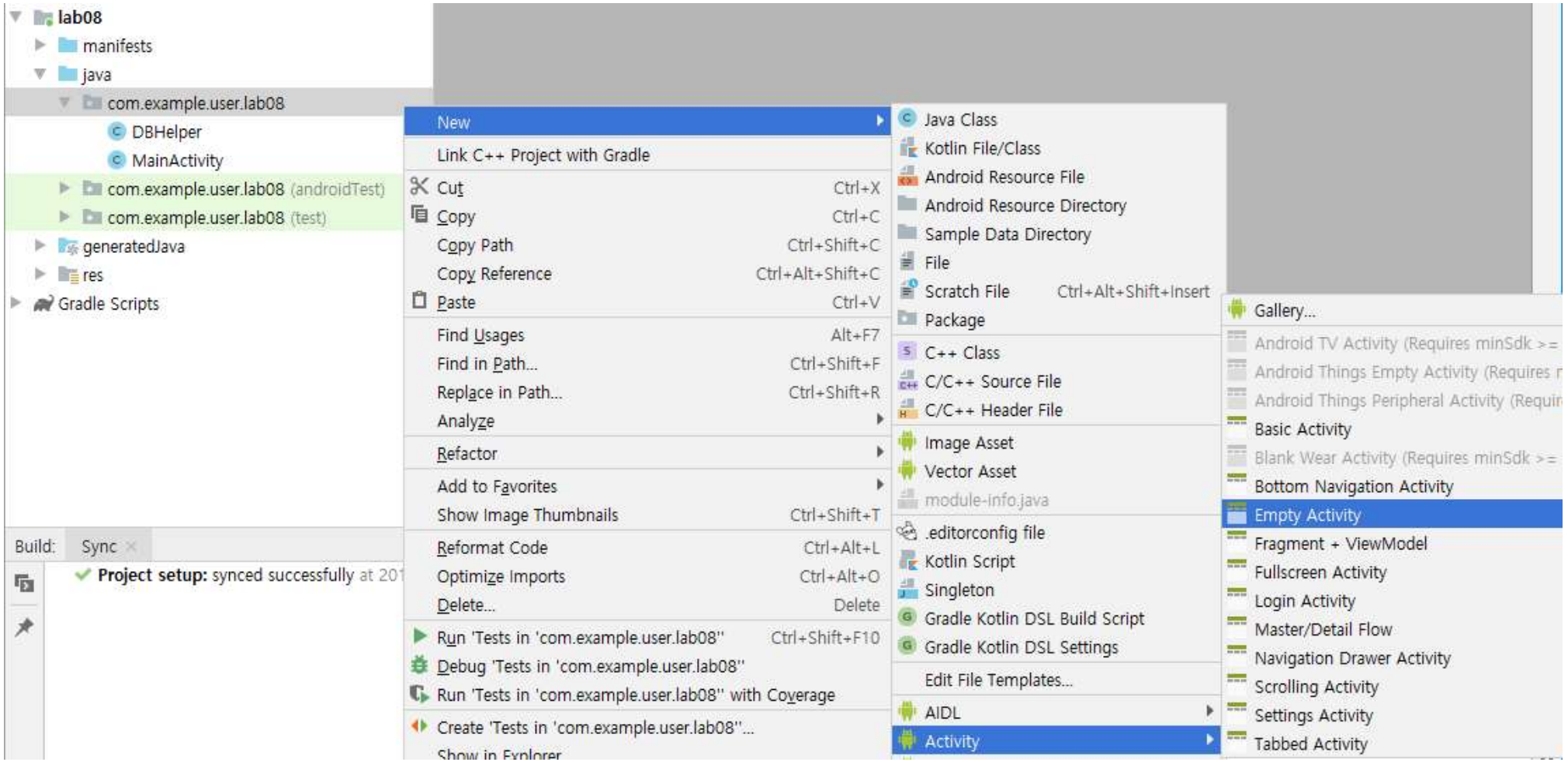
