



Menu 구현





학습 목표

교육 목표

- ❖ Menu
- ❖ Options Menu
 - ◆ Icon Menu
 - ◆ Expanded Menu
- ❖ Context Menu



Navigation voice



Traffic view



Street View





Menu (1)

Menu

❖ 기능

- ◆ Activity에 표시할 메뉴를 나타내는 기능

❖ 종류

◆ Options menu

- Shortcut, item icon을 지원하지 않음

◆ Context menu

- Item check mark 지원하지 않음
- Condensed title 지원
- Expanded menus 지원

◆ Sub menu

- item icon을 지원하지 않음

public interface

Menu

android.view.Menu

► Known Indirect Subclasses
ContextMenu, SubMenu





Menu (2)

Constants

Constants		
int	<code>CATEGORY_ALTERNATIVE</code>	Category code for the order integer for items/groups that are alternative actions on the data that is currently displayed -- or/add this with your base value.
int	<code>CATEGORY_CONTAINER</code>	Category code for the order integer for items/groups that are part of a container -- or/add this with your base value.
int	<code>CATEGORY_SECONDARY</code>	Category code for the order integer for items/groups that are user-supplied secondary (infrequently used) options -- or/add this with your base value.
int	<code>CATEGORY_SYSTEM</code>	Category code for the order integer for items/groups that are provided by the system -- or/add this with your base value.
int	<code>FIRST</code>	First value for group and item identifier integers.
int	<code>FLAG_ALWAYS_PERFORM_CLOSE</code>	Flag for <code>performShortcut(int, KeyEvent, int)</code> : if set, always close the menu after executing the shortcut.
int	<code>FLAG_APPEND_TO_GROUP</code>	Flag for <code>addIntentOptions(int, int, int, ComponentName, Intent[], Intent, int, MenuItem[])</code> : if set, do not automatically remove any existing menu items in the same group.
int	<code>FLAG_PERFORM_NO_CLOSE</code>	Flag for <code>performShortcut(int, KeyEvent, int)</code> : if set, do not close the menu after executing the shortcut.
int	<code>NONE</code>	Value to use for group and item identifier integers when you don't care about them.





Menu (3)

Method

```
public abstract MenuItem add (int titleRes)
```

Add a new item to the menu. This item displays the given title for its label.

Parameters

titleRes Resource identifier of title string.

Returns

The newly added menu item.

Public Methods	
abstract MenuItem	<code>add (int titleRes)</code> Add a new item to the menu.
abstract MenuItem	<code>add (int groupId, int itemId, int order, CharSequence title)</code> Add a new item to the menu.
abstract MenuItem	<code>add (int groupId, int itemId, int order, int titleRes)</code> Variation on <code>add (int, int, int, CharSequence)</code> that takes a string resource identifier instead of the string itself.
abstract MenuItem	<code>add (CharSequence title)</code> Add a new item to the menu.
abstract int	<code>addIntentOptions (int groupId, int itemId, int order, ComponentName caller, Intent[] specifics, Intent intent, int flags, MenuItem[] outSpecificItems)</code> Add a group of menu items corresponding to actions that can be performed for a particular Intent.
abstract SubMenu	<code>addSubMenu (int titleRes)</code> Add a new sub-menu to the menu.
abstract SubMenu	<code>addSubMenu (int groupId, int itemId, int order, int titleRes)</code> Variation on <code>addSubMenu (int, int, int, CharSequence)</code> that takes a string resource identifier for the title instead of the string itself.
abstract SubMenu	<code>addSubMenu (CharSequence title)</code> Add a new sub-menu to the menu.
abstract SubMenu	<code>addSubMenu (int groupId, int itemId, int order, CharSequence title)</code> Add a new sub-menu to the menu.
abstract void	<code>clear ()</code> Remove all existing items from the menu, leaving it empty as if it had just been created.
abstract void	<code>close ()</code> Closes the menu, if open.





Menu (4)

abstract MenuItem	<code>findItem (int id)</code> Return the menu item with a particular identifier.
abstract MenuItem	<code>getItem (int index)</code> Gets the menu item at the given index.
abstract boolean	<code>hasVisibleItems ()</code> Return whether the menu currently has item items that are visible.
abstract boolean	<code>isShortcutKey (int keyCode, KeyEvent event)</code> Is a keypress one of the defined shortcut keys for this window.
abstract boolean	<code>performIdentifierAction (int id, int flags)</code> Execute the menu item action associated with the given menu identifier.
abstract boolean	<code>performShortcut (int keyCode, KeyEvent event, int flags)</code> Execute the menu item action associated with the given shortcut character.
abstract void	<code>removeGroup (int groupId)</code> Remove all items in the given group.
abstract void	<code>removeItem (int id)</code> Remove the item with the given identifier.
abstract void	<code>setGroupCheckable (int group, boolean checkable, boolean exclusive)</code> Control whether a particular group of items can show a check mark.
abstract void	<code>setGroupEnabled (int group, boolean enabled)</code> Enable or disable all menu items that are in the given group.
abstract void	<code>setGroupVisible (int group, boolean visible)</code> Show or hide all menu items that are in the given group.
abstract void	<code>setQwertyMode (boolean isQwerty)</code> Control whether the menu should be running in qwerty mode (alphabetic shortcuts) or 12-key mode (numeric shortcuts).
abstract int	<code>size ()</code> Get the number of items in the menu.





Options Menu (1)

Options Menu

❖ 기능

- ◆ 현재 실행 중인 Activity를 위한 Menu (Menu button click시 나타남)

❖ onCreateOptionsMenu (Menu menu)

- ◆ option menu 호출 시 한번 실행

public boolean onCreateOptionsMenu (Menu menu)

parameter	시스템에 의해 생성된 menu 객체
return	true / false = 화면 출력 / 화면 출력 안됨

❖ onPrepareOptionsMenu (Menu menu)

- ◆ option menu 화면 출력 전에 항상 호출

public boolean onPrepareOptionsMenu (Menu menu)

parameter	이 메소드를 호출한 Activity의 option menu
return	true / false = 화면 출력 / 화면 출력 안됨

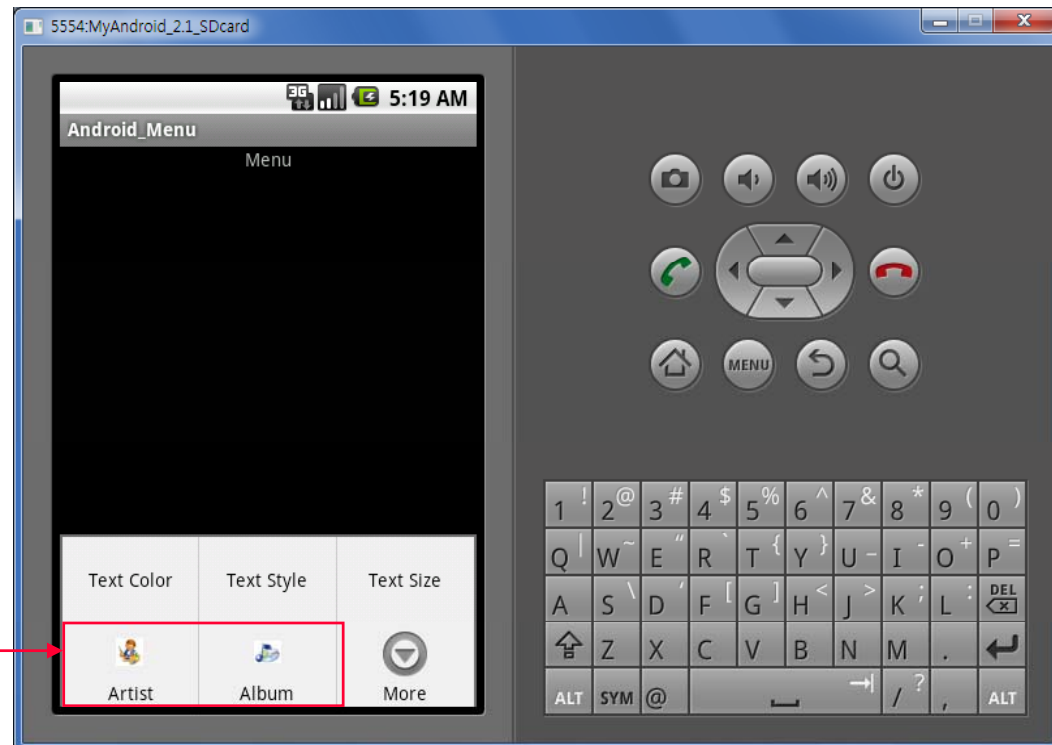




Options Menu (2)

❖ Icon Menu

- ◆ Android screen 하단에서 상층
- ◆ 최대 6 개까지의 text + icon(옵션) 형태 메뉴 표시
- ◆ 마지막 6번째 icon menu 버튼은 more로 표시



