

Week04.

# 이미지의 출력



# 개발환경 구축 절차

주 차	수 업 내 용
1	수업 소개
2	개발 환경 구축과 맛보기 프로젝트
3	텍스트 출력과 레이아웃
4	<b>이미지의 출력</b>
5	이벤트 처리와 액티비티 간 이동
6	오디오 재생
7	비디오 재생
8	<b>중간고사</b>
9	애니메이션
10	사물인터넷과 센서 - 터치 센서, 모션 센서
11	사물인터넷과 센서 - 위치 센서, 환경 센서
12	NFC 활용
13	공공 DB 오픈 API 활용
14	구글 맵과 위치 추적
15	<b>기말 고사</b>



# https://goo.gl/vSdwLq

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The screenshot shows a web browser window displaying the GitHub repository page for 'hopypark / LectureNotes'. The browser's address bar shows the URL 'https://github.com/hopypark/LectureNotes/tree/master/AndroidApp'. The repository page includes a header with the repository name, a search bar, and navigation links for 'Pull requests', 'Issues', 'Marketplace', and 'Explore'. Below the header, there are buttons for 'Unwatch', 'Star', and 'Fork'. The main content area shows a list of files and folders in the 'AndroidApp' directory. The files listed are: 'README.md', 'Week02.Chap02.앱 개발환경 구축.pdf', 'Week02.Chap03.앱 프로젝트 구조와 실행원리.pdf', 'Week03.Chap06.텍스트 출력과 레이아웃.pdf', 'Week04.Chap07.이미지의 출력.pdf', 'ic\_launcher\_new-web.png', and 'starry\_night.png'. The file 'Week04.Chap07.이미지의 출력.pdf' is highlighted with an orange box, and the file 'starry\_night.png' is also highlighted with an orange box. The 'README.md' file is also visible at the bottom of the list.

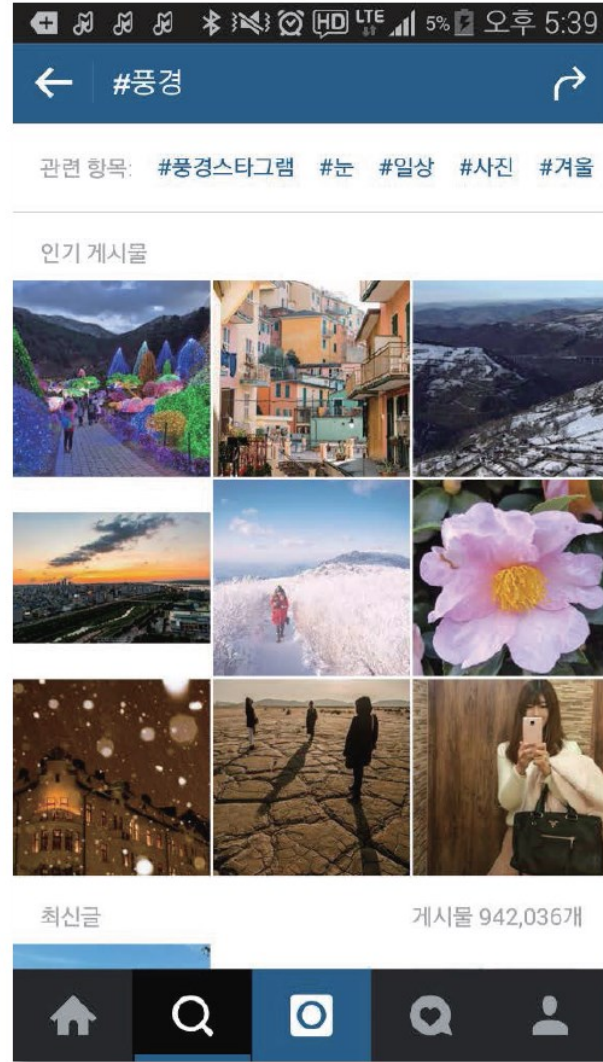
Repository: hopypark / LectureNotes

Branch: master

Files and folders:

- README.md
- Week02.Chap02.앱 개발환경 구축.pdf
- Week02.Chap03.앱 프로젝트 구조와 실행원리.pdf
- Week03.Chap06.텍스트 출력과 레이아웃.pdf
- Week04.Chap07.이미지의 출력.pdf
- ic\_launcher\_new-web.png
- starry\_night.png
- README.md

# 이미지 출력 앱의 예



(a) 사진 목록(인스타그램)

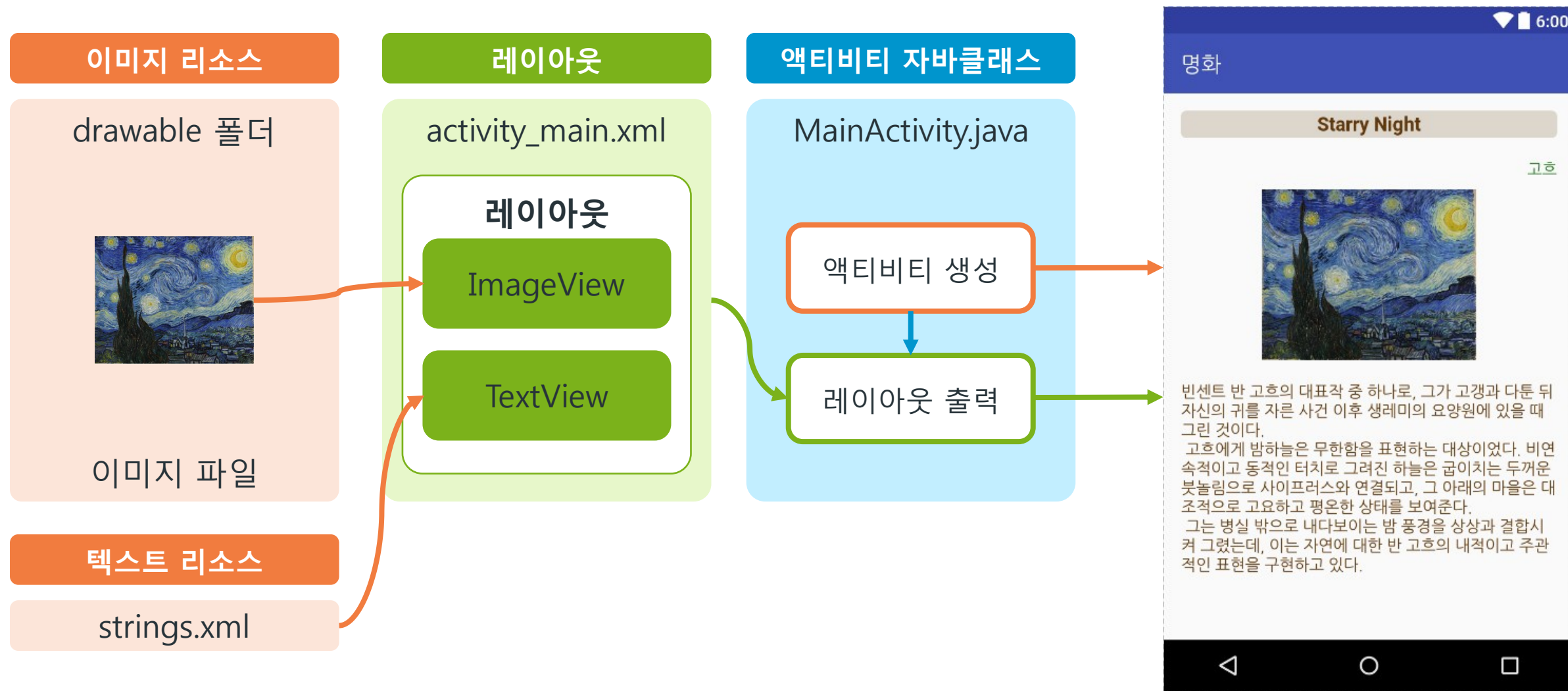


(b) 음식 배달 메뉴(배달의민족)

- 이미지 중심 앱의 예

# 이미지 출력 원리

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# Step 0.프로젝트 개요

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# Step 1. 프로젝트 생성

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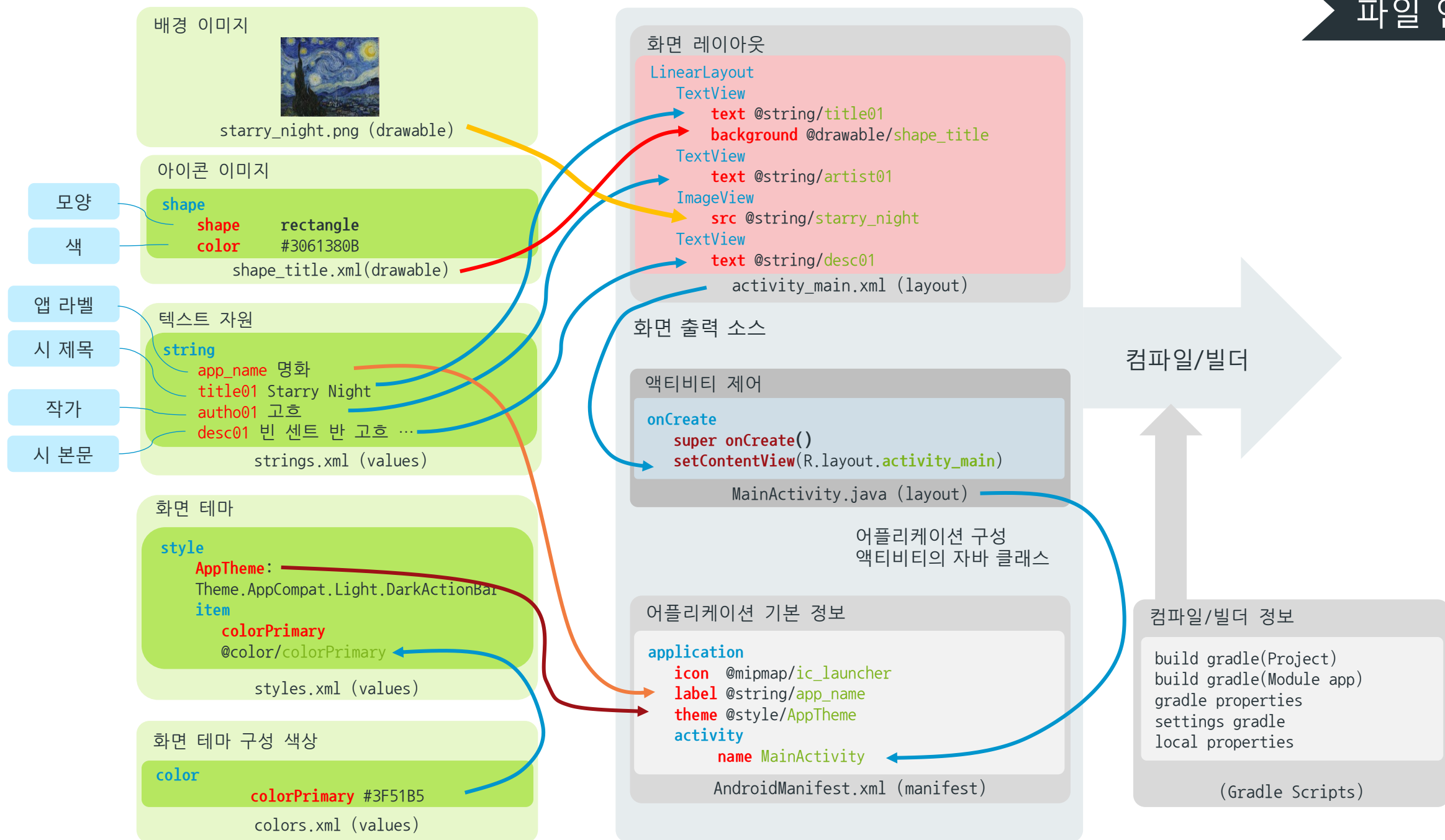
절차	내 용
①프로젝트 시작	메뉴에서 ‘ <code>File → New Project</code> ’ 클릭
②프로젝트 구성	Application Name: <code>FamousPaintings</code>
	Company Domain: <code>사용자계정.example.com</code> (디폴트 사용)
③제품형태	<code>Phone and Tablet</code> (사용할 안드로이드 버전 지정: <code>Android 7.0 Nougat</code> )
④액티비티 유형	<code>Empty Activity</code>
⑤파일 옵션	Activity Name: <code>MainActivity</code>
	Layout Name: <code>activity_main</code>