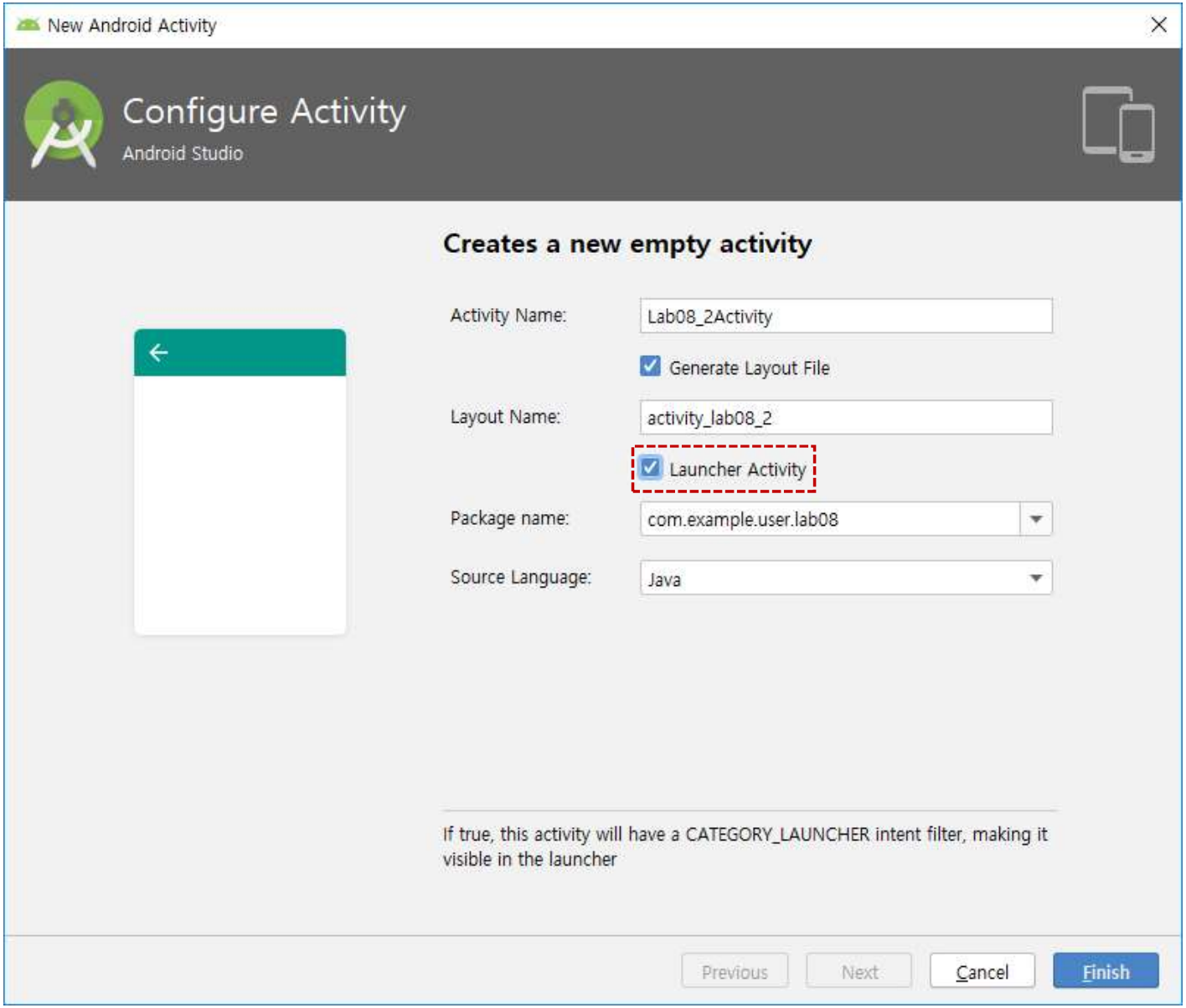
커스텀 Adapter