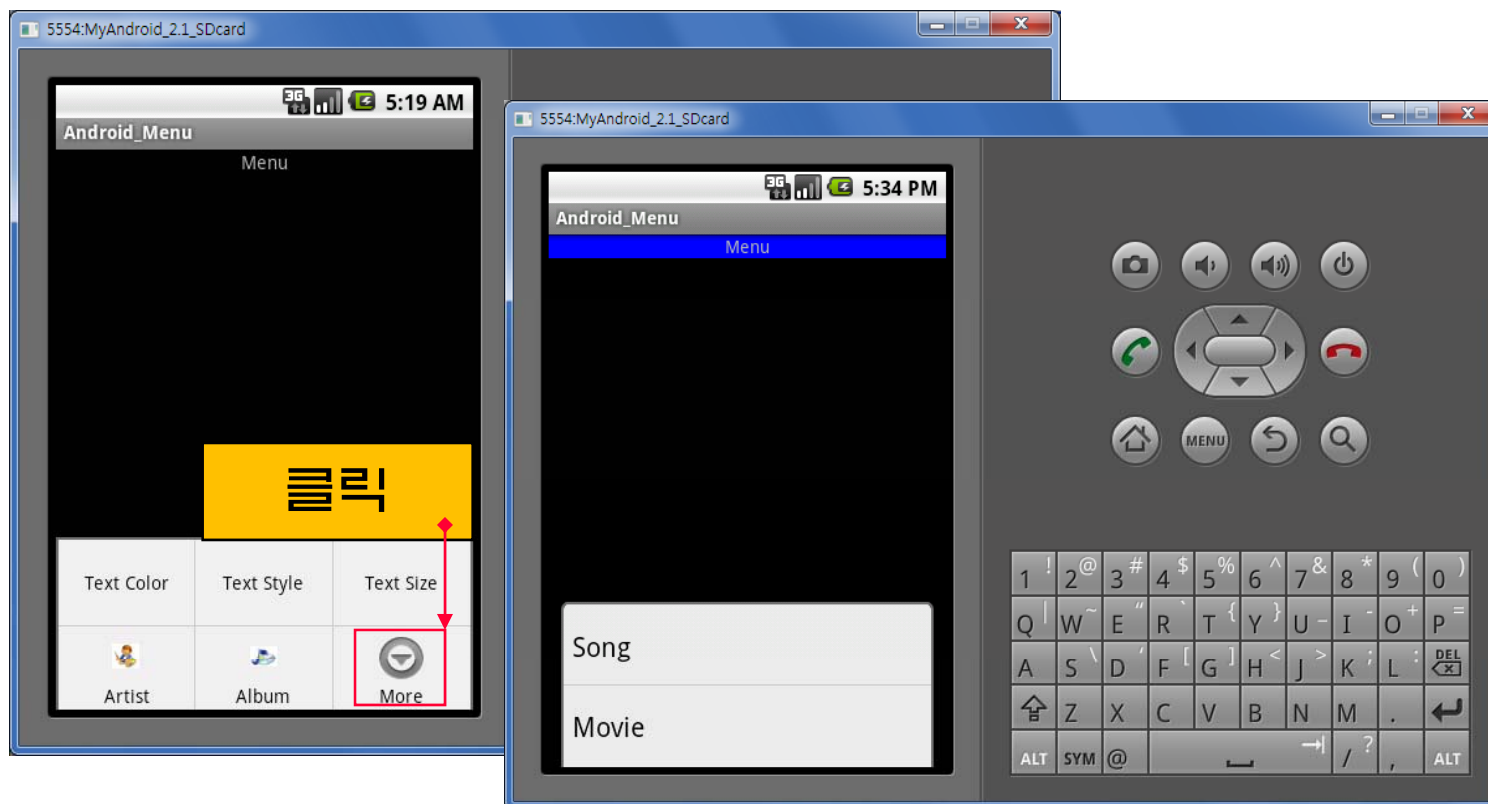
Icon Menu



Options Menu (3)

❖ Expanded Menu

- ◆ option menu의 총 항목 개수가 6개
- ◆ 마지막 6번째 icon menu 버튼이 more로 표시되었을 때 이를 사용하면 출력되는 text기반 list 형식의 메뉴





Context Menu (1)

Context Menu

❖ 기능

◆ Activity 내부의 view가 제공하는 text기반의 list 메뉴

❖ registerForContextMenu (View view)

◆ Context Menu 제공 view임을 Activity에 알리는 메소드

```
public void registerForContextMenu (View view)
```

parameter

Context Menu 제공 view 지정

❖ onCreateContextMenu (Menu menu)

◆ option menu 화면 출력 전에 항상 호출

```
public void onCreateContextMenu (ContextMenu menu,  
                                View v, ContextMenu.ContextMenuInfo menuInfo)
```

parameters

- menu : 시스템에 의해 생성된 Context Menu 객체
- v : Context Menu를 소유한 view 인스턴스
- menuInfo : context menu가 표현할 menu item에 대한 추가 정보 전달 기능

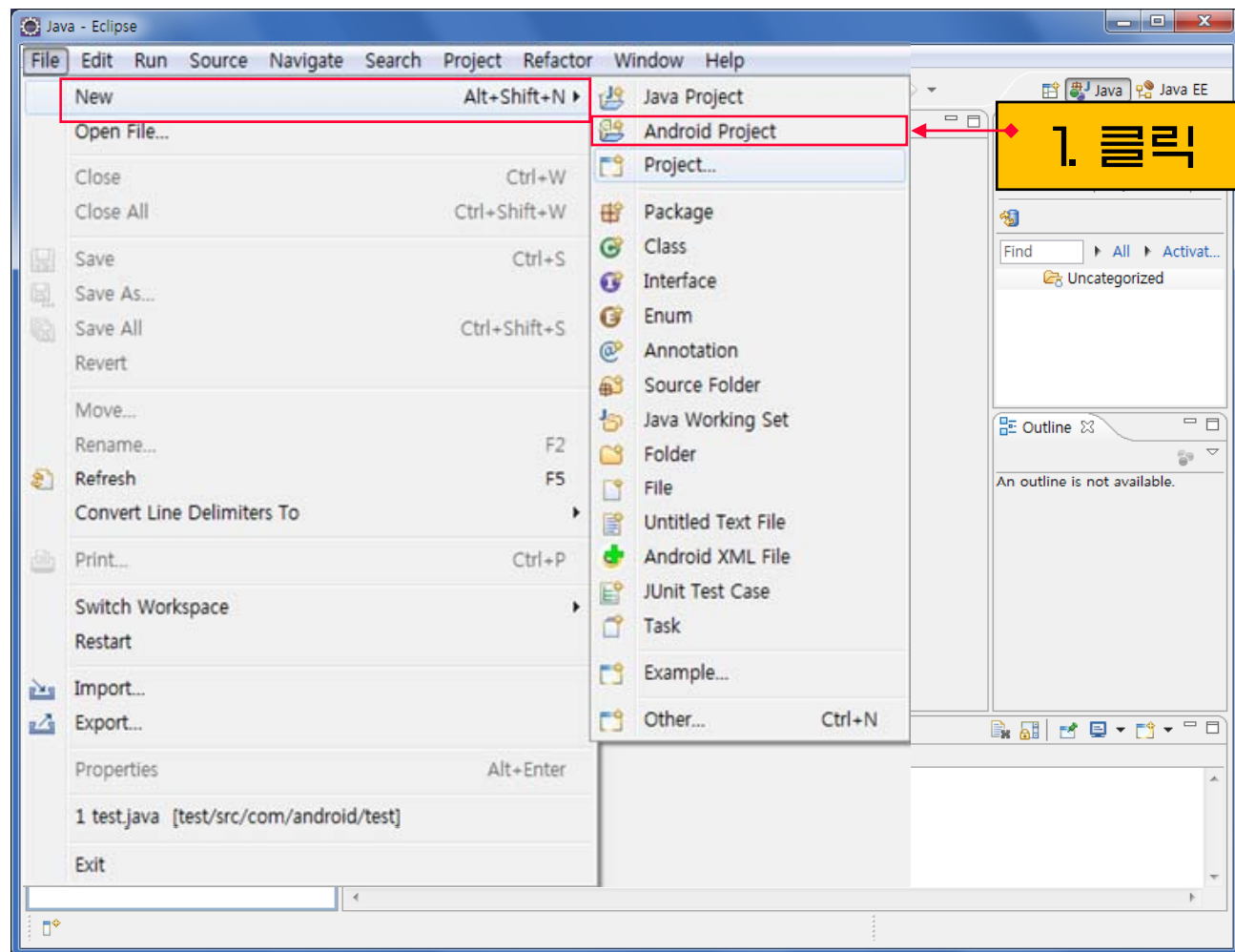




Menu 구현 (1)

■ Android 프로젝트 생성

❖ 프로젝트 명 : Android_Menu





Menu 구현 (2)

New Android Project

Creates a new Android Project resource.

Project name:

Contents

☒ Create new project in workspace
☐ Create project from existing source
☒ Use default location

Location:

☐ Create project from existing sample

Samples:

Build Target

Target Name	Vendor	Platform	API ...
<input type="checkbox"/> Android 1.1	Android Open Source Project	1.1	2
<input type="checkbox"/> Android 2.0.1	Android Open Source Project	2.0.1	6
<input checked="" type="checkbox"/> Android 2.1	Android Open Source Project	2.1	7
<input type="checkbox"/> Google APIs	Google Inc.	2.0.1	6
<input type="checkbox"/> Google APIs	Google Inc.	2.1	7

Standard Android platform 2.1

Properties

Application name:

Package name:

☒ Create Activity:

Min SDK Version:

2. Android_Menu 입력

3. 클릭

4. Android_Menu 입력

5. com.inhatec.android_Menu 입력

6. Android_Menu 입력

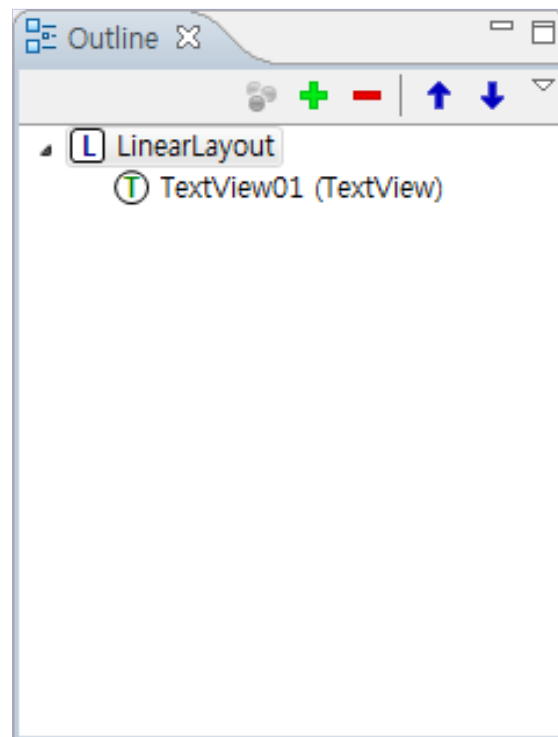
7. 클릭



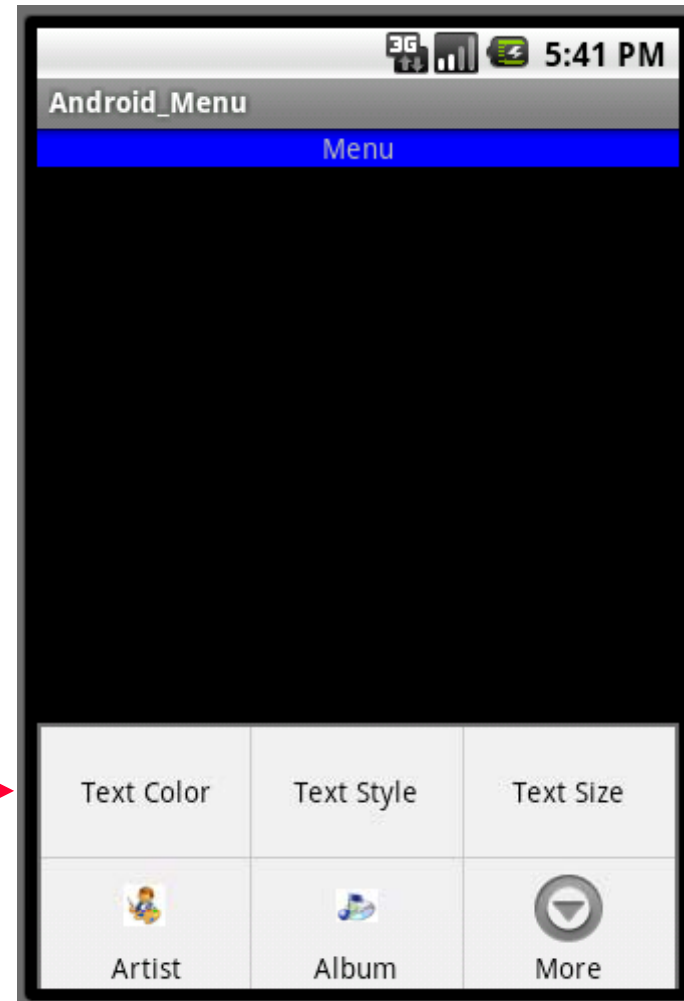


Menu 구현 (3)

UI 설계



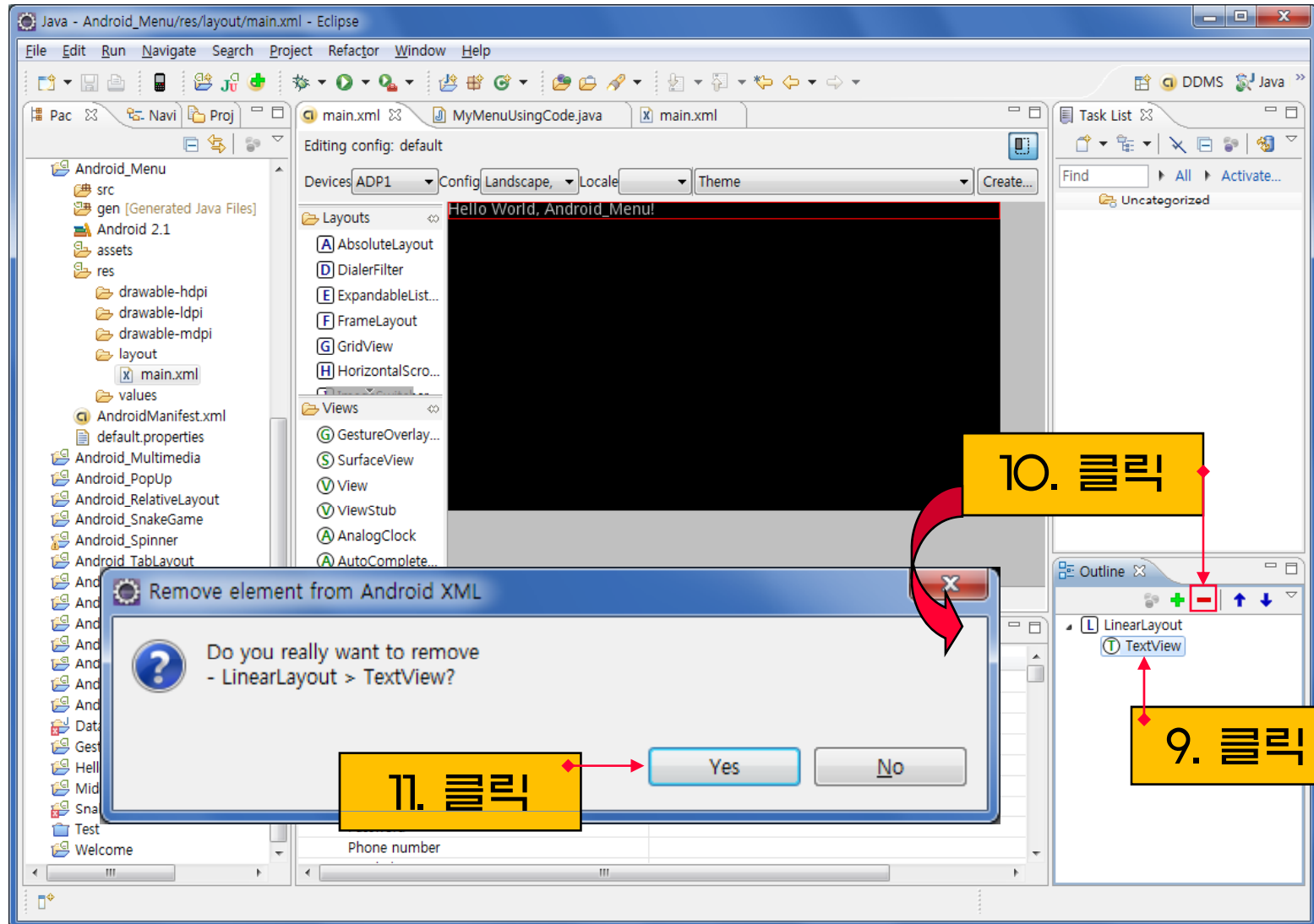
8. UI 설계 및 속성 지정





Menu 구현 (4)

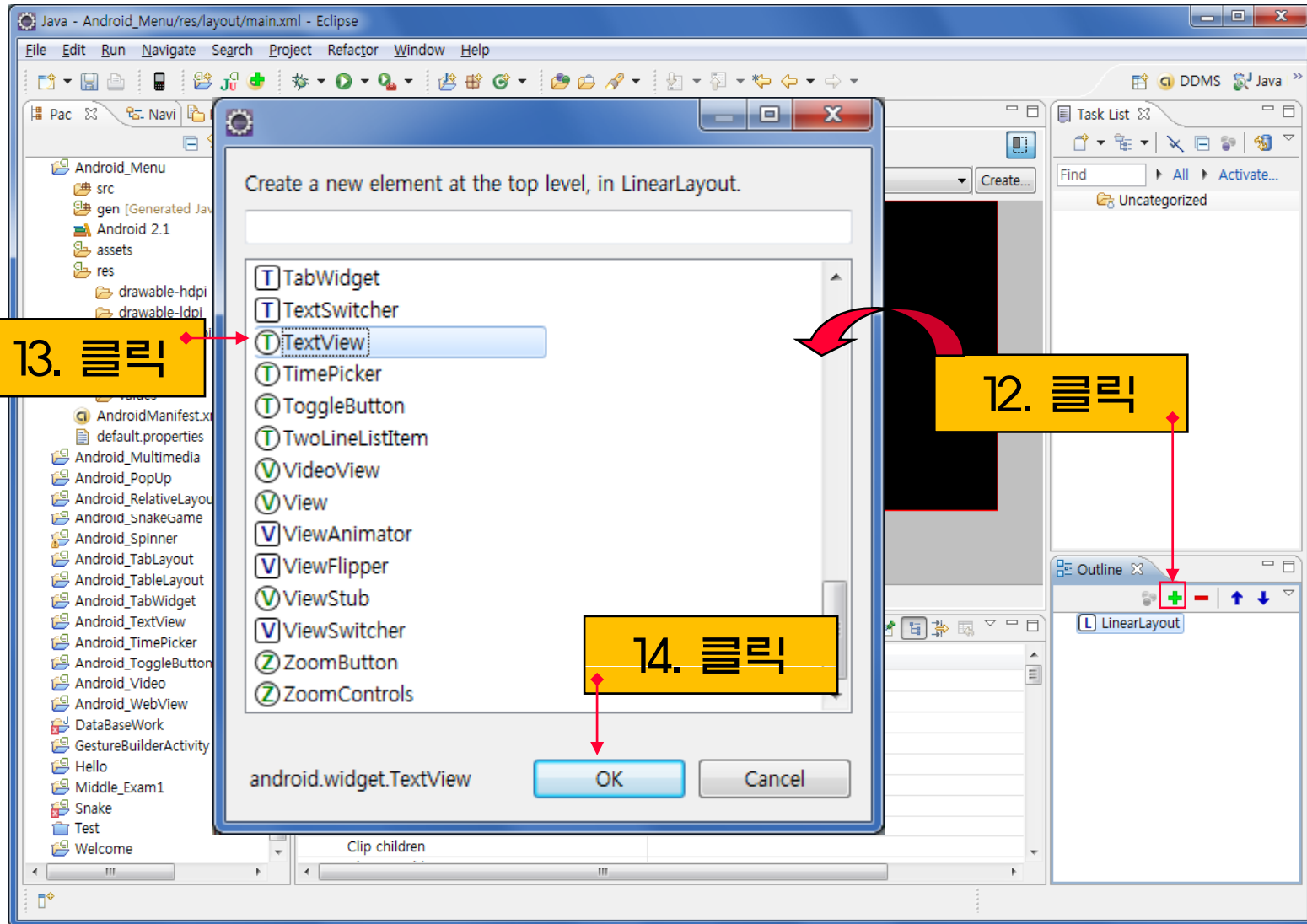
❖ TextView 삭제





Menu 구현 (5)