# Step 2. 파일 편집

모듈	폴더	소스 파일	편집 내용
manifests		AndroidManifest.xml	
java	com.example.kyungtae.famouspaintings	MainActivity.java	
res	drawable	starry_night.png	• 영화 이미지
		shape_title.xml	• 영화 제목의 출력모양 설계(배경색, 패딩, 모서리)
	layout	activity_main.xml	• 영화 화면 구성(제목, 작가, 이미지, 설명)
	mipmap	ic_launcher.png	
	values	dimens.xml	
		strings.xml	• 영화 목록 아이템(제목, 작가, 설명)
		styles.xml	






# Step 2.1 이미지 파일 복사

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- res 폴더에 있는 **starry\_night.png** 파일을 **drawable** 폴더에 저장

모듈	폴더	소스 파일	이미지
res	drawable	starry_night.png	

# ConstraintLayout을 LinearLayout로 바꾸기

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The image shows the Android Studio IDE with two versions of the `activity_main.xml` file open. An orange arrow points from the top version (ConstraintLayout) to the bottom version (LinearLayout).

**Top Version (Original):**

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res-
3   xmlns:app="http://schemas.android.com/apk/res-auto"
4   xmlns:tools="http://schemas.android.com/tools"
5   android:layout_width="match_parent"
6   android:layout_height="match_parent"
7   tools:context="com.example.kyungtae.famouspainting.MainActivity">
8
9   <TextView
10     android:layout_width="wrap_content"
11     android:layout_height="wrap_content"
12     android:text="Hello World!"
13     app:layout_constraintBottom_toBottomOf="parent"
14     app:layout_constraintLeft_toLeftOf="parent"
15     app:layout_constraintRight_toRightOf="parent"
16     app:layout_constraintTop_toTopOf="parent" />
17
18 </android.support.constraint.ConstraintLayout>
```

**Bottom Version (Modified):**

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout 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="match_parent"
6   tools:context="com.example.kyungtae.famouspainting.MainActivity">
7
8
9 </LinearLayout>
```

The preview window on the right shows the app's title "FamousPainting" and a white background.



# drawable 폴더에 이미지 추가하기

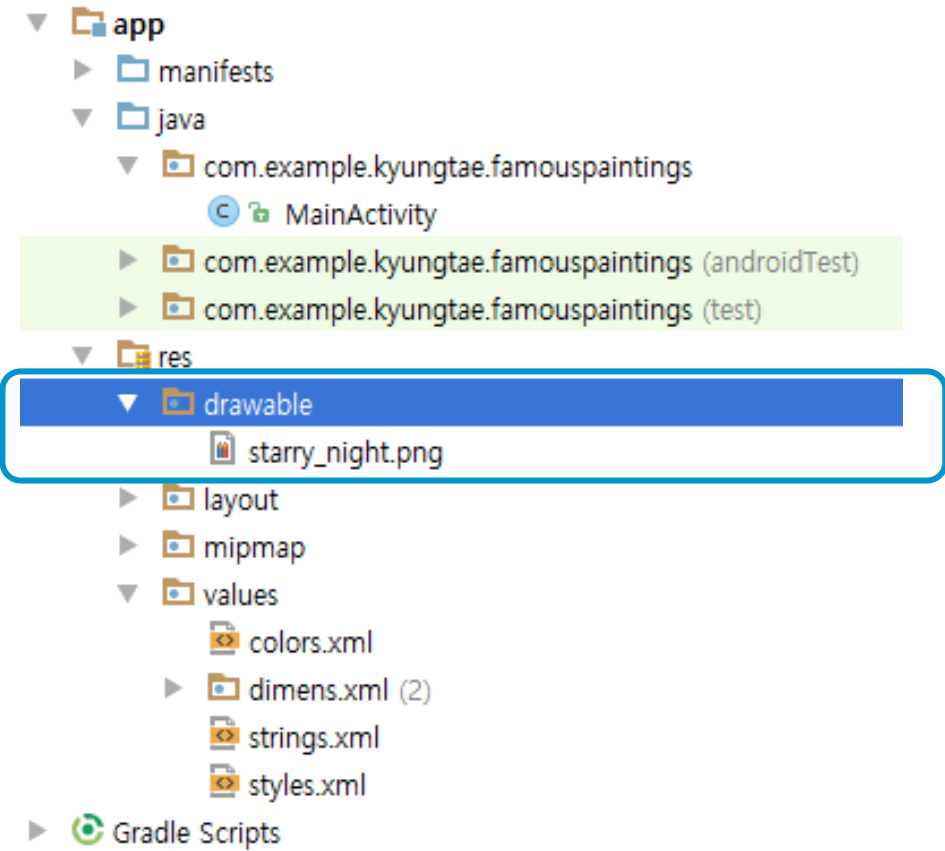
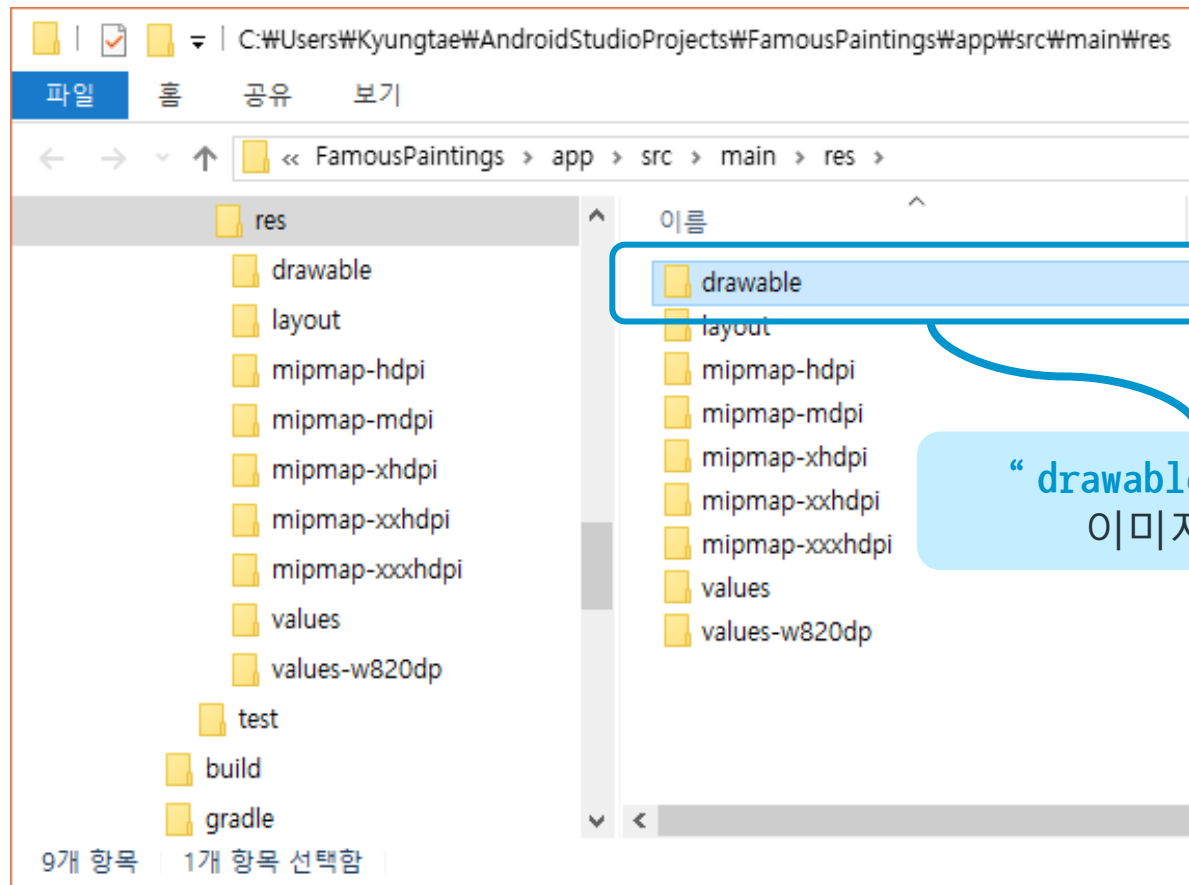
The image shows the Android Studio interface with the 'app' project selected. The 'res' folder is expanded, and the 'drawable' folder is highlighted. A context menu is open over the 'drawable' folder, showing various actions. A blue box highlights the 'Show in Explorer' option at the bottom of the menu. A blue arrow points from the 'drawable' folder to the context menu, and another blue arrow points from the 'Show in Explorer' option to a text box.

팝업 메뉴 띄우기

윈도우 탐색기 창보기  
(탐색기에서 이미지 추가)