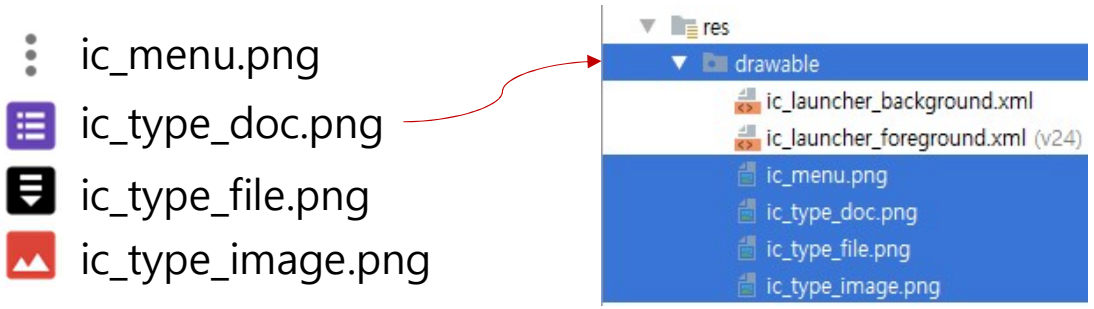
하나의 View에 여러 개의
view를 달 경우 사용

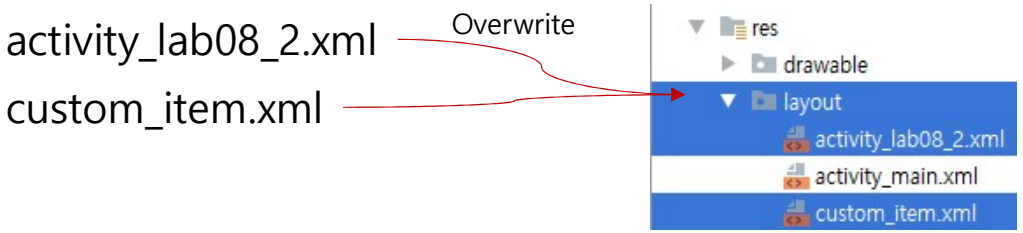
Step 1 _ 액티비티 생성



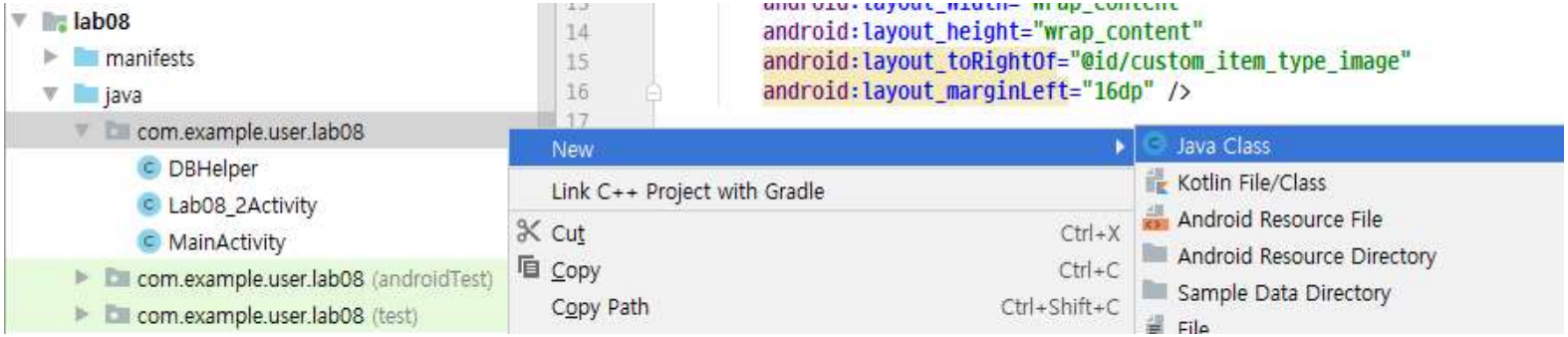

New Android Activity
Configure Activity
Android Studio
Creates a new empty activity
Activity Name:
Lab08_2Activity
Generate Layout File
Layout Name:
activity_lab08_2
Launcher Activity
Package name:
com.example.user.lab08
Source Language:
Java
If true, this activity will have a CATEGORY_LAUNCHER intent filter, making it visible in the launcher
Previous
Next
Cancel
Finish

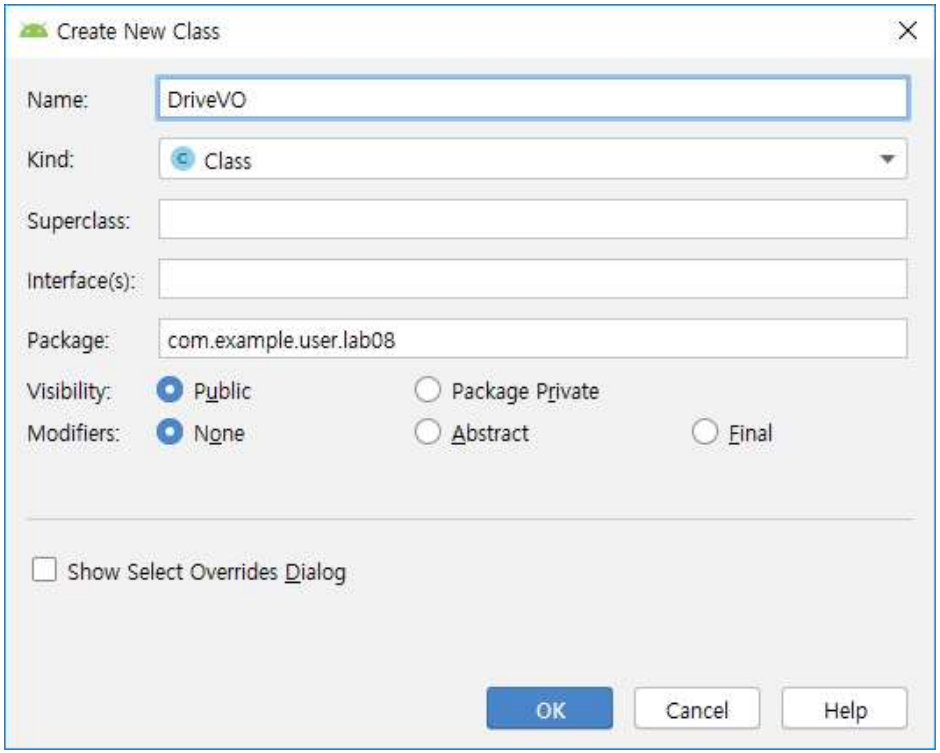
Step 2 _ 파일 복사


ic_menu.png
ic_type_doc.png
ic_type_file.png
ic_type_image.png
res
drawable
ic_launcher_background.xml
ic_launcher_foreground.xml (v24)
ic_menu.png
ic_type_doc.png
ic_type_file.png
ic_type_image.png


activity_lab08_2.xml
custom_item.xml
Overwrite
res
drawable
layout
activity_lab08_2.xml
activity_main.xml
custom_item.xml