❖ TextView 추가





Menu 구현 (6)

❖ TextView 속성 지정

컨트롤	속성 지정
TextView	<ul style="list-style-type: none">• android:id="@+id/TextView01"• android:layout_width="fill_parent"• android:layout_height="wrap_content"• android:text="Menu"• android:gravity="center"• android:layout_gravity="center"





Menu 구현 (7)

❖ Main.xml

```
*main.xml
1<?xml version="1.0" encoding="utf-8"?>
2<LinearLayout
3    xmlns:android="http://schemas.android.com/apk/res/android"
4    android:orientation="vertical"
5    android:layout_width="fill_parent"
6    android:layout_height="fill_parent">
7
8    <TextView
9        android:id="@+id/TextView01"
10       android:layout_height="wrap_content"
11       android:text="Menu"
12       android:gravity="center"
13       android:layout_gravity="center"
14       android:layout_width="fill_parent">
15   </TextView>
16
17</LinearLayout>
```

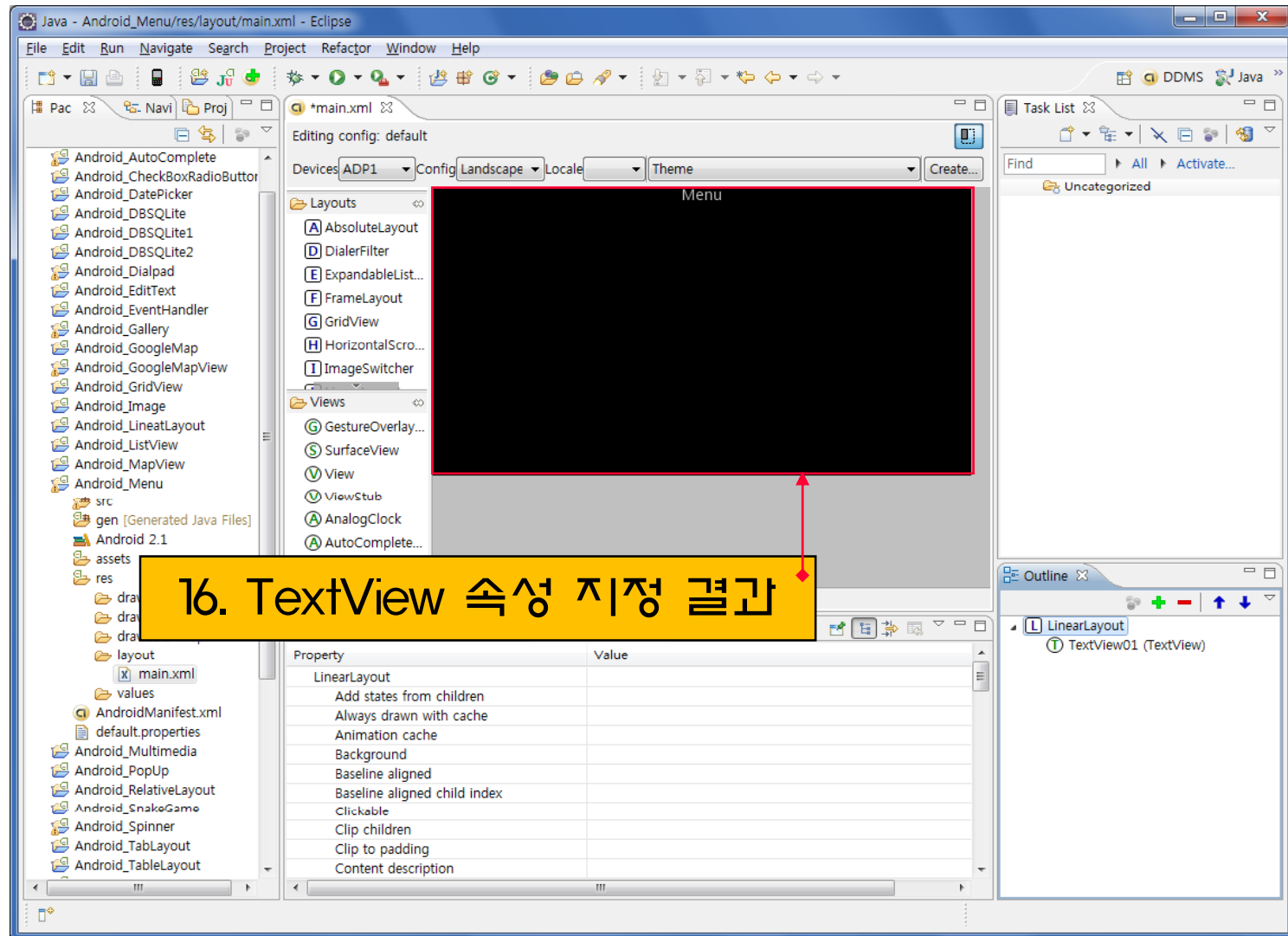
15. XML code 추가 확인





Menu 구현 (8)

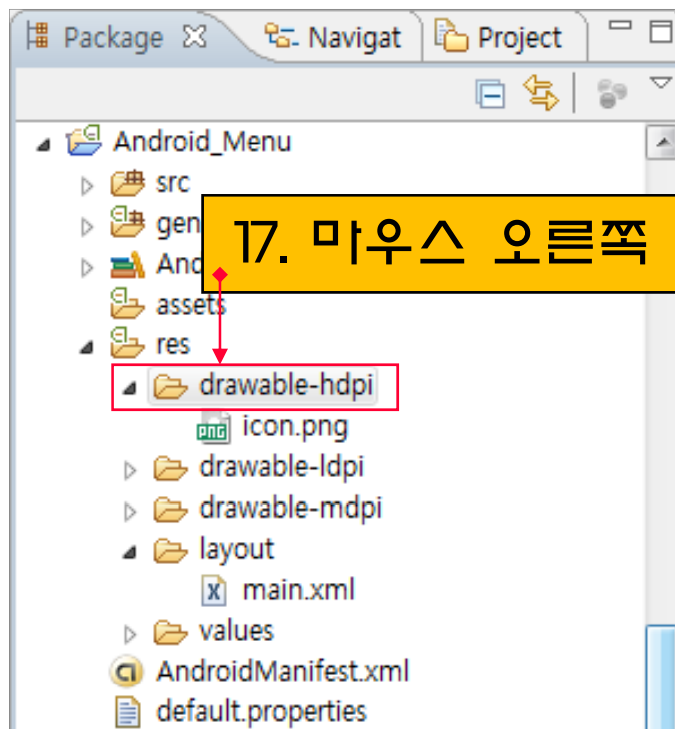
❖ TextView 속성 지정 결과



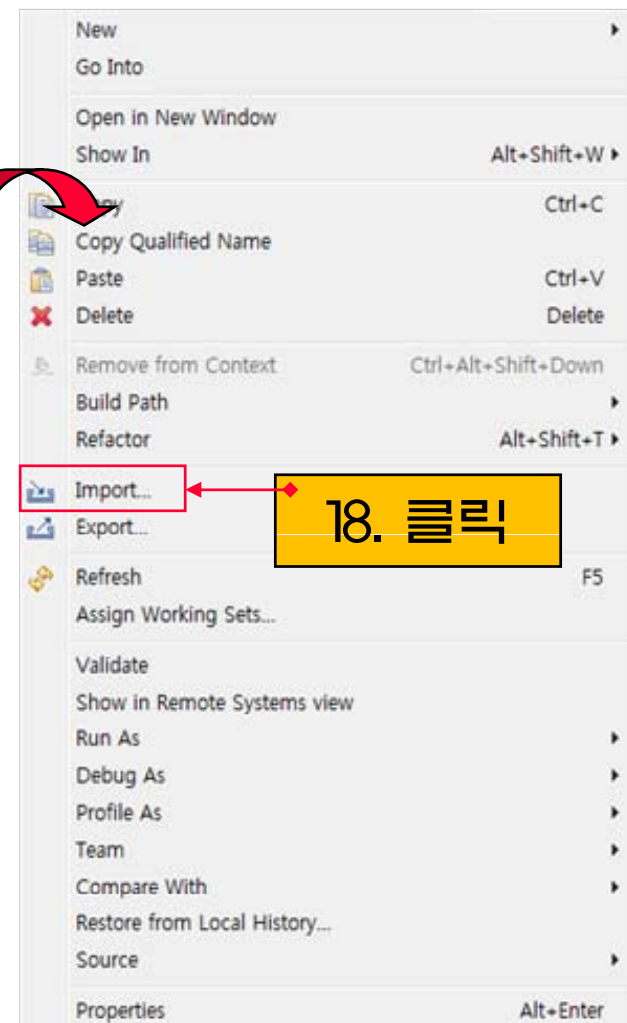


Menu 구현 (9)