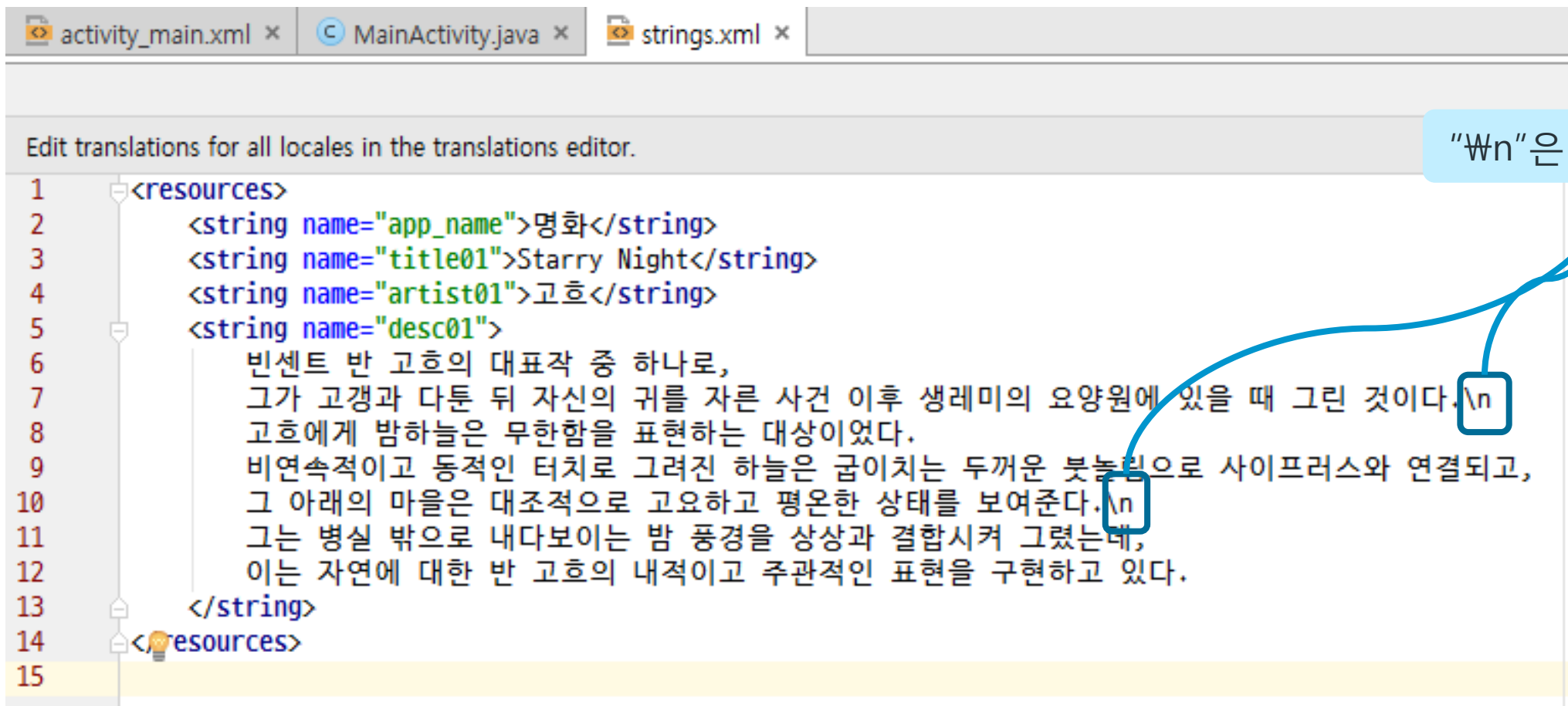
New

- Link C++ Project with Gradle
- Cut Ctrl+X
- Copy Ctrl+C
- Copy Path Ctrl+Shift+C
- Copy as Plain Text
- Copy Reference Ctrl+Alt+Shift+C
- Paste Ctrl+V
- Find Usages Alt+F7
- Find in Path... Ctrl+Shift+F
- Replace in Path... Ctrl+Shift+R
- Analyze
- Refactor
- Add to Favorites
- Show Image Thumbnails Ctrl+Shift+T
- Reformat Code Ctrl+Alt+L
- Optimize Imports Ctrl+Alt+O
- Delete... Delete
- Run 'Tests in 'drawable'' Ctrl+Shift+F10
- Debug 'Tests in 'drawable''
- Run 'Tests in 'drawable'' with Coverage
- Create 'Tests in 'drawable''...
- Local History
- Synchronize 'drawable'
- Show in Explorer
- File Path Ctrl+Alt+F12
- Compare With... Ctrl+D
- Create Gist...



# Step 2.2 텍스트 자원의 편집

- strings.xml



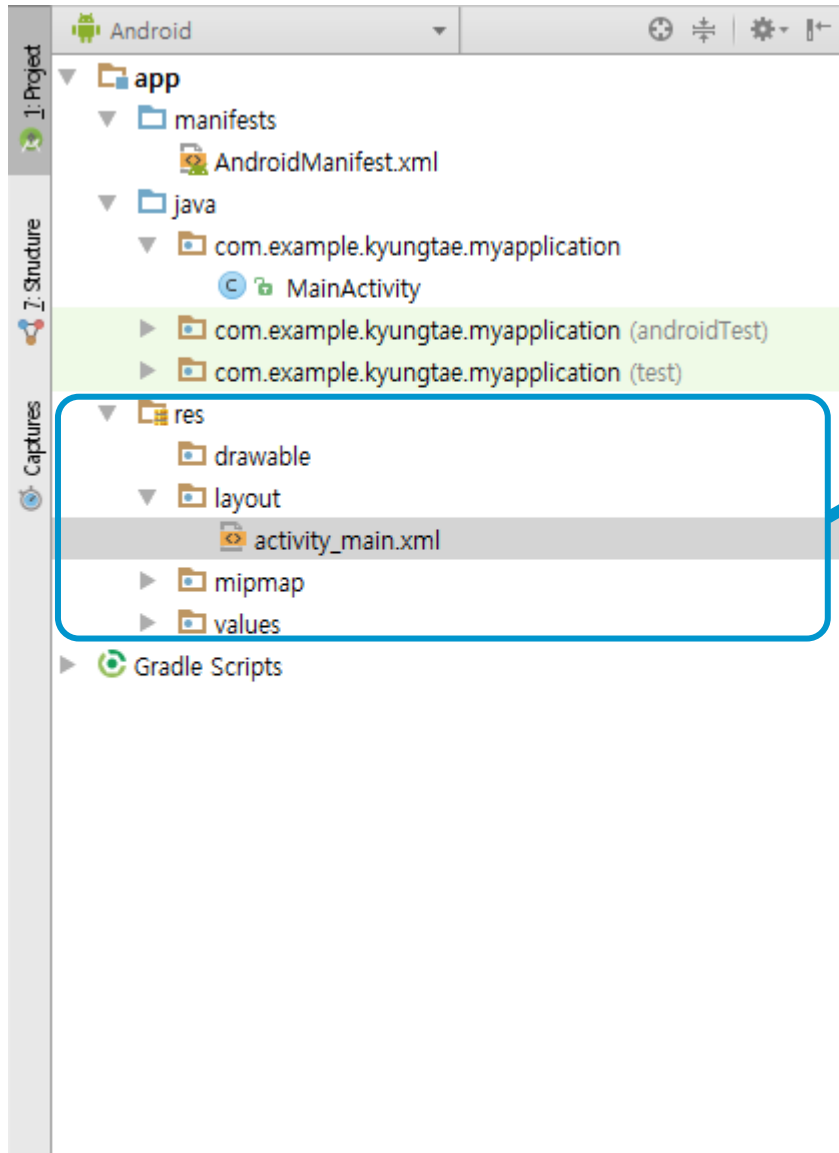
```
1 <resources>
2   <string name="app_name">영화</string>
3   <string name="title01">Starry Night</string>
4   <string name="artist01">고흐</string>
5   <string name="desc01">
6     빈센트 반 고흐의 대표작 중 하나로,
7     그가 고갱과 다툼 뒤 자신의 귀를 자른 사건 이후 생레미의 요양원에 있을 때 그린 것이다.
8     고흐에게 밤하늘은 무한함을 표현하는 대상이었다.
9     비연속적이고 동적인 터치로 그려진 하늘은 굵이치는 두꺼운 붓놀림으로 사이프러스와 연결되고,
10    그 아래의 마을은 대조적으로 고요하고 평온한 상태를 보여준다.
11    그는 병실 밖으로 내다보이는 밤 풍경을 상상과 결합시켜 그렸는데,
12    이는 자연에 대한 반 고흐의 내적이고 주관적인 표현을 구현하고 있다.
13  </string>
14 </resources>
```

"\n"은 줄 넘기문자



# Drawable Resource

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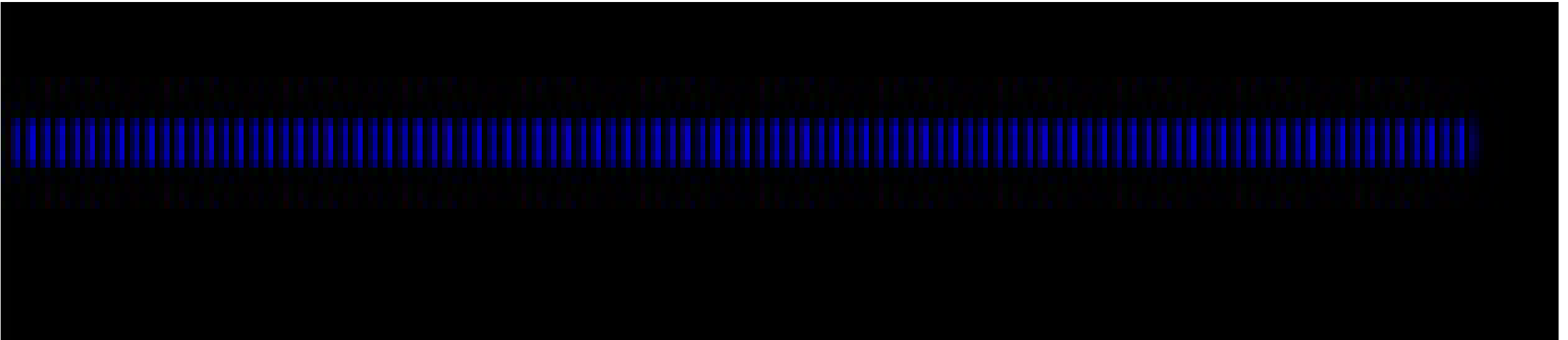
모듈에 사용되는 리소스 파일 관리  
(화면 레이아웃 설계, 텍스트와 이미지 리소스 등)

# Drawable Resource

- 화면에 출력하는 그래픽을 위한 일반적인 개념으로 여러 유형이 존재한다.
- **Shape Drawable**은 색상, 테두리, 그라데이션을 넣거나 가장자리를 둥글게 처리하는 등의 수준 높은 버튼이나 배경을 그릴 수 있다.
- Shape Drawable은 다른 drawable과 마찬가지로 `res/drawable/` 내에 XML 파일(`res/drawable/filename.xml`)을 생성하면 된다.
- Java 소스에서는 `R.drawable.filename` 형태로, 액티비티 XML에서는 `@drawable/filename` 형태로 사용

- 예제-선 그리기(출처: <http://aroundck.tistory.com/140>)

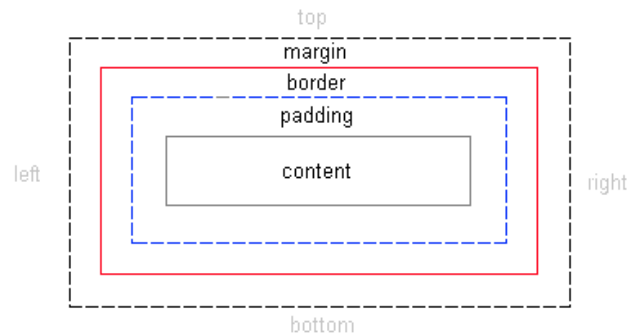
```
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="line">
    <stroke
        android:width="5dp"
        android:color="#FF0000FF"
        android:dashWidth="1dp"
        android:dashGap="2dp" />
</shape>
```