Step 3 _ DriveVO 클래스 작성



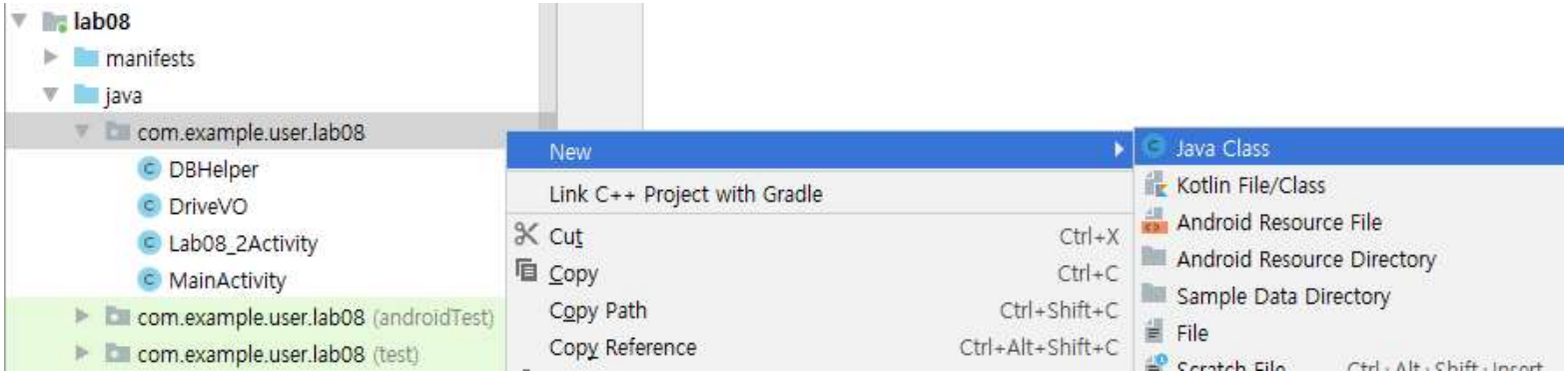

Create New Class
Name:
DriveVO
Kind:
Class
Superclass:
Interface(s):
Package:
com.example.user.lab08
Visibility:
Public
Package Private
Modifiers:
None
Abstract
Final
Show Select Overrides Dialog
OK
Cancel
Help

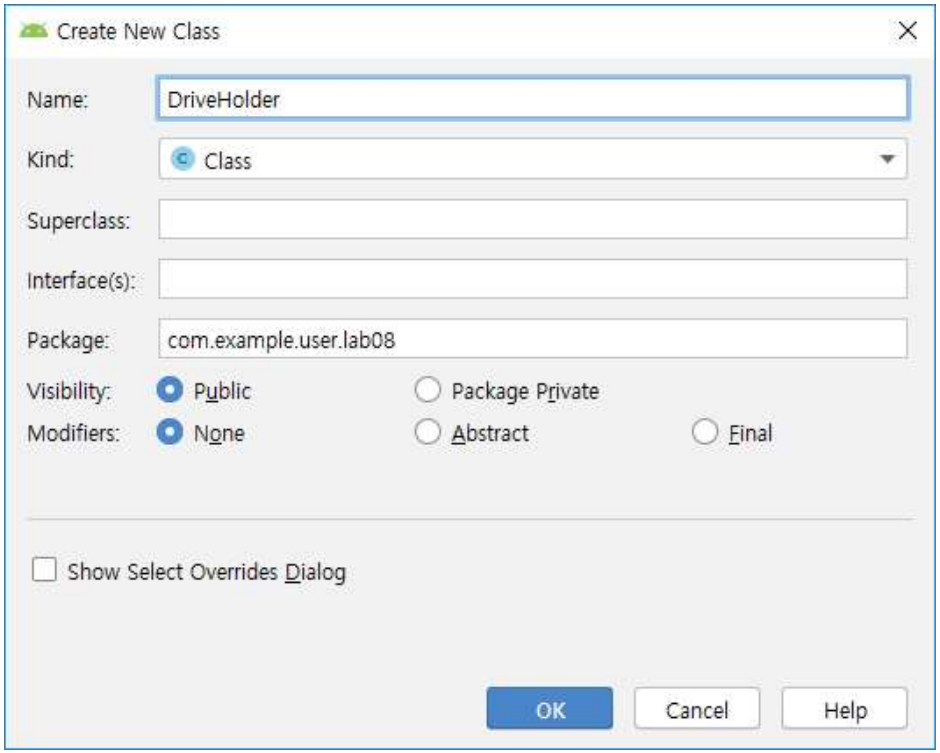
클래스의 객체 하나가 하나의 항목 데이터를 표현

```
public class DriveVO {
    public String type;
    public String title;
    public String date;
}
```