❖ Image import



17. 마우스 오른쪽 버튼 클릭

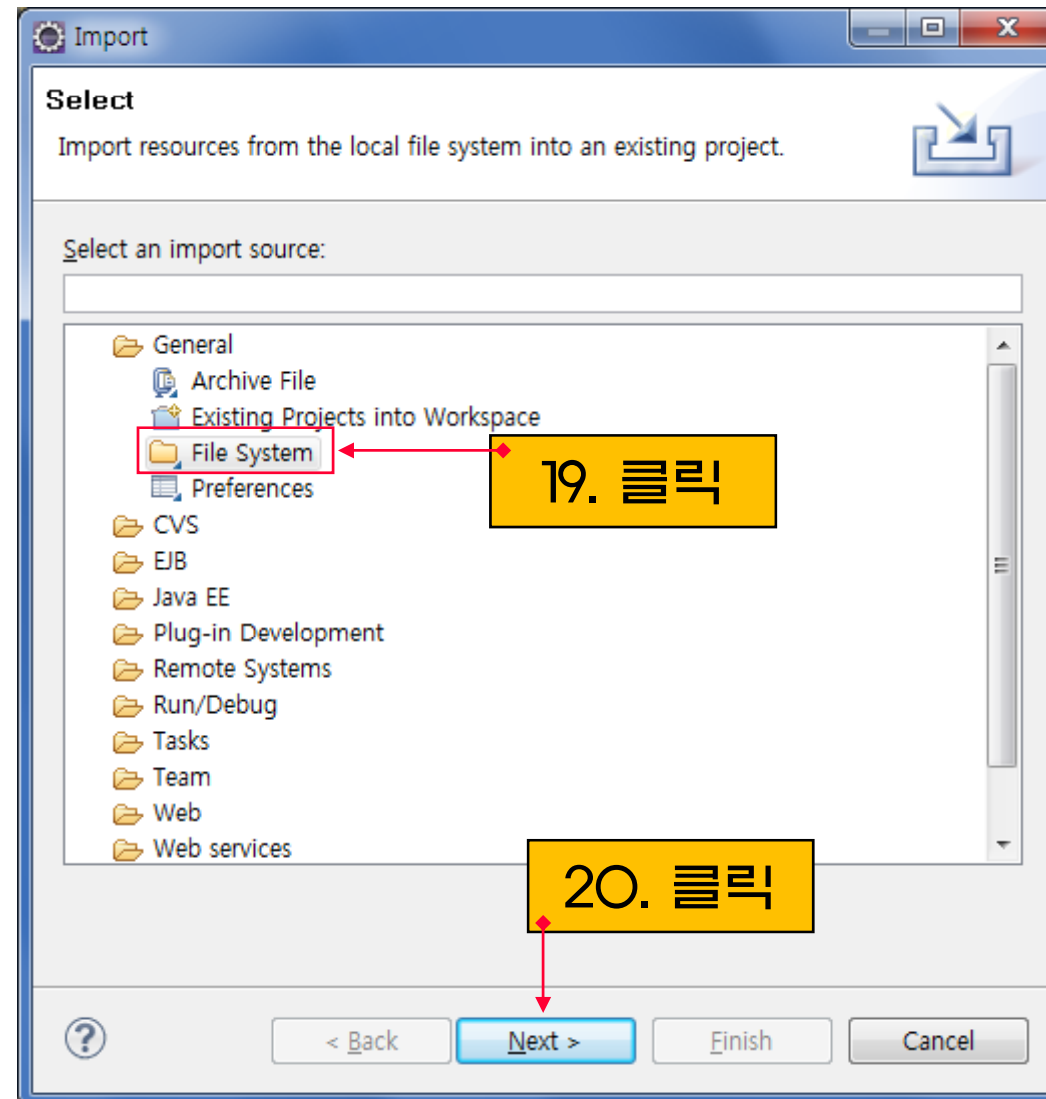


18. 클릭



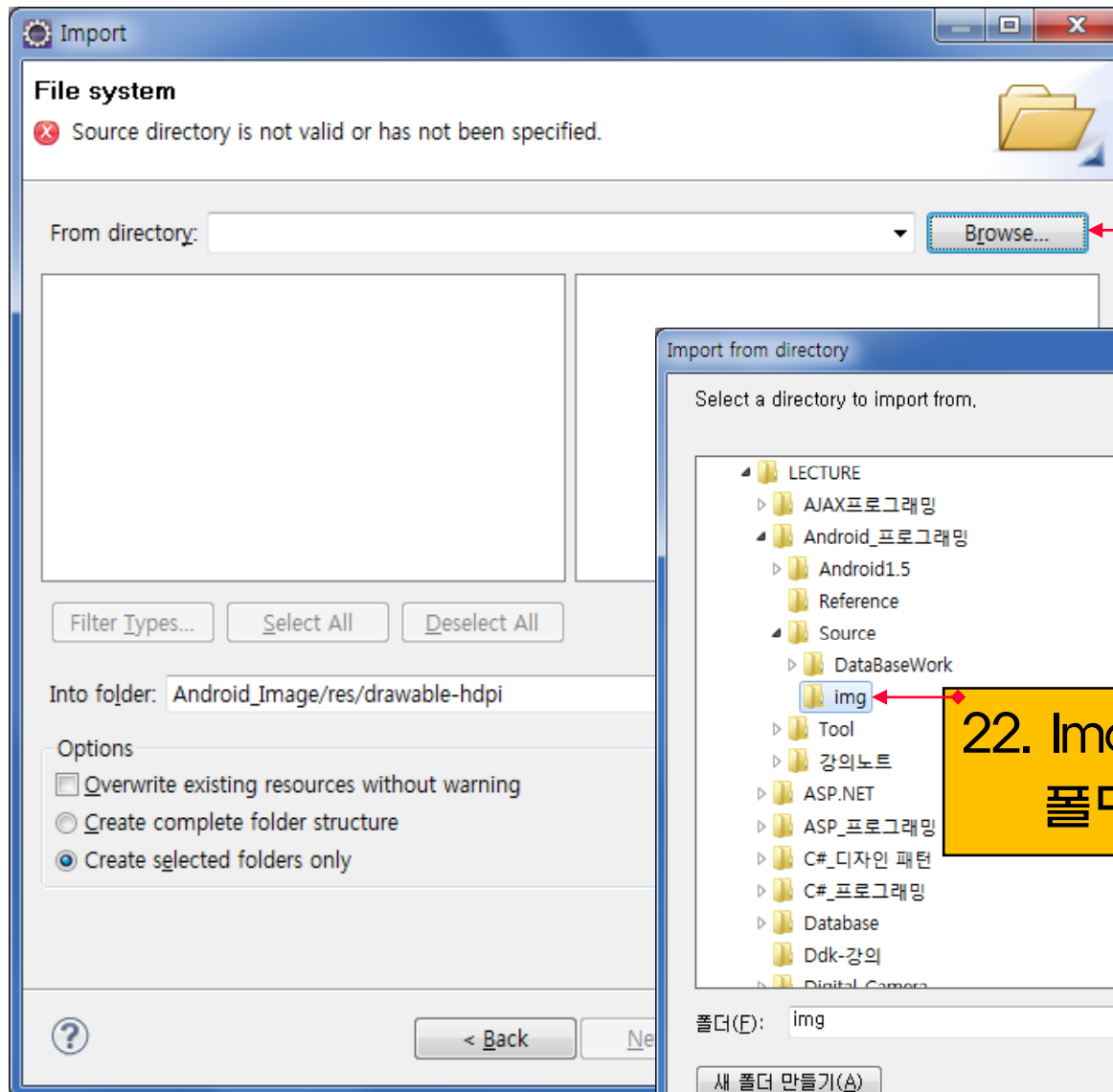


Menu 구현 (10)

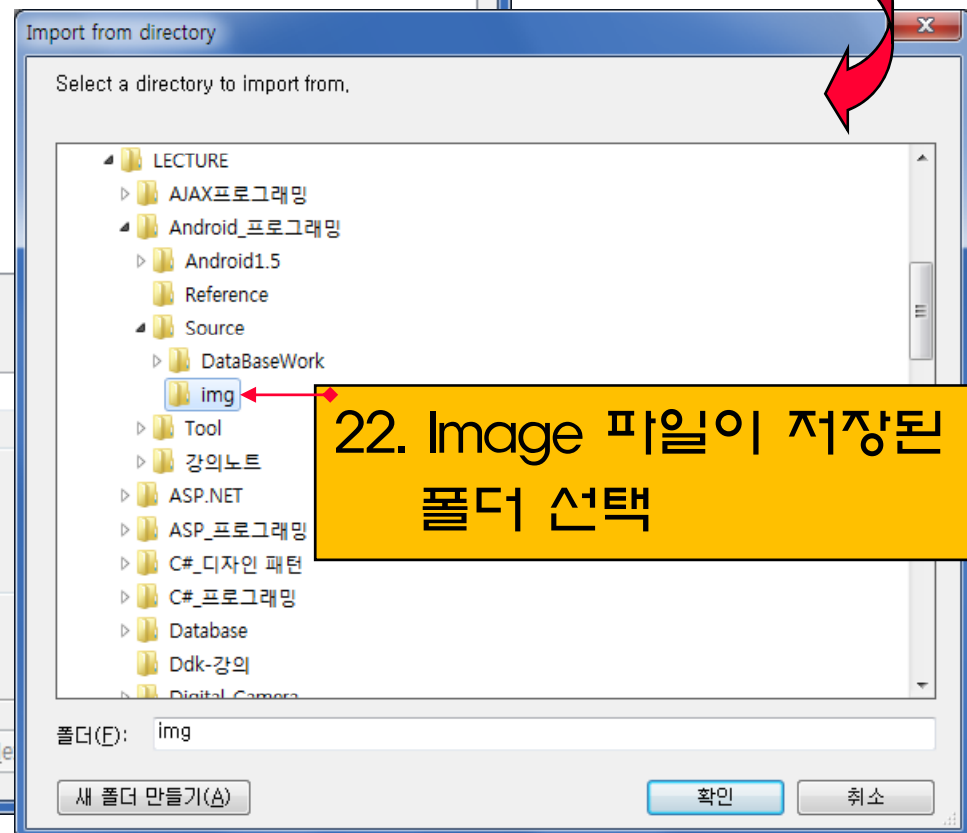




Menu 구현 (11)