# • 예제-사각형 그리기(출처: <http://aroundck.tistory.com/140>)

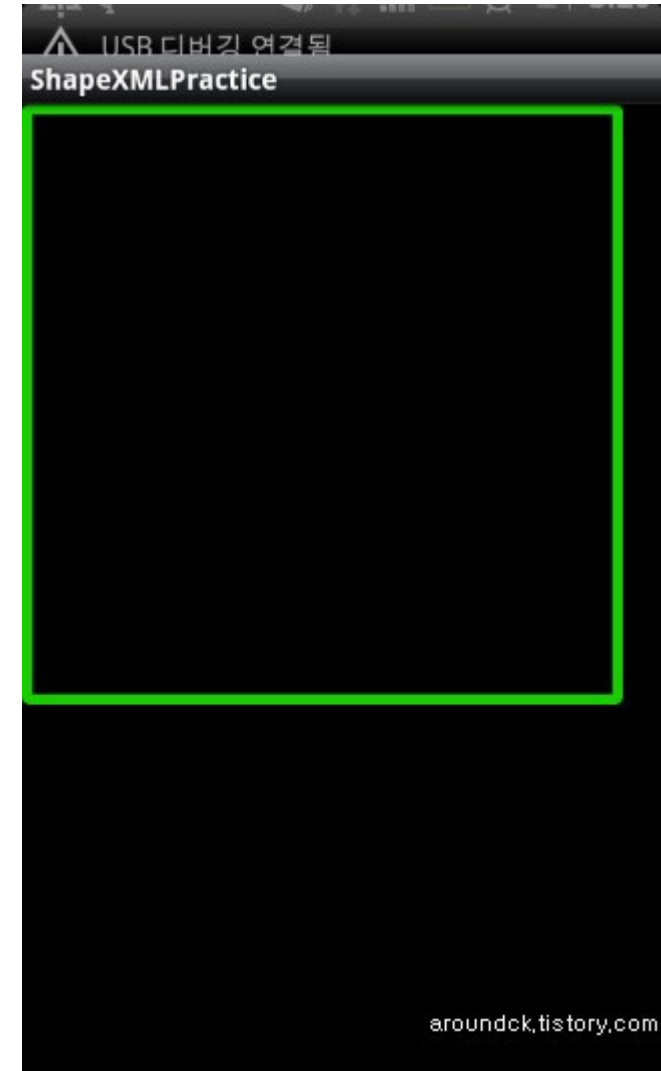
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```
<?xml version="1.0" encoding="UTF-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="rectangle">
    <stroke
        android:width="5dip"
        android:color="#19CD00" />
    <corners
        android:bottomRightRadius="1dip"
        android:bottomLeftRadius="1dip"
        android:topLeftRadius="1dip"
        android:topRightRadius="1dip"/>
    <padding
        android:left="1dip"
        android:top="1dip"
        android:right="1dip"
        android:bottom="1dip" />
</shape>
```



--- margin edge  
— border edge  
--- padding edge  
— content edge

Padding은 content와 border 사이의 공간

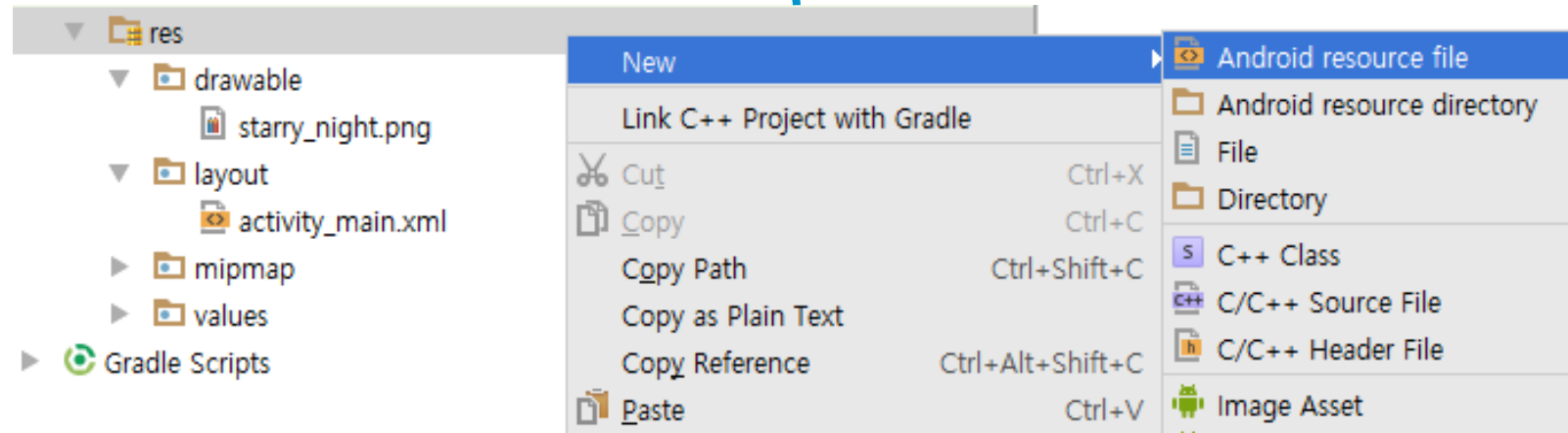


- **shape\_title.xml** 생성(res/drawable 폴더)

- drawable resource를 이용한 그림 출력
- 제목(title)에 대한 출력 모양을 지정
- **drawable 폴더에는 화면에 그릴 수 있는 요소(도형)를 XML로 정의**
- **android:shape** 속성을 사용하여 다른 XML 리소스에 적용할 수 있는 그래픽에 대한 일반적인 개념

**Starry Night**

XML 파일 생성



- Set New Resource File

**File name:** shape\_title.xml

**Resource type:** Drawable

**Root element:** shape

**Source set:** main

**Directory name:** drawable

New Resource File

File name: shape\_title.xml ↑↓

Resource type: Drawable ▼

Root element: shape

Source set: main ▼

Directory name: drawable

Available qualifiers:

- Country Code
- Network Code
- Locale
- Layout Direction
- Smallest Screen Width
- Screen Width
- Screen Height
- Size
- Ratio
- Orientation

Chosen qualifiers:

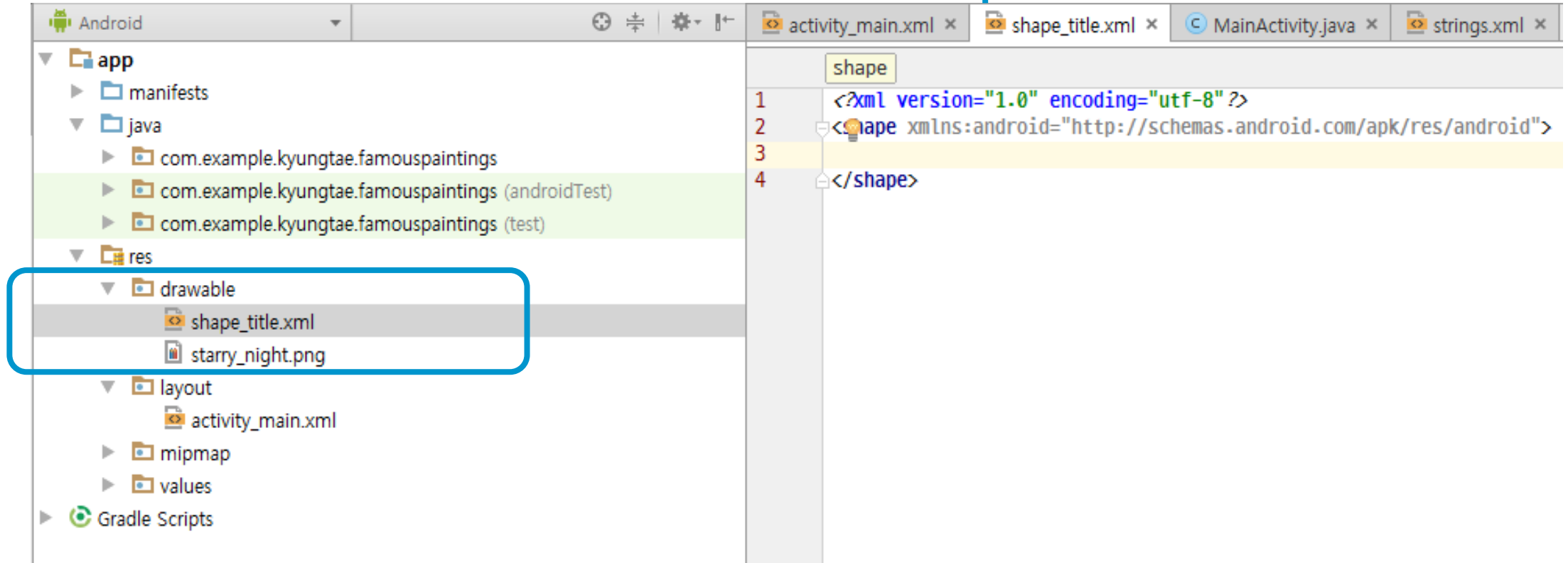
Nothing to show

>> <<

OK Cancel Help

- 생성된 shape\_title.xml

shape\_title.xml 파일





## • shape\_title.xml 소스

The image shows the Android Studio interface with the XML editor and a preview window. The XML code for `shape_title.xml` is as follows:

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <shape xmlns:android="http://schemas.android.com/apk/res/android"
3     android:shape="rectangle">
4
5     <solid android:color="#3061380B"/>
6
7     <padding
8         android:top="2dp"
9         android:bottom="2dp"
10        android:left="10dp"
11        android:right="10dp">
12     </padding>
13     <corners android:radius="5dp">
14     </corners>
15
16 </shape>
```

Annotations explaining the code:

- `android:shape="rectangle"`: 출력모양을 사각형으로 지정
- `android:color="#3061380B"`: 출력모양을 내부의 색
- `<padding>` block: 내부 패딩 정보
- `<corners android:radius="5dp">`: 출력모양 모서리를 둥근 모양으로 지정(반지름은 5dp)

The preview window shows a light gray rounded rectangle on a white background, matching the visual output of the XML code.

- LinearLayout의 **orientation**을 **vertical**로 설정

The screenshot shows the Android Studio IDE with the following components:

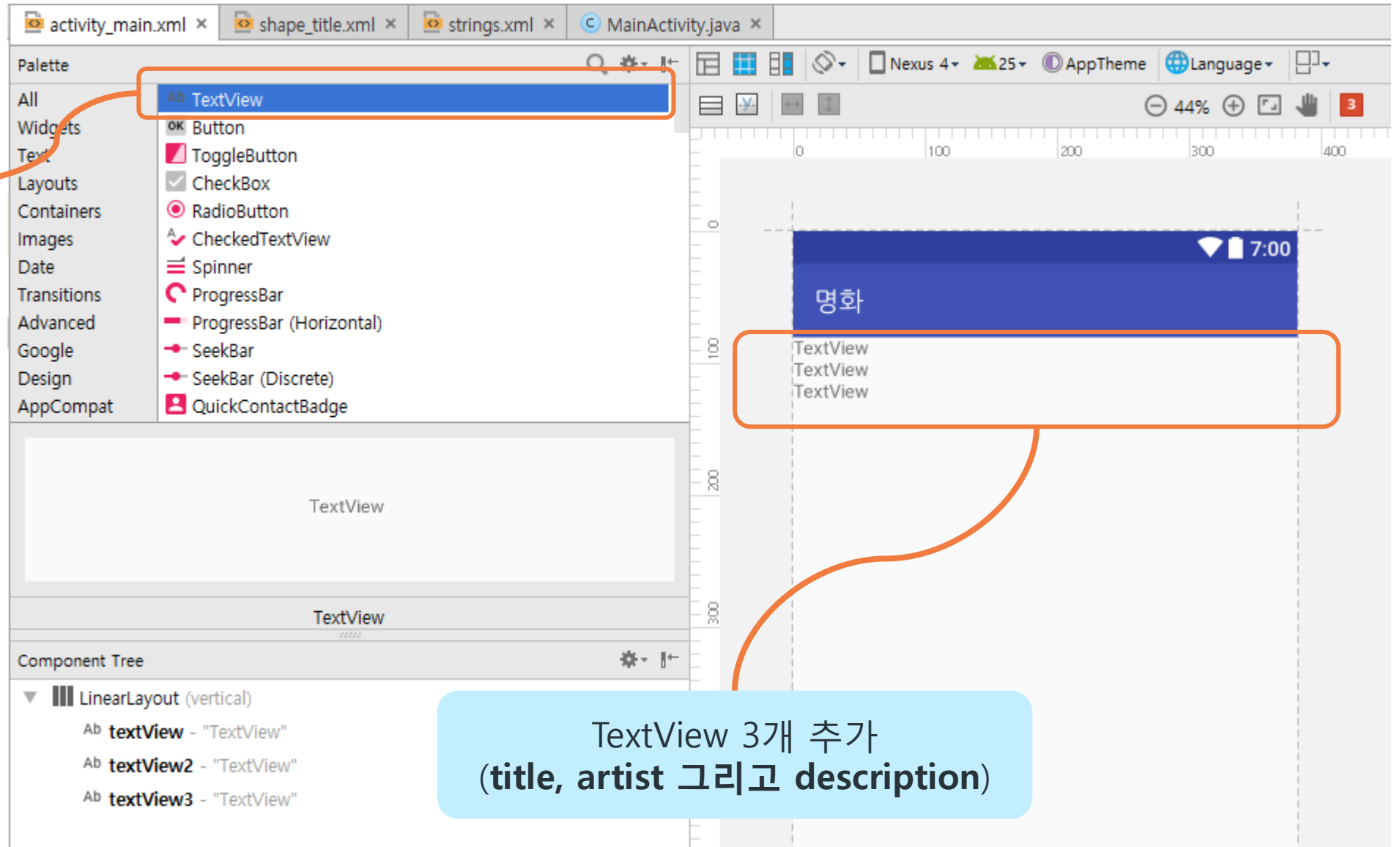
- Palette:** A list of UI widgets on the left. Under the 'Layouts' category, 'LinearLayout' is selected.
- Component Tree:** Located at the bottom left, it shows the hierarchy of UI components. 'LinearLayout (horizontal)' is highlighted with a blue box.
- Properties Panel:** On the right, it displays the attributes for the selected 'LinearLayout'. The 'orientation' attribute is set to 'vertical', which is highlighted with a blue box. Other attributes like 'layout\_width' and 'layout\_height' are set to 'match\_parent'.
- Design View:** The central area shows a visual representation of the app layout on a Nexus 4 device. It features a blue header bar with the text '영화' and a black navigation bar at the bottom.