type 마다
Icon 이 다름

Step 4 _ DriveHolder 클래스 작성

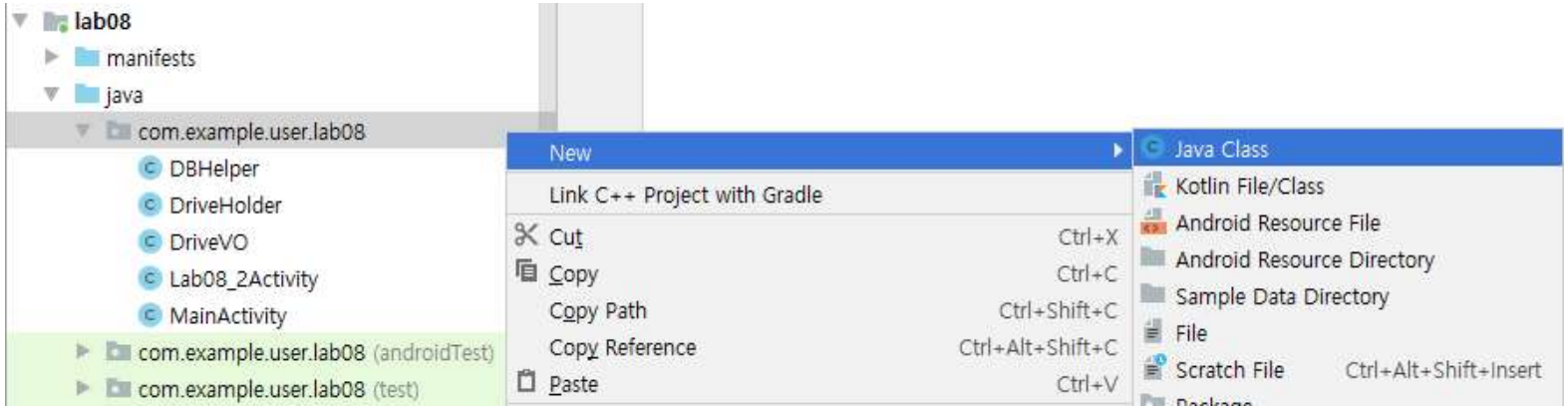


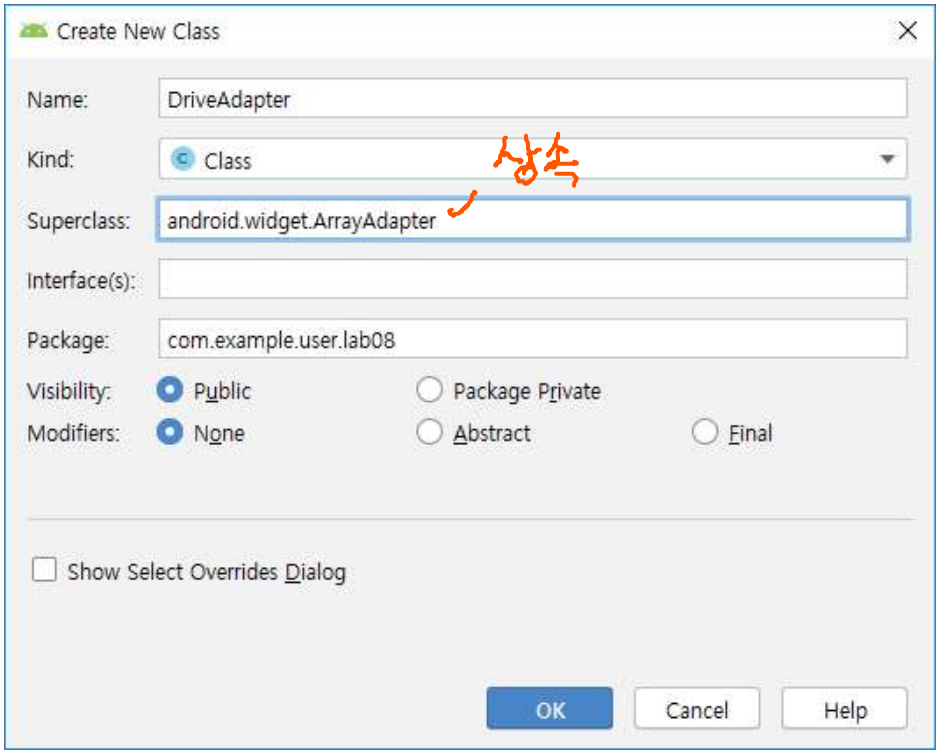

Create New Class
Name:
DriveHolder
Kind:
Class
Superclass:
Interface(s):
Package:
com.example.user.lab08
Visibility:
Public
Package Private
Modifiers:
None
Abstract
Final
Show Select Overrides Dialog
OK
Cancel
Help

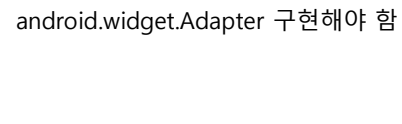
```
public class DriveHolder {
    public ImageView typeImageView;
    public TextView titleView;
    public TextView dateView;
    public ImageView menuImageView;

    public DriveHolder(View root) {
        typeImageView = root.findViewById(R.id.custom_item_type_image);
        titleView = root.findViewById(R.id.custom_item_title);
        dateView = root.findViewById(R.id.custom_item_date);
        menuImageView = root.findViewById(R.id.custom_item_menu);
    }
}
```