21. 클릭



22. Image 파일이 저장된
폴더 선택





Menu 구현 (12)

❖ Image 파일 선택

◆ album.png



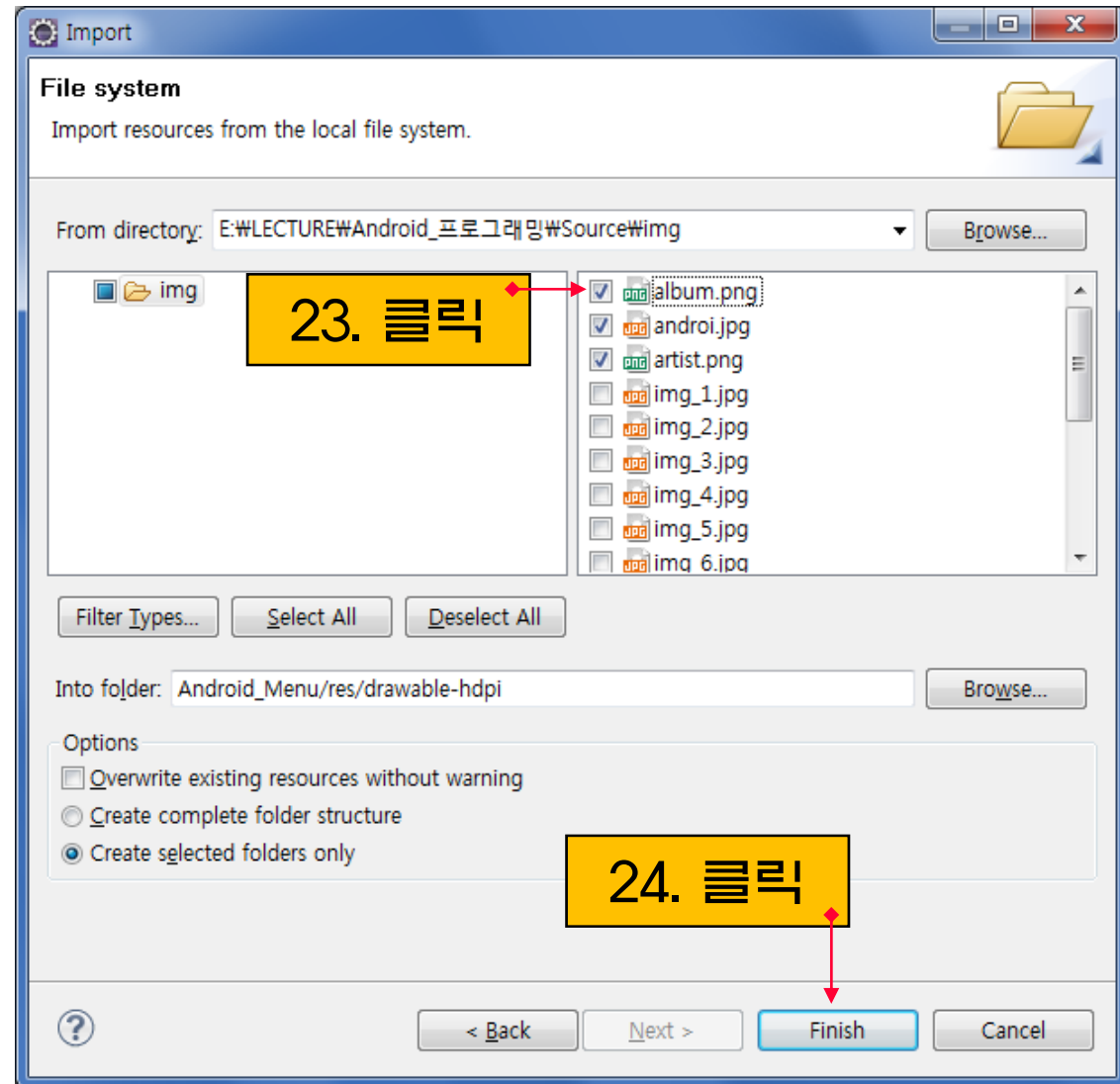
◆ Artist.png



◆ Song.png



◆ Androi.jpg





Menu 구현 (13)

❖ Image 파일 import 확인

◆ album.png



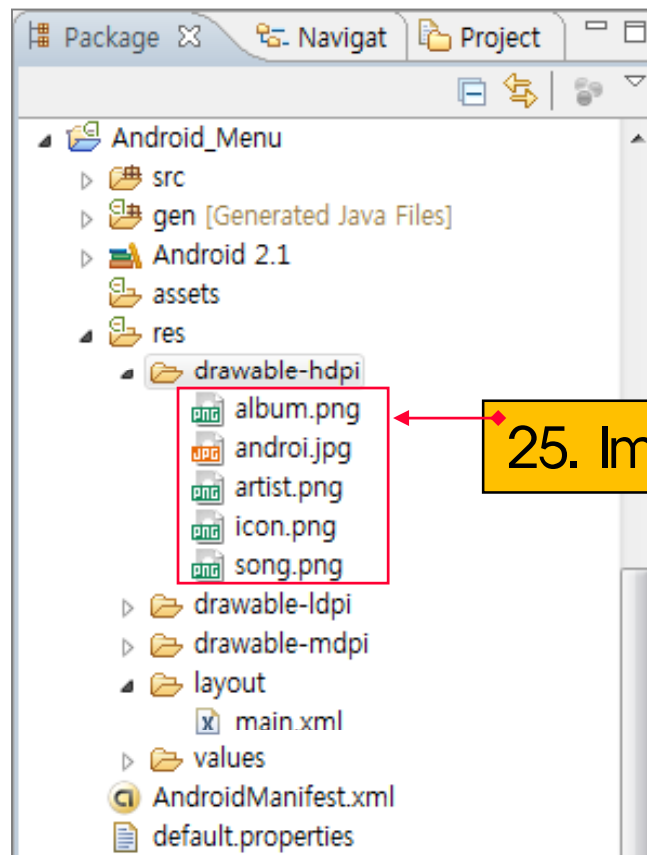
◆ Artist.png



◆ Song.png



◆ Androi.jpg



25. Image 파일 import 확인





Menu 구현 (14)

❖ R.java

```
R.java
1  /* AUTO-GENERATED FILE.  DO NOT MODIFY.
7
8  package com.inhatc.android_Menu;
9
10 public final class R {
11     public static final class attr {
12     }
13     public static final class drawable {
14         public static final int album=0x7f020000;
15         public static final int androi=0x7f020001;
16         public static final int artist=0x7f020002;
17         public static final int icon=0x7f020003;
18         public static final int song=0x7f020004;
19     }
20     public static final class id {
21         public static final int TextView01=0x7f050000;
22     }
23     public static final class layout {
24         public static final int main=0x7f030000;
25     }
26     public static final class string {
27         public static final int app_name=0x7f040001;
28         public static final int hello=0x7f040000;
29     }
30 }
```

26. drawable, id 클래스 변수 추가 확인





Menu 구현 (15)

❖ onCreate() Method 구현

```
*Android_Menu.java ✕
1 package com.inhatc.android_Menu;
2
3 import android.app.Activity;
4
5
6
7 public class Android_Menu extends Activity {
8     TextView objTxtView; //TextView 객체 선언
9
10    @Override
11    public void onCreate(Bundle savedInstanceState) {
12        super.onCreate(savedInstanceState);
13        setContentView(R.layout.main);
14
15        objTxtView = (TextView) findViewById(R.id.TextView01);
16
17        //Context menu 제공
18        registerForContextMenu(objTxtView);
19
20    }
21
22 }
```