Two callout boxes provide additional context:

- A blue callout box on the left states: "전체 화면의 기본 레이아웃 설정 (기본은 horizontal)" (Basic layout setting for the entire screen (default is horizontal)).
- A blue callout box on the right states: "기본 레이아웃을 vertical로 설정" (Set the basic layout to vertical).

# • LinearLayout에 **TextView**와 ImageView 추가하기

Palette에서 TextView 선택



TextView 3개 추가  
(title, artist 그리고 description)

# • LinearLayout에 TextView와 **ImageView** 추가하기

Palette에서 **Image** 폴더에서 **ImageView** 선택

ImageButton  
ImageView  
VideoView

Text  
Layouts  
Containers  
Images  
Date  
Transitions  
Advanced  
Google  
Design  
AppCompat

0 100 200 300 400

0 100 200 300

영화  
TextView  
TextView  
TextView

ImageView

Component Tree

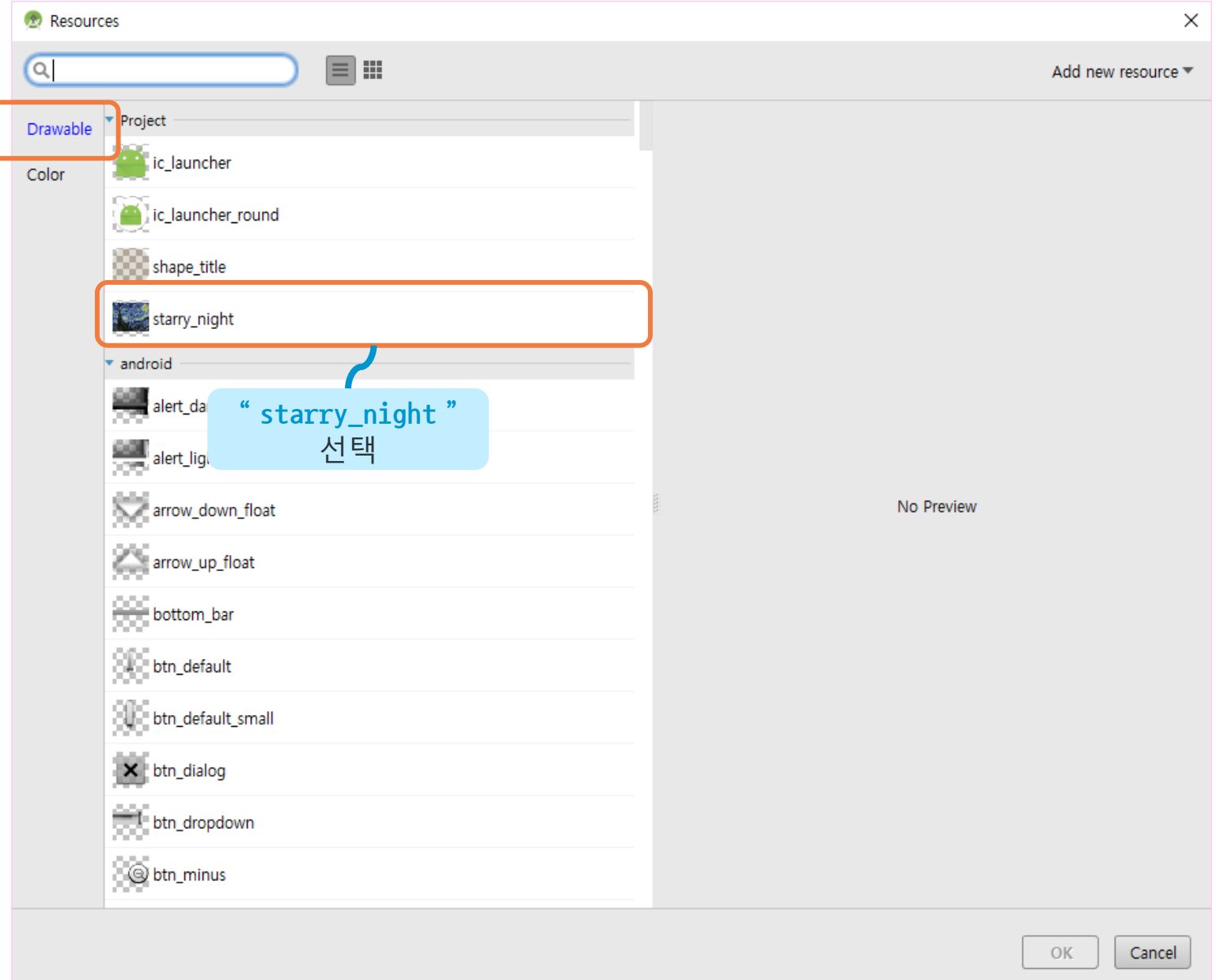
- LinearLayout (vertical)
  - textView - "TextView"
  - textView2 - "TextView"
  - textView3 - "TextView"