Step 5 _ DriveAdapter 클래스 작성

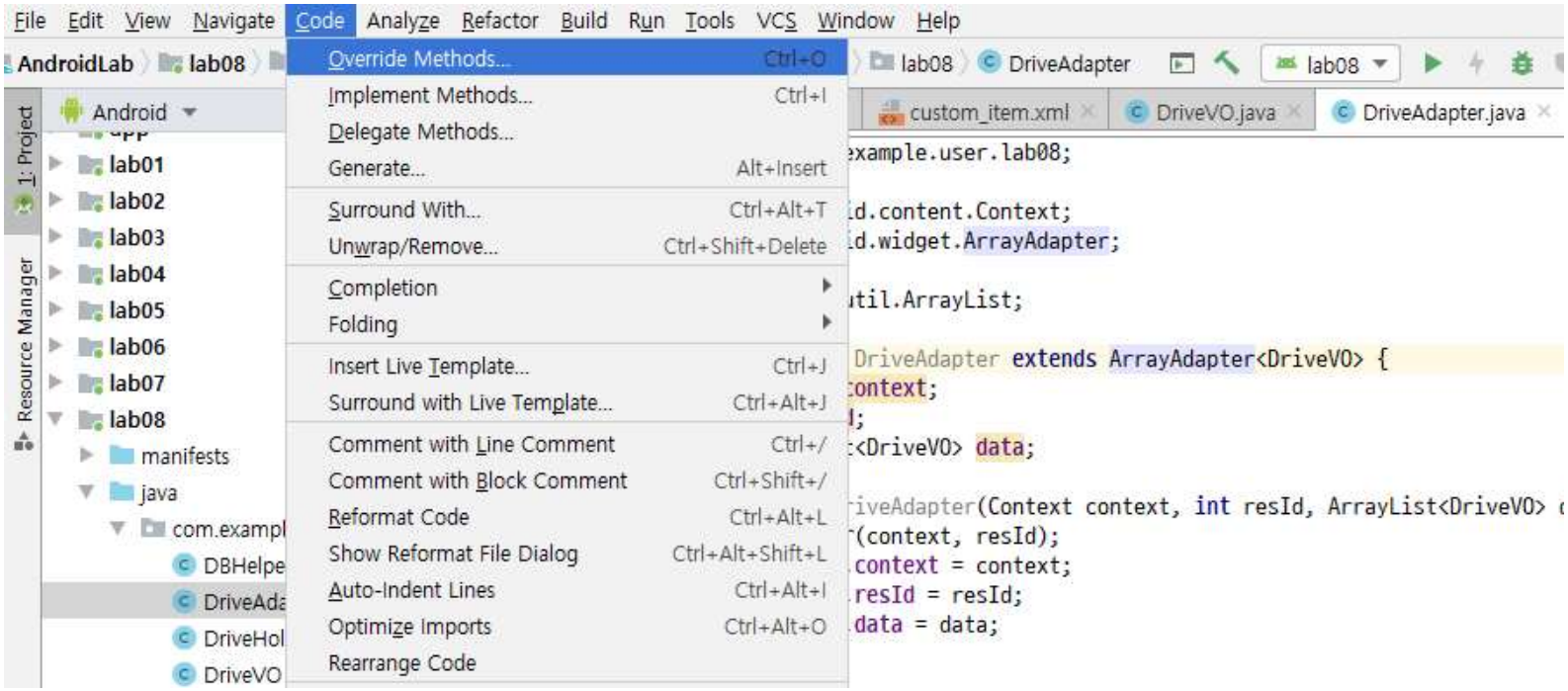


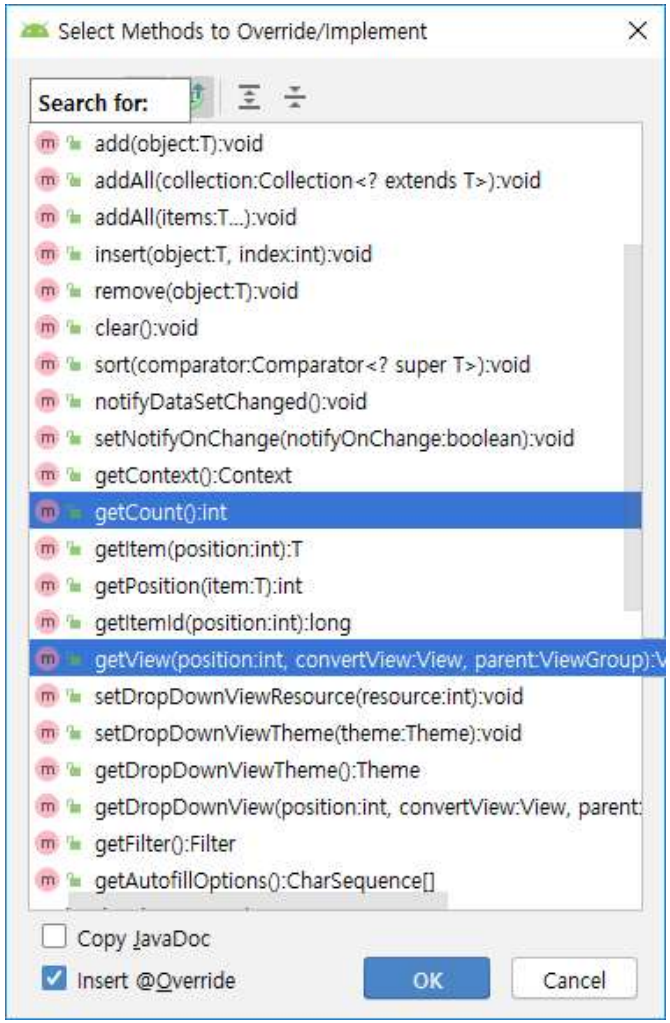

Create New Class
Name:
DriveAdapter
Kind:
Class
상속
Superclass:
android.widget.ArrayAdapter
Interface(s):
Package:
com.example.user.lab08
Visibility:
Public
Package Private
Modifiers:
None
Abstract
Final
Show Select Overrides Dialog
OK
Cancel
Help




```
public class DriveAdapter extends ArrayAdapter<DriveVO> {
    Context context;
    int resId;
    ArrayList<DriveVO> data;

    public DriveAdapter(Context context, int resId, ArrayList<DriveVO> data) {
        super(context, resId);
        this.context = context;
        this.resId = resId;
        this.data = data;
    }
}
```