27. Coding



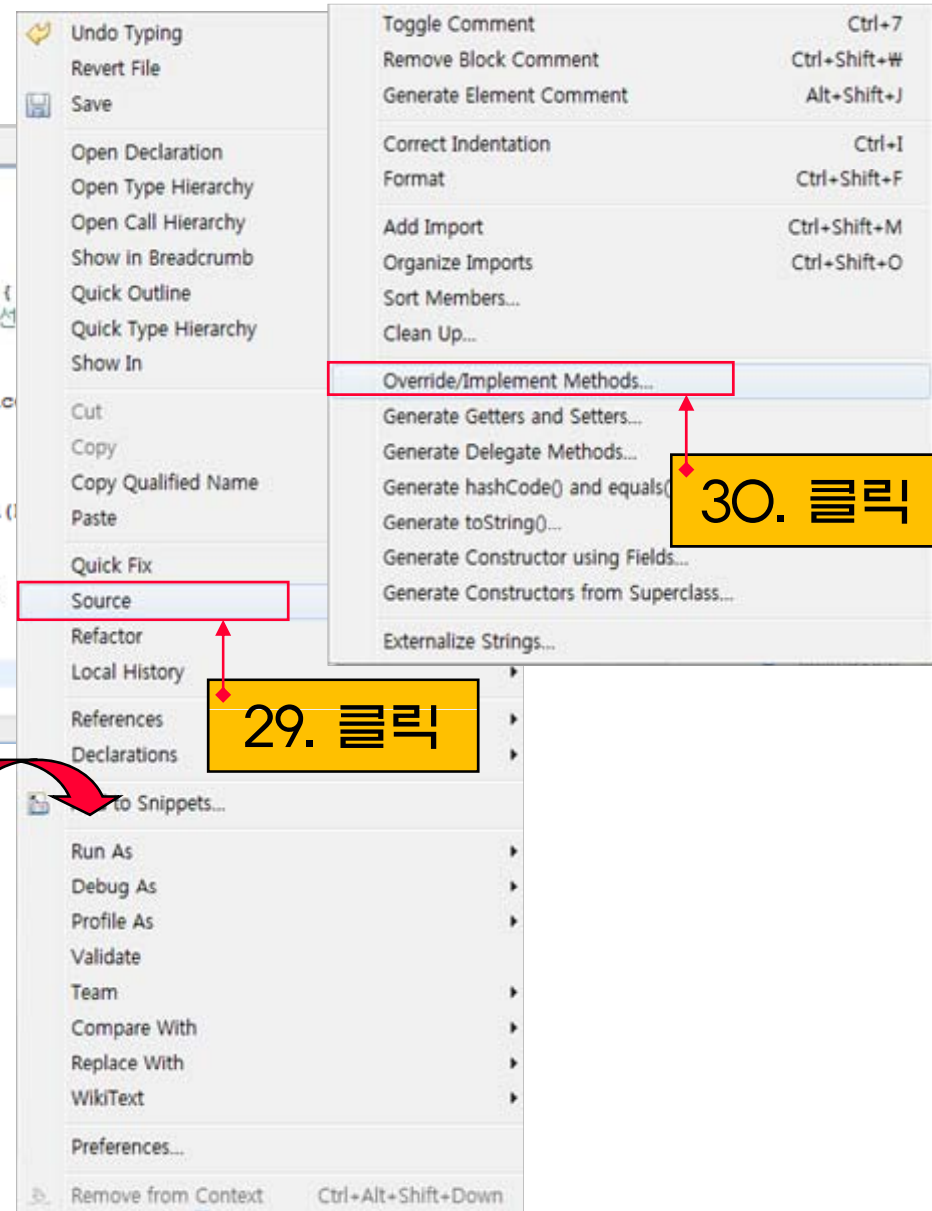


Menu 구현 (16)

❖ override Method 추가

```
1 package com.inhatc.android_Menu;
2
3 import android.app.Activity;
4
5
6
7 public class Android_Menu extends Activity {
8     TextView objTextView; //TextView 객체 선언
9
10    @Override
11    public void onCreate(Bundle savedInstanceState) {
12        super.onCreate(savedInstanceState);
13        setContentView(R.layout.main);
14
15        objTextView = (TextView)findViewById(R.id.textView1);
16
17        //Context menu 제공
18        registerForContextMenu(objTextView);
19
20    }
21
22 }
```

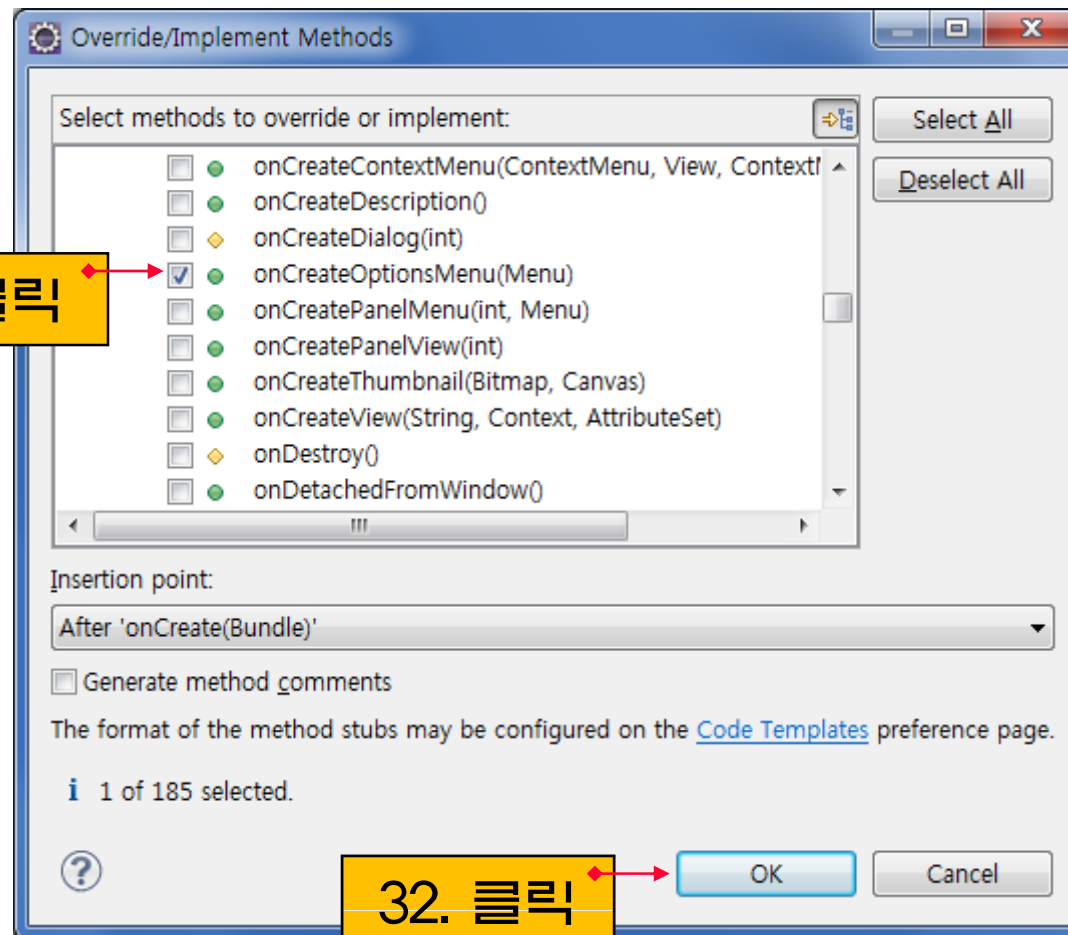
28. Cursor 위치에서
마우스 오른쪽 버튼 클릭





Menu 구현 (17)

❖ Override / Implement Methods 추가





Menu 구현 (18)

■ onCreateOptionsMenu() Method 구현

❖ Text

❖ Text + Icon

```
Android_Menu.java X
22
23 //Options Menu 생성 및 Item 생성
24 public boolean onCreateOptionsMenu(Menu menu) {
25     SubMenu mnuTextColor = menu.addSubMenu("Text Color");
26
27     SubMenu mnuTextStyle = menu.addSubMenu("Text Style");
28
29     SubMenu mnuTextSize = menu.addSubMenu("Text Size");
30
31     SubMenu mnuArtist = menu.addSubMenu("Artist");
32     mnuArtist.setIcon(R.drawable.artist);
33
34     SubMenu mnuAlbum = menu.addSubMenu("Album");
35     mnuAlbum.setIcon(R.drawable.album);
36
37     SubMenu mnuSong = menu.addSubMenu("Song");
38     mnuSong.setIcon(R.drawable.song);
39
40     SubMenu mnuMovie = menu.addSubMenu("Movie");
41
42     return super.onCreateOptionsMenu(menu);
43 }
44 }
```

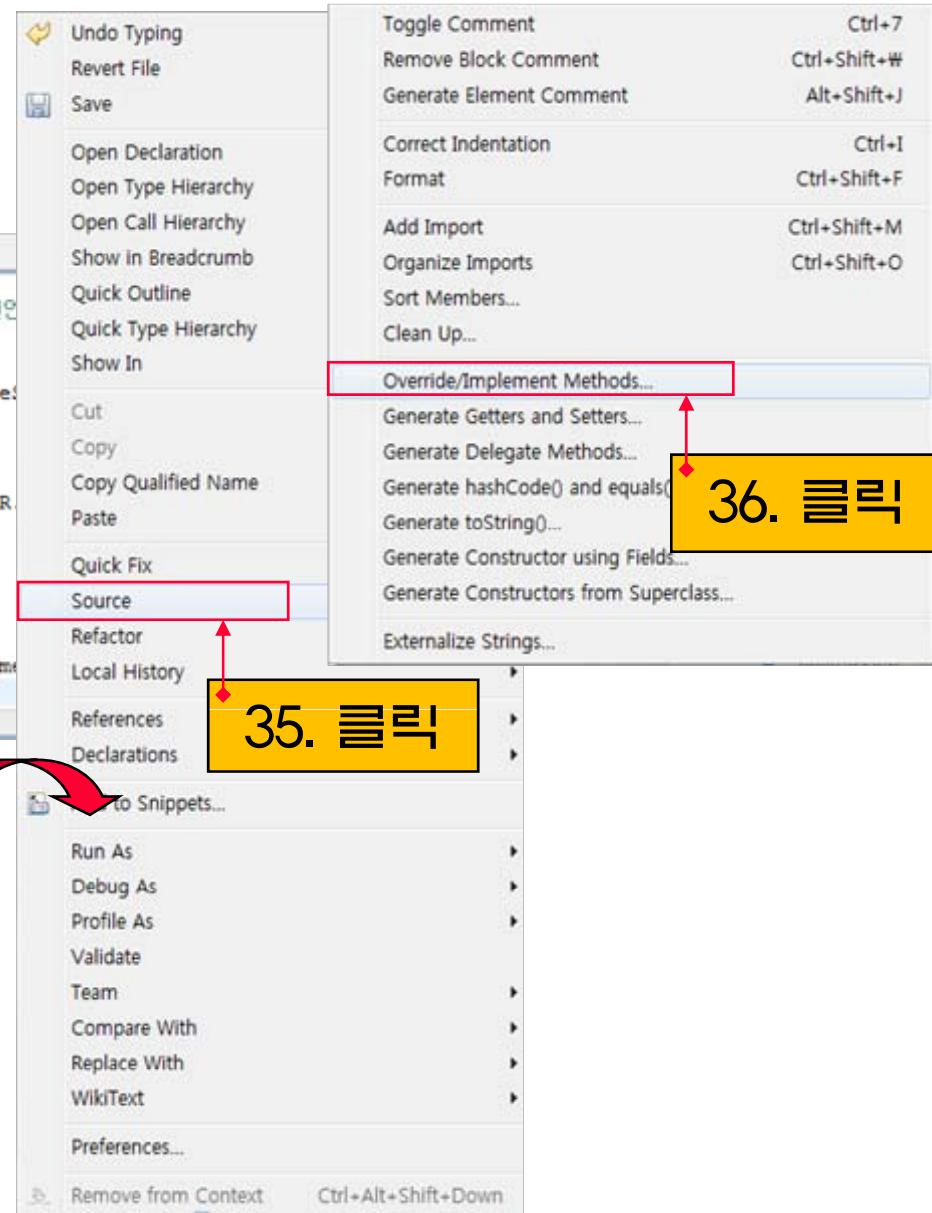
33. Coding



Menu 구현 (19)