ImageView를 2번째와 3번째 TextView 사이에 추가

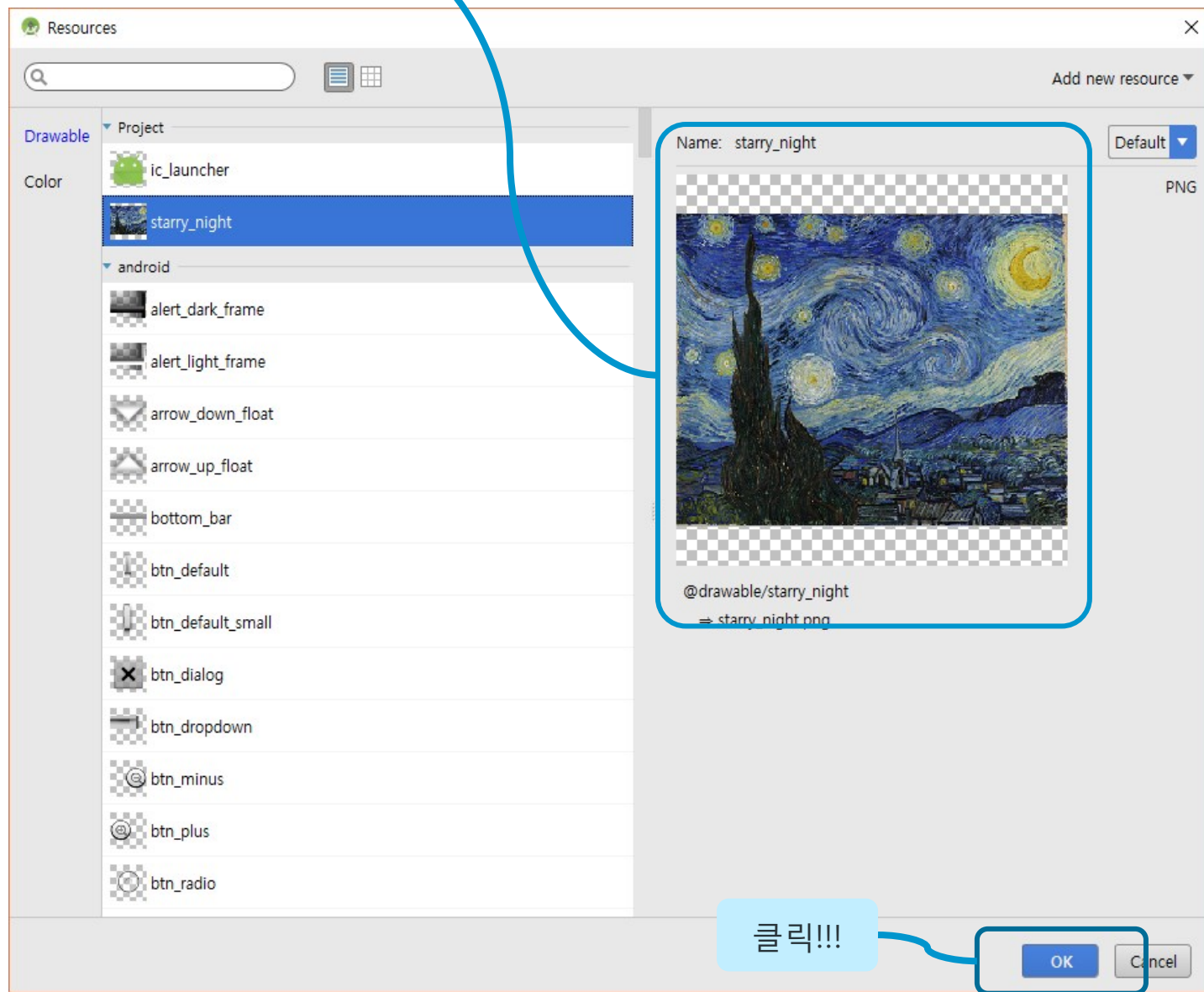
이미지 추가를 위한 팝업창 열림

- ImageView에 이미지 소스 선택 팝업 창

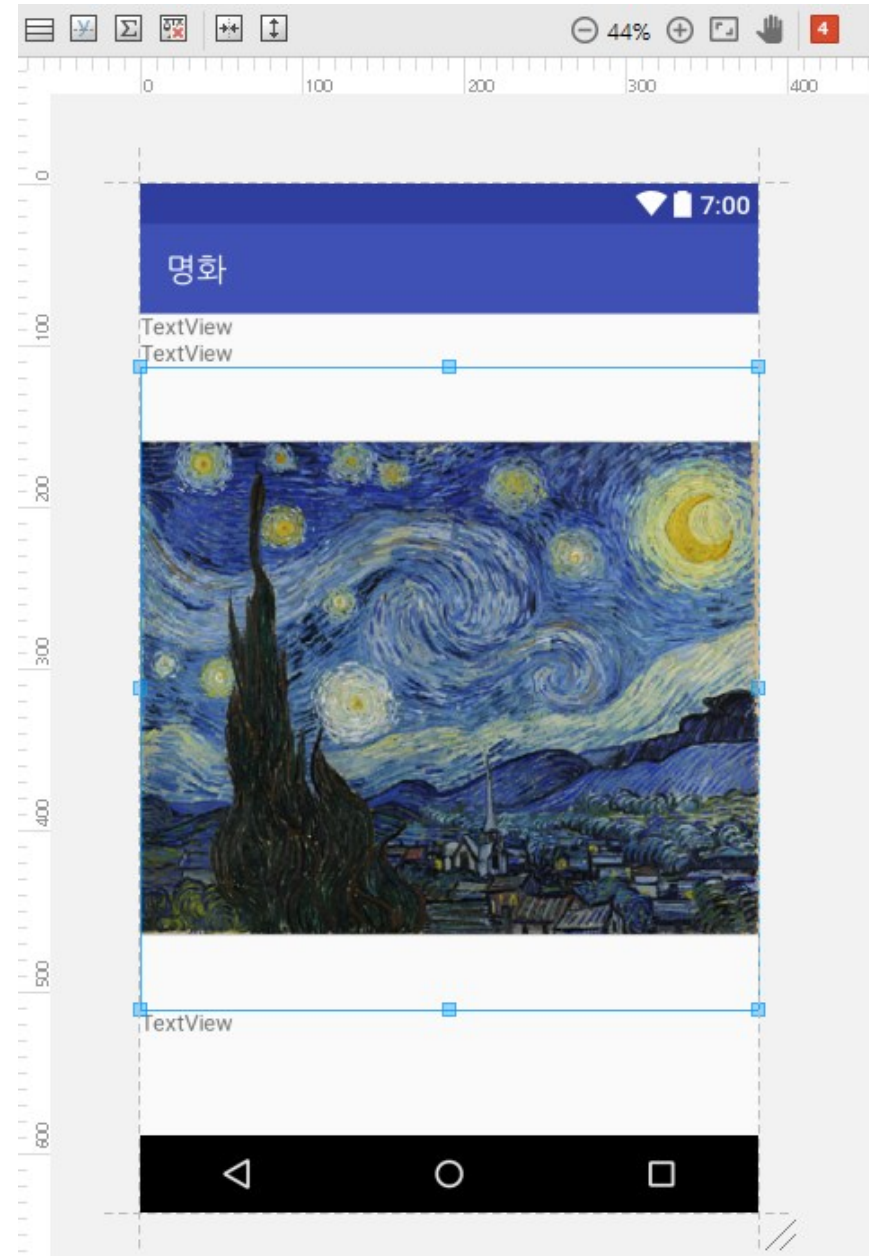
리소스 폴더 인  
"Drawable" 선택



선택한 이미지  
미리보기



완성된 화면





# • Title TextView의 “Text” 속성 변경하기

The screenshot shows the Android Studio IDE with the following components:

- Palette:** A list of UI widgets on the left. Under the 'Text' category, 'TextView' is selected.
- Design View:** The central area showing a mobile app layout. It features a blue header bar with the text '영화' (Movie) and a large image of 'The Starry Night' painting below it. A 'TextView' component is highlighted with a blue selection box.
- Component Tree:** Located at the bottom left, it shows the hierarchy of UI components. A 'TextView' component is selected and highlighted with a blue box.
- Properties Panel:** On the right, it lists various properties for the selected 'TextView'. The 'text' property is highlighted with a blue box.

Annotations and Callouts:

- A blue callout bubble points to the 'text' property in the Properties panel, containing the text: "해당 속성을 선택 후 값을 변경→ title01" (Select this property and change the value → title01).
- Another blue callout bubble points to the selected 'TextView' in the Component Tree, containing the text: "속성 변경을 위한 컴포넌트 요소 선택" (Select component element for attribute change).



Properties

id	
layout_width	wrap_content
layout_height	wrap_content
▶ Layout_Margin	[?, ?, ?, ?]
▶ Padding	[?, ?, ?, ?]
▶ Theme	
elevation	
text	Hello World!
accessibilityLiveRegion	
accessibilityTraversalAfter	
accessibilityTraversalBefore	
allowUndo	[-]
alpha	
▶ autoLink	[]
autoText	[-]
background	
backgroundTint	
backgroundTintMode	
breakStrategy	high_quality
bufferType	
capitalize	
clickable	[-]
contentDescription	
contextClickable	[-]
cursorVisible	[-]
digits	
drawableBottom	

Click to pick a resource

속성 변경을 위한  
컴포넌트 요소 선택

Resources

사용할 리소스 선택

Add new resource ▼

Name: title01

Default Starry Night

Project	
app_name	명화
artist01	고흐
desc01	빈센트 반 고흐의 대표작 중 하나...
title01	Starry Night
android	
VideoView_error_button	OK
VideoView_error_text_invalid_progres	This video isn't valid for streamin...
VideoView_error_text_unknown	Can't play this video.
VideoView_error_title	Video problem
cancel	Cancel
copy	Copy
copyUrl	Copy URL
cut	Cut
defaultMsisdnAlphaTag	MSISDN1
defaultVoiceMailAlphaTag	Voicemail
dialog_alert_title	Attention
emptyPhoneNumber	(No phone number)
fingerprint_icon_content_description	Fingerprint icon
httpErrorBadUrl	Couldn't open the page because t...
httpErrorUnsupportedScheme	The protocol isn't supported.

[EDIT TRANSLATIONS](#)

OK Cancel

# • title TextView의 “Text” 속성 변경 완료

The screenshot displays the Android Studio IDE with the following components:

- Palette:** Shows various widget categories. Under the "Images" category, **ImageButton**, **ImageView**, and **VideoView** are listed.
- Component Tree:** Located at the bottom left, it shows a **LinearLayout (vertical)** containing:
  - textView** - "@string/title01" (highlighted with a blue box)
  - textView2** - "TextView"
  - imageView2**
  - textView3** - "TextView"
- Design View:** The central area shows a mobile app preview. At the top, a blue header bar contains the text "영화" (Movie) and a clock showing "7:00". Below this, a white box displays the text "Starry Night" (highlighted with a blue box). The bottom half of the screen shows a reproduction of the painting "The Starry Night" by J.M.W. Turner.
- Properties Panel:** Located on the right, it lists various attributes for the selected **textView**. The **text** property is highlighted with a blue box and set to **@string/title01**.

# • title 컴포넌트의 기타 속성 변경하기

The screenshot displays the Android Studio interface. On the left, the design view shows a mobile app layout with a blue header bar containing the text '영화' (Movie). Below the header, a white rectangular box with a blue border contains the text 'Starry Night'. Below this box is a reproduction of the 'Starry Night' painting. On the right, the 'Properties' panel lists various attributes for the selected 'TextView' component. Arrows point from specific properties in the panel to callout boxes on the right side of the image.

id	textView
layout_width	match_parent
layout_height	wrap_content
Layout_Margin	[?, ?, ?, ?, ?]
Padding	[?, ?, ?, ?, ?]
Theme	
elevation	
gravity	[center]
text	@string/title01
textColor	#613808
textSize	18sp
textStyle	[bold]
accessibilityLiveReg	
accessibilityTraversa	
accessibilityTraversa	
allowUndo	<input type="checkbox"/>
alpha	

layout\_width: match\_parent

layout\_height: wrap\_content

gravity: center

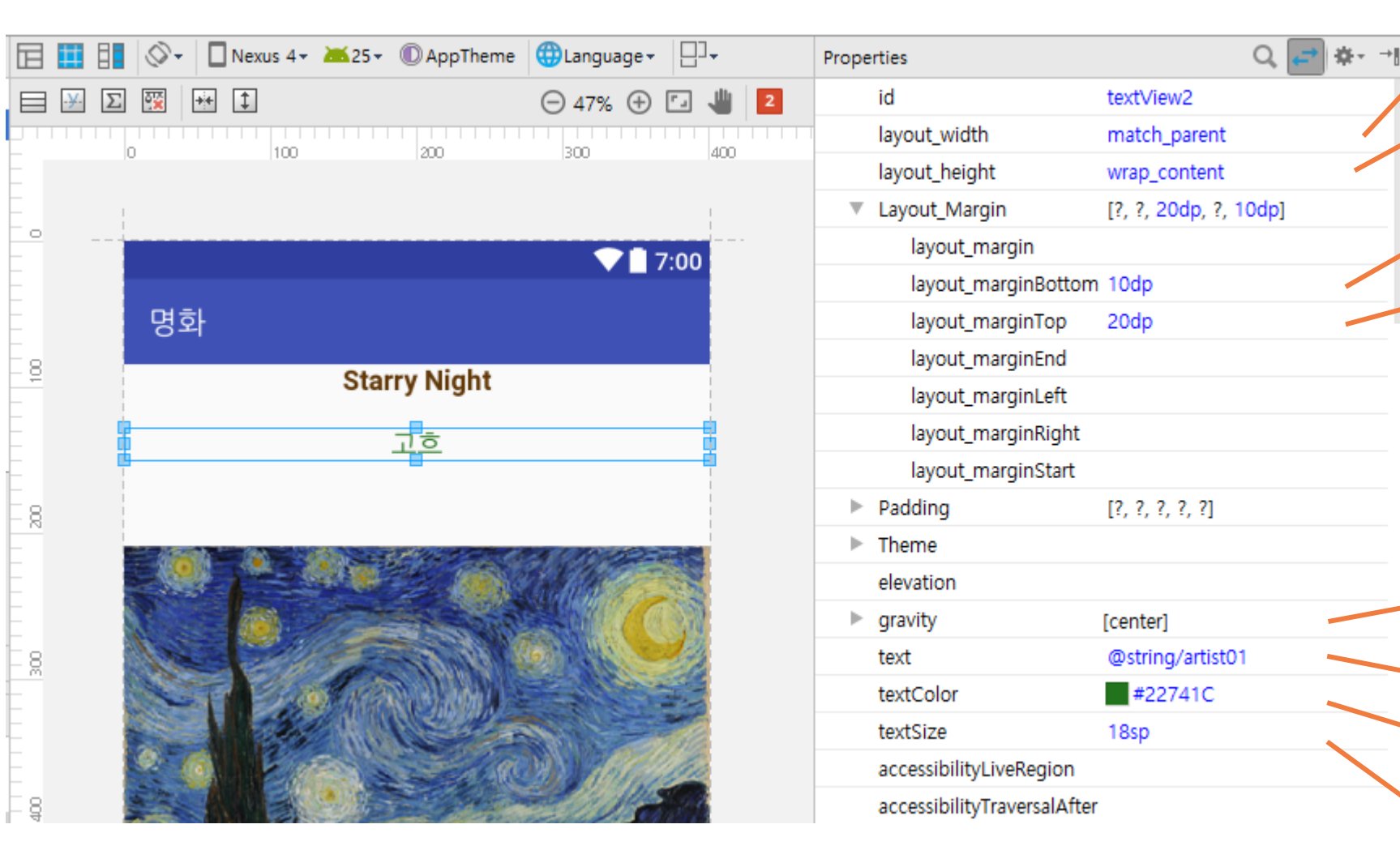
text: @string/title01

textColor: #613808

textSize: 18sp

textStyle: bold

# • artist TextView의 속성 변경



The screenshot shows the Android Studio interface with a design view on the left and a properties panel on the right. The design view displays a mobile app layout with a blue header bar containing the text '영화' (Movie) and a status bar at the top showing '7:00'. Below the header, the text 'Starry Night' is displayed in a brown font. At the bottom, there is a reproduction of the 'Starry Night' painting. The properties panel on the right lists various attributes for the selected TextView widget (id: textView2). Orange arrows point from specific property values in the panel to callout boxes on the right side of the image.