File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
AndroidLab lab08
Override Methods... Ctrl+O
Implement Methods... Ctrl+I
Delegate Methods...
Generate... Alt+Insert
Surround With... Ctrl+Alt+T
Unwrap/Remove... Ctrl+Shift+Delete
Completion
Folding
Insert Live Template... Ctrl+J
Surround with Live Template... Ctrl+Alt+J
Comment with Line Comment Ctrl+/
Comment with Block Comment Ctrl+Shift+/
Reformat Code Ctrl+Alt+L
Show Reformat File Dialog Ctrl+Alt+Shift+L
Auto-Indent Lines Ctrl+Alt+I
Optimize Imports Ctrl+Alt+O
Rearrange Code
lab08 DriveAdapter
lab08
custom_item.xml
DriveVO.java
DriveAdapter.java
1: Project
Resource Manager
Android
lab01
lab02
lab03
lab04
lab05
lab06
lab07
lab08
manifests
java
com.exampl
DBHelpe
DriveAda
DriveHol
DriveVO
example.user.lab08;
d.content.Context;
d.widget.ArrayAdapter;
til.ArrayList;
DriveAdapter extends ArrayAdapter<DriveVO> {
context;
;
<DriveVO> data;
iveAdapter(Context context, int resId, ArrayList<DriveVO>
(context, resId);
context = context;
resId = resId;
data = data;


Select Methods to Override/Implement
Search for:
add(object:T):void
addAll(collection:Collection<? extends T>):void
addAll(items:T...):void
insert(object:T, index:int):void
remove(object:T):void
clear():void
sort(comparator:Comparator<? super T>):void
notifyDataSetChanged():void
setNotifyOnChange(notifyOnChange:boolean):void
getContext():Context
getCount():int
getItem(position:int):T
getPosition(item:T):int
getItemId(position:int):long
getView(position:int, convertView:View, parent:ViewGroup):V
setDropDownViewResource(resource:int):void
setDropDownViewTheme(theme:Theme):void
getDropDownViewTheme():Theme
getDropDownView(position:int, convertView:View, parent:
getFilter():Filter
getAutofillOptions():CharSequence[]
Copy JavaDoc
Insert @Override
OK
Cancel

전체 항목의 개수를 판단하기 위해 호출됨

```
@Override
public int getCount() {
    return data.size();
}
```

n행에 표시할 view

재사용

```
@Override
public View getView(int position, View convertView, ViewGroup parent) {
    if (convertView == null) {
        LayoutInflater inflater = (LayoutInflater)context.getSystemService(Context.LAYOUT_INFLATER_SERVICE);
        convertView = inflater.inflate(resId, null);
        DriveHolder holder = new DriveHolder(convertView);
        convertView.setTag(holder);
    }

    DriveHolder holder = (DriveHolder)convertView.getTag();

    ImageView typeImageView = holder.typeImageView;
    TextView titleView = holder.titleView;
    TextView dateView = holder.dateView;
    ImageView menuImageView = holder.menuImageView;

    final DriveVO vo = data.get(position);

    titleView.setText(vo.title);
    dateView.setText(vo.date);

    if (vo.type.equals("doc")) {
        typeImageView.setImageDrawable(ResourcesCompat.getDrawable(context.getResources(), R.drawable.ic_type_doc, null));
    } else if (vo.type.equals("file")) {
        typeImageView.setImageDrawable(ResourcesCompat.getDrawable(context.getResources(), R.drawable.ic_type_file, null));
    } else if (vo.type.equals("img")) {
        typeImageView.setImageDrawable(ResourcesCompat.getDrawable(context.getResources(), R.drawable.ic_type_image, null));
    }

    menuImageView.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Toast toast = Toast.makeText(context, vo.title+" menu click", Toast.LENGTH_SHORT);
            toast.show();
        }
    });

    return convertView;
}
```

The old view to reuse, if possible.

an extra piece of information that can be associated with a view
https://developer.android.com/reference/android/view/View.html#tags

```
public void setTag (Object tag)
public Object getTag ()
```

Image 넣기

Listener

getDrawable

added in version 24.1.0

```
Drawable getDrawable (Resources res,
                int id,
                Resources.Theme theme)
```

Return a drawable object associated with a particular resource ID and styled for the specified theme. Various types of objects will be returned depending on the underlying resource -- for example, a solid color, PNG image, scalable image, etc.

Prior to API level 21, the theme will not be applied and this method simply calls through to `getDrawable(int)`.

