
  }

  public MyAdapter(String[] myDataset) {
        mDataset = myDataset;
 }

  public ViewHolder onCreateViewHolder(ViewGroup parent, int viewType) {
        TextView v = (TextView) LayoutInflater.from(parent.getContext())
                .inflate(R.layout.my_text_view, parent, false);
        return new ViewHolder(v);
  }

  public void onBindViewHolder(ViewHolder holder, int position) {
      holder.mTextView.setText(mDataset[position]);
  }

  public int getItemCount() {
      return mDataset.length
  }
}
```