Property	Value
id	textView2
layout_width	match_parent
layout_height	wrap_content
Layout_Margin	[?, ?, 20dp, ?, 10dp]
layout_margin	
layout_marginBottom	10dp
layout_marginTop	20dp
layout_marginEnd	
layout_marginLeft	
layout_marginRight	
layout_marginStart	
Padding	[?, ?, ?, ?, ?]
Theme	
elevation	
gravity	[center]
text	@string/artist01
textColor	#22741C
textSize	18sp
accessibilityLiveRegion	
accessibilityTraversalAfter	

layout\_width: match\_parent

layout\_height: wrap\_content

Layout\_marginBottom: 10dp

Layout\_marginTop: 20dp

gravity: center

text: @string/artist01

textColor: #22741C

textSize: 18sp



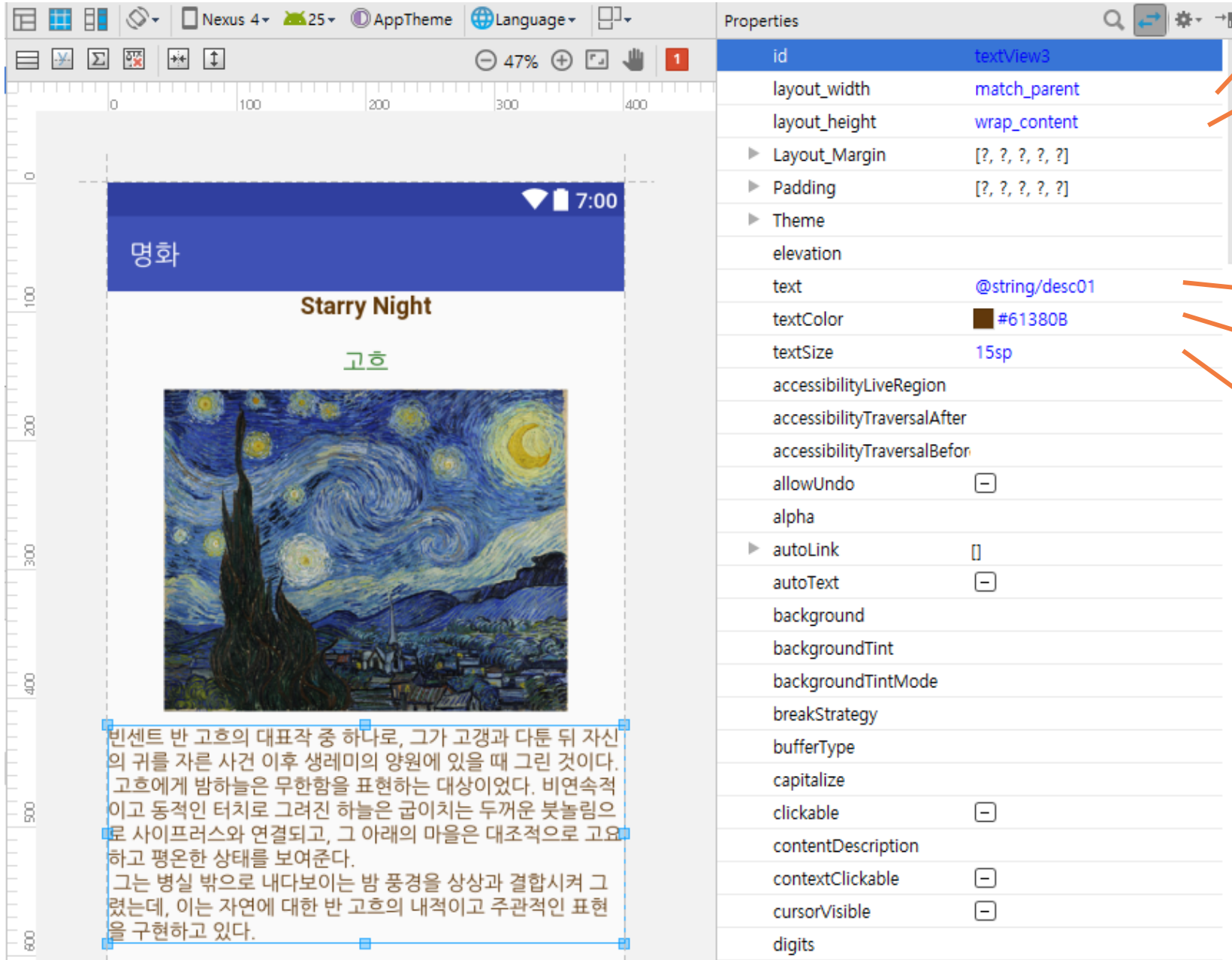
# • 이미지의 ImageView의 속성 변경

The screenshot shows the Android Studio IDE with a mobile app layout. The design view on the left displays a blue header bar with the text '영화' (Movie) and '7:00'. Below the header, the title 'Starry Night' is centered, followed by the artist's name '고흐' (Gogh). The main content area features a large image of 'The Starry Night' by J.M.W. Turner. The Properties panel on the right lists the attributes for the selected `imageView2` widget. Callouts highlight the following properties:

- `layout_width: wrap_content`
- `layout_height: wrap_content`
- `Layout_marginBottom: 10dp`
- `adjustViewBounds: true(check)`
- `layout_gravity: center`
- `maxHeight: 300dp`
- `maxWidth: 300dp`
- `srcCompat: @drawable/starry_night`

※ `adjustViewBounds` 이미지의 종횡비를 맞추기 위해 이미지 뷰의 크기를 적당히 조정할 것인가를 지정

# • desc의 TextView의 속성 변경



id	textView3
layout_width	match_parent
layout_height	wrap_content
Layout_Margin	[?, ?, ?, ?]
Padding	[?, ?, ?, ?]
Theme	
elevation	
text	@string/desc01
textColor	#61380B
textSize	15sp
accessibilityLiveRegion	
accessibilityTraversalAfter	
accessibilityTraversalBefore	
allowUndo	<input type="checkbox"/>
alpha	
autoLink	<input type="checkbox"/>
autoText	<input type="checkbox"/>
background	
backgroundTint	
backgroundTintMode	
breakStrategy	
bufferType	
capitalize	
clickable	<input type="checkbox"/>
contentDescription	
contextClickable	<input type="checkbox"/>
cursorVisible	<input type="checkbox"/>
digits	

layout\_width: match\_parent

layout\_height: wrap\_content

text: @string/artist01

textColor: #61380B

textSize: 15sp

# • shape\_title.xml을 이용한 제목바의 배경 처리

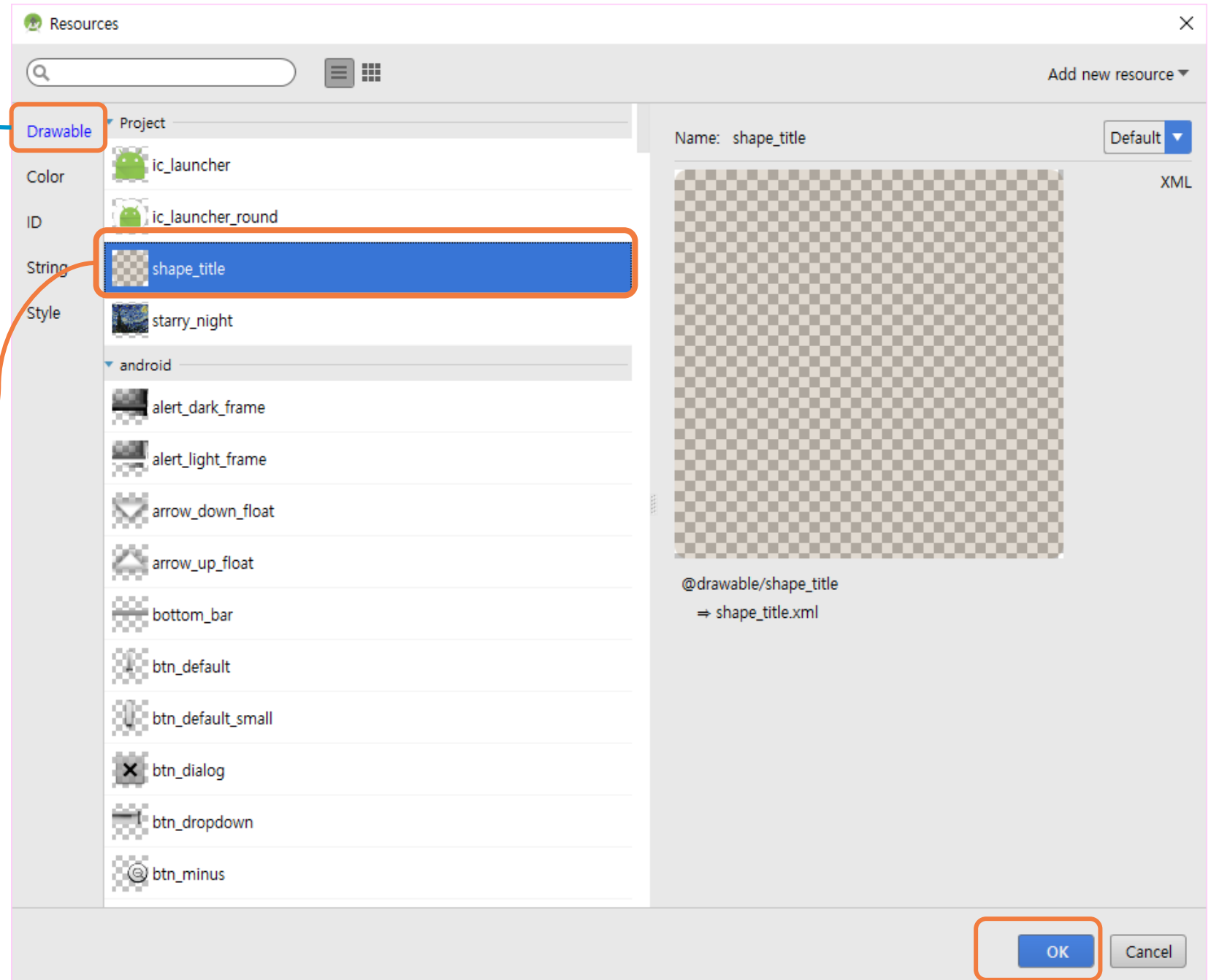
The screenshot displays the Android Studio IDE with the following components:

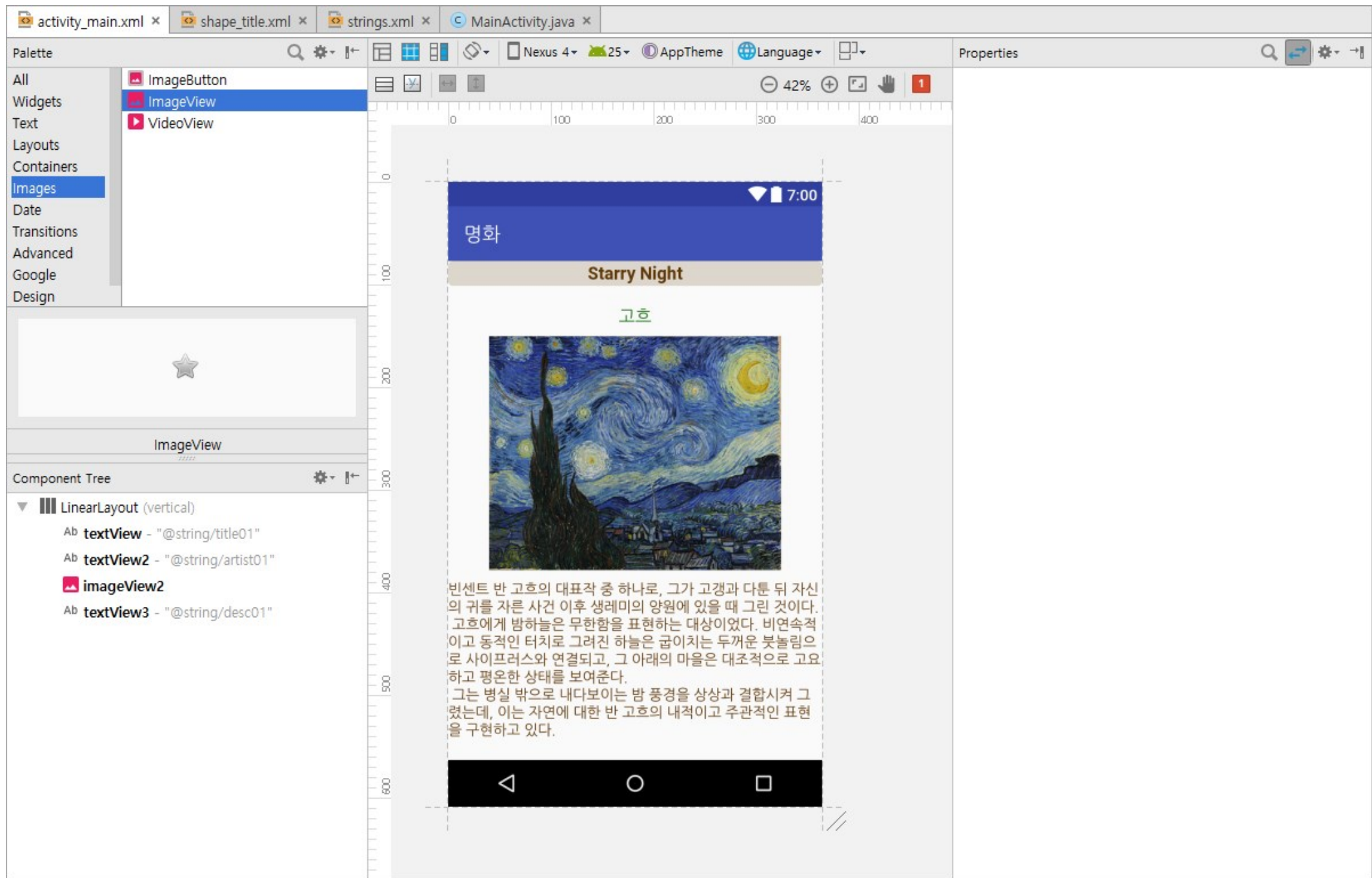
- Palette:** The 'Images' category is selected, showing options like ImageButton, ImageView, and VideoView.
- Component Tree:** A vertical LinearLayout is shown with three children: textView - "@string/title01" (highlighted), textView2 - "@string/artist01", and imageView2.
- Design Canvas:** A visual representation of the layout on a Nexus 4 device. It features a blue header bar with the text '영화' (Movie) and 'Starry Night'. Below the header is a reproduction of J.M.W. Turner's painting 'Rain, Steam, and Great Bridge' (labeled '고흐' - Gogh). At the bottom, there is a block of Korean text describing the painting and the artist.
- Properties Panel:** The 'background' property of the selected textView is highlighted, showing its value as a solid blue color.