❖ override Method 추가

```
36  
37 TextView objTxtView; //TextView 객체 선언  
38  
39  
40 @Override  
41 public void onCreate(Bundle savedInstanceState)  
42 {  
43     super.onCreate(savedInstanceState);  
44     setContentView(R.layout.main);  
45  
46     objTxtView = (TextView) findViewById(R.  
47  
48     //Context menu 제공  
49     registerForContextMenu(objTxtView);  
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```



34. Cursor 위치에서
마우스 오른쪽 버튼 클릭

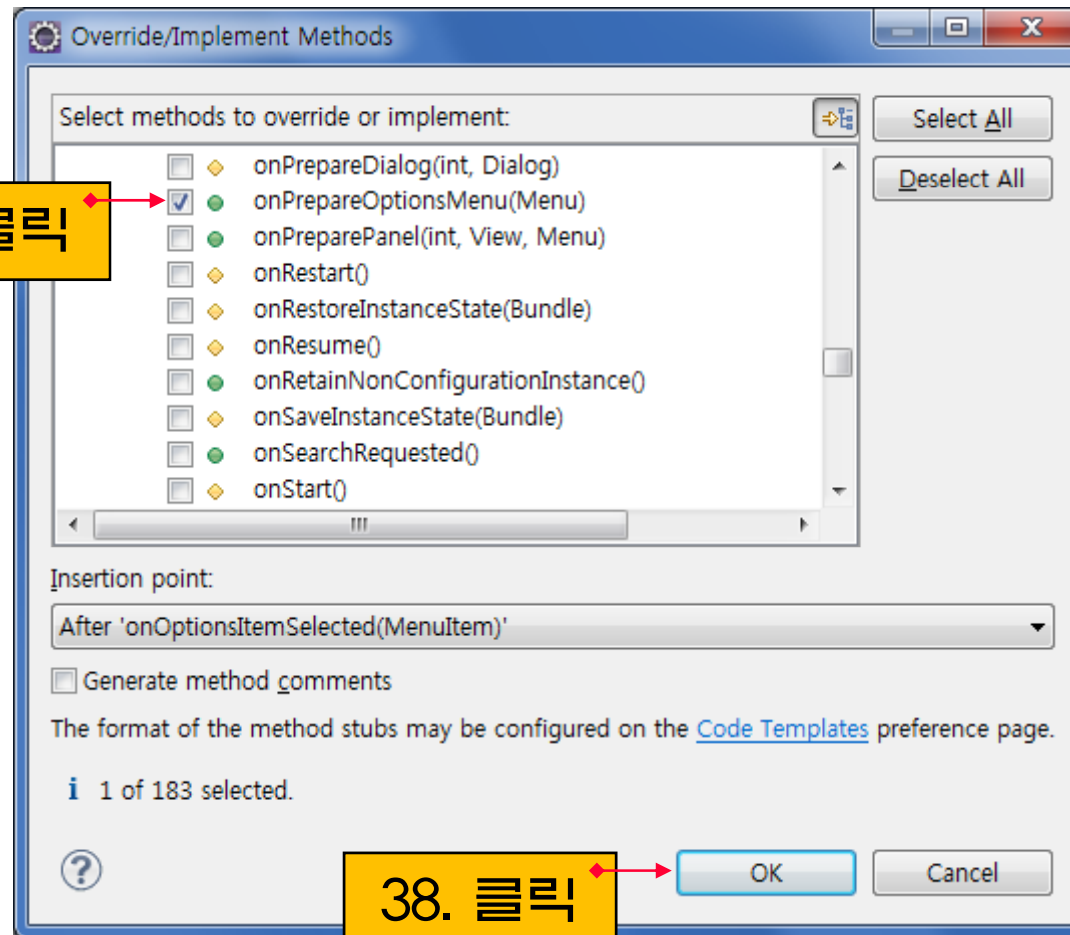
35. 클릭

36. 클릭



Menu 구현 (20)

❖ Override / Implement Methods 추가





Menu 구현 (21)

■ onPrepareOptionsMenu() Method 구현

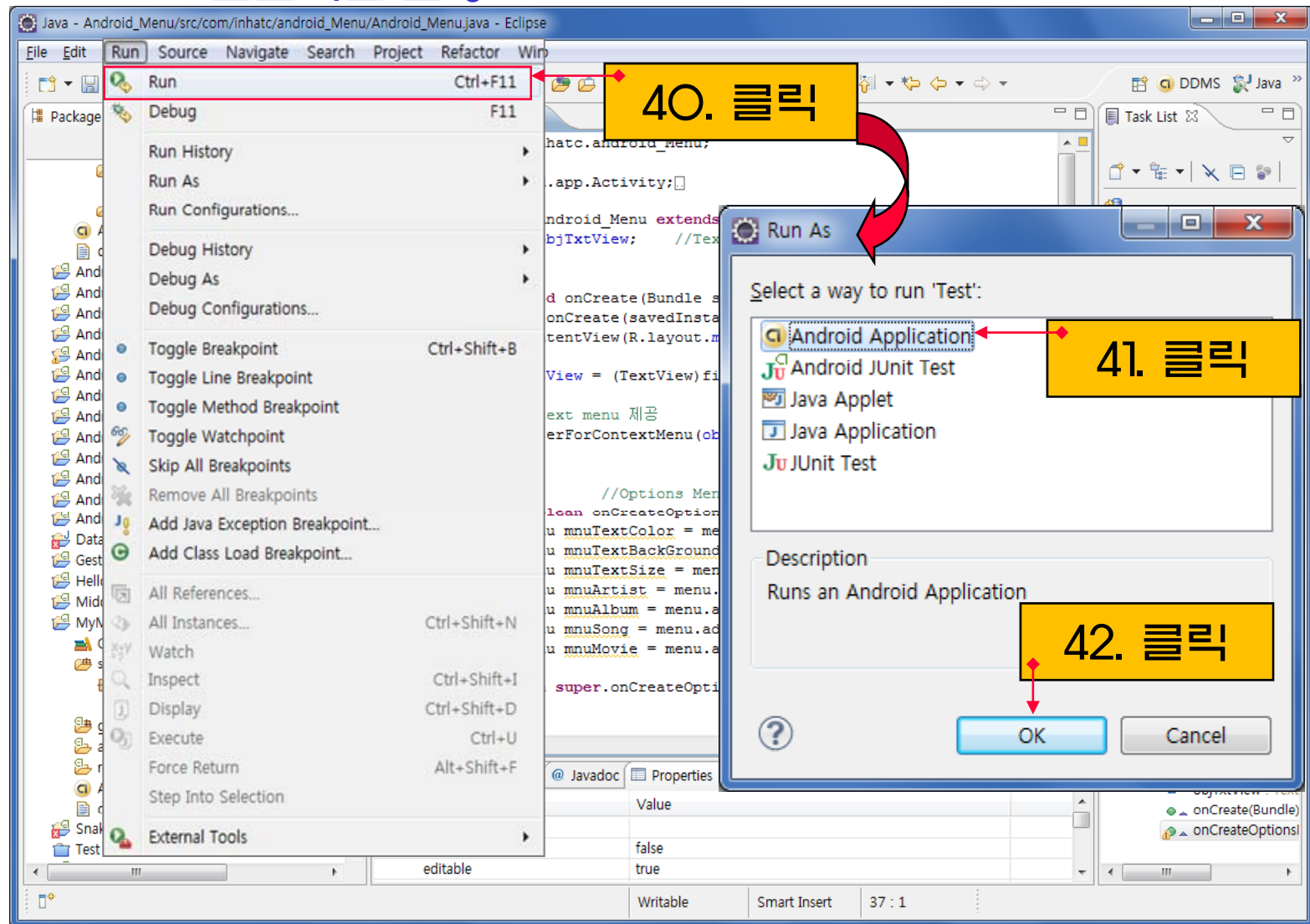
```
*Android_Menu.java X
36
37     TextView objTextView;    //TextView 객체 선언
38
39     @Override
40     public void onCreate(Bundle savedInstanceState) {
41         super.onCreate(savedInstanceState);
42         setContentView(R.layout.main);
43
44         objTextView = (TextView) findViewById(R.id.TextView01);
45
46         //Context menu 제공
47         registerForContextMenu(objTextView);
48     }
49
51     public boolean onCreateOptionsMenu(Menu menu) {
80
81     @Override    // Option menu 화면 출력전 호출
82     public boolean onPrepareOptionsMenu(Menu menu) {
83         // TODO Auto-generated method stub
84         return super.onPrepareOptionsMenu(menu);
85     }
```

39. Coding