Parameters	
`res`	`Resources`
`id`	`int`: The desired resource identifier, as generated by the aapt tool. This integer encodes the package, type, and resource entry. The value 0 is an invalid identifier.
`theme`	`Resources.Theme`: The theme used to style the drawable attributes, may be `null`.

Returns	
`Drawable`	Drawable An object that can be used to draw this resource.

Throws	
`Resources.NotFoundException`	Throws NotFoundException if the given ID does not exist.

https://developer.android.com/reference/android/support/v4/content/res/ResourcesCompat.html#getdrawable

Step 6 _ Lab08_2Activity 작성

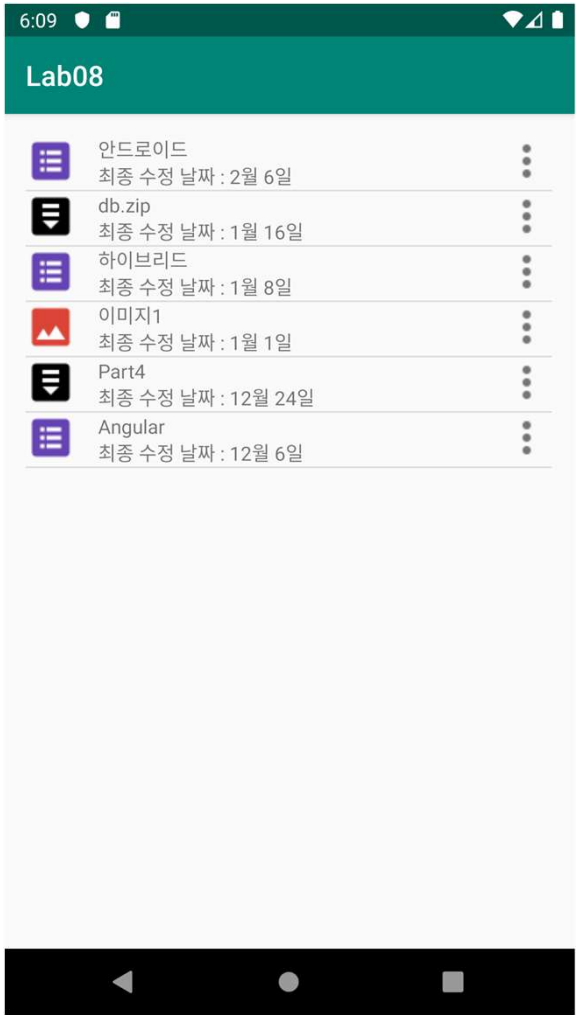
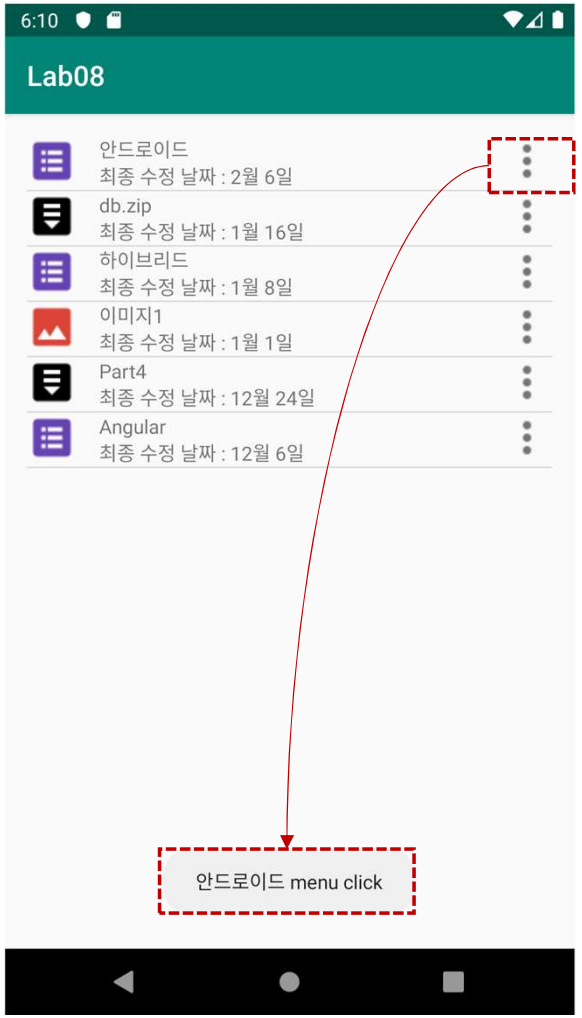
```
public class Lab08_2Activity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_lab08_2);

        ListView listView = findViewById(R.id.custom_listview);

        DBHelper helper = new DBHelper(this);
        SQLiteDatabase db = helper.getWritableDatabase();
        Cursor cursor = db.rawQuery("select * from tb_drive", null);

        ArrayList<DriveVO> data = new ArrayList<>();
        while (cursor.moveToNext()) {
            DriveVO vo = new DriveVO();
            vo.type = cursor.getString(3);
            vo.title = cursor.getString(1);
            vo.date = cursor.getString(2);
            data.add(vo);
        }
        db.close();

        DriveAdapter adapter = new DriveAdapter(this, R.layout.custom_item, data);
        listView.setAdapter(adapter);
    }
}
```

Step 7 _ Lab08_2Activity.java 실행