Resources 종류:  
Drawable

선택





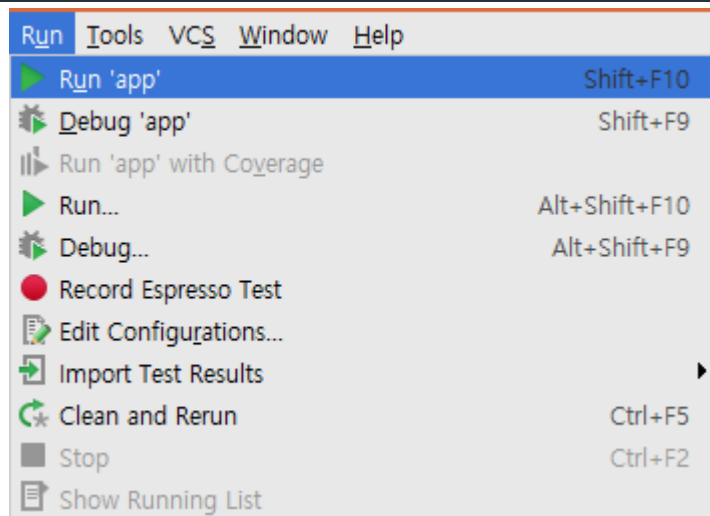
# • 화면 상하좌우에 여백주기

The screenshot shows the Android Studio IDE with the following components:

- Palette:** Shows the 'Images' category selected, with 'ImageButton', 'ImageView', and 'VideoView' visible.
- Component Tree:** Shows a 'LinearLayout (vertical)' containing:
  - textView - "@string/title01"
  - textView2 - "@string/artist01"
  - imageView2
  - textView3 - "@string/desc01"
- Design View:** A visual representation of the app layout. It features a blue header bar with the text '영화' (Movie), a title 'Starry Night', an artist name '고흐' (Van Gogh), and a painting of 'The Starry Night'. Below the painting is a paragraph of Korean text. The bottom of the screen has a black navigation bar with three icons.
- Properties Panel:** Shows the properties of the selected 'imageView2' widget. The 'Layout\_Margin' property is highlighted with an orange box and set to '5sp'.

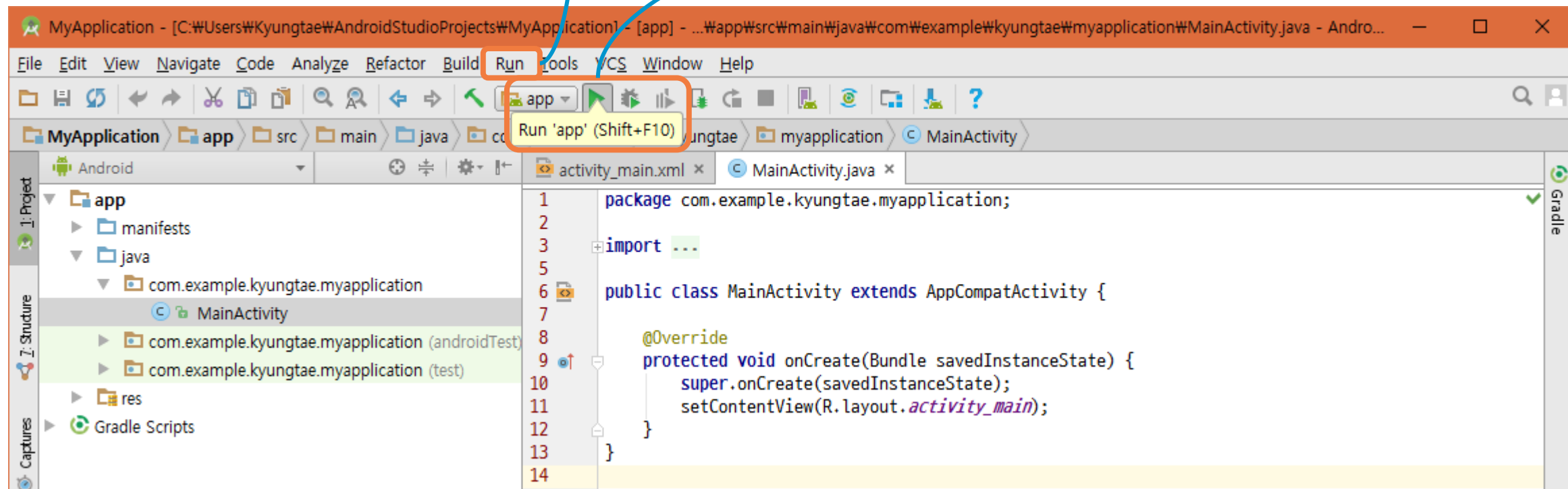
# Step 3. 프로젝트 실행

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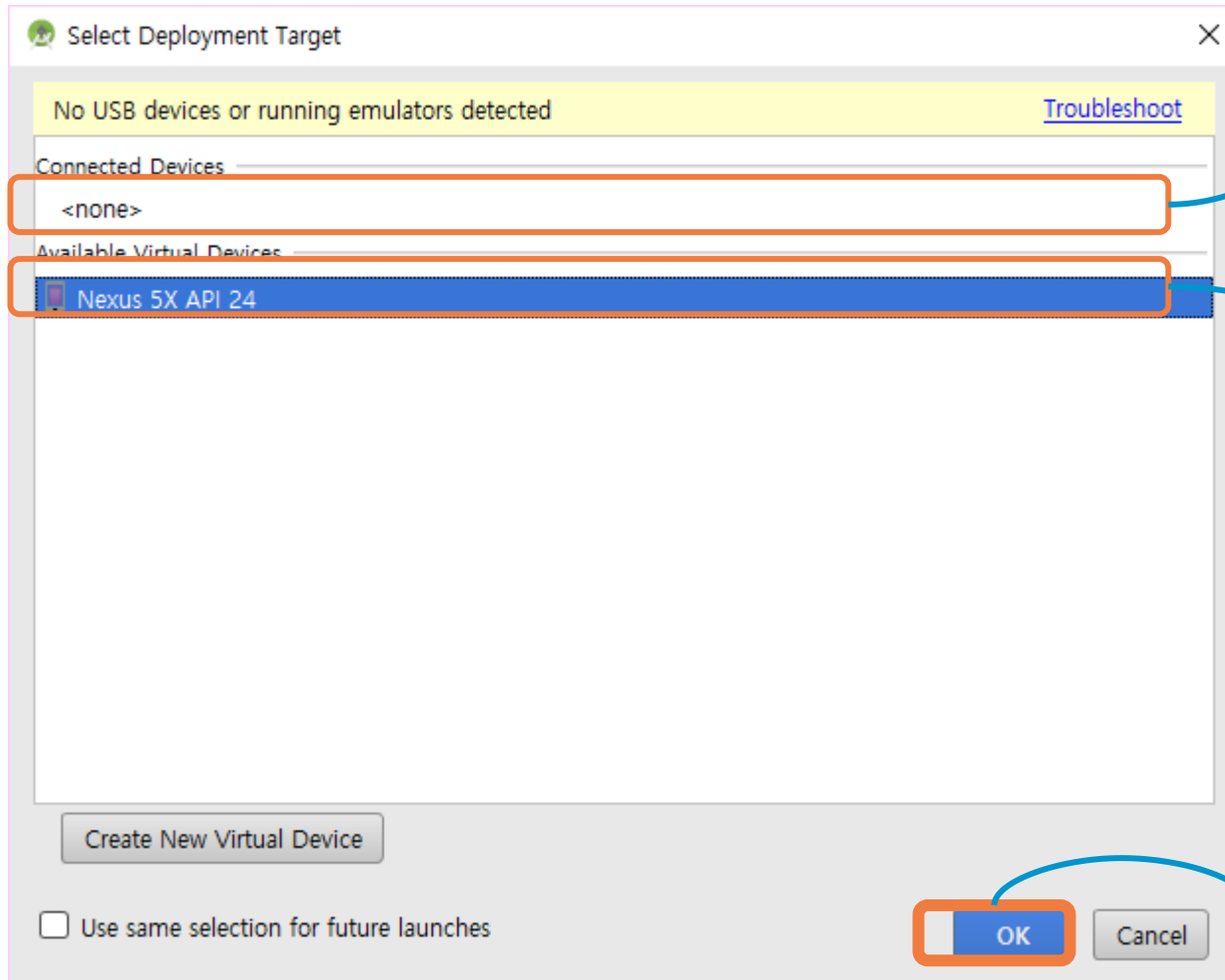


Run → Run 'app' 메뉴 클릭

앱 실행 아이콘 클릭



## • AVD 장비 선택하기



데이터 케이블로 연결된  
스마트폰

AVD

스마트폰 또는 AVD를 선택하고  
'OK' 버튼을 클릭

# O utputs



빈센트 반 고흐의 대표작 중 하나로, 그가 고갱과 다툰 뒤 자신의 귀를 자른 사건 이후 생레미의 양원에 있을 때 그린 것이다. 고흐에게 밤하늘은 무한함을 표현하는 대상이었다. 비연속적이고 동적인 터치로 그려진 하늘은 굽이치는 두꺼운 붓놀림으로 사이프러스와 연결되고, 그 아래의 마을은 대조적으로 고요하고 평온한 상태를 보여준다. 그는 병실 밖으로 내다보이는 밤 풍경을 상상과 결합시켜 그렸는데, 이는 자연에 대한 반 고흐의 내적이고 주관적인 표현을 구현하고 있다.

# Q & A question & answer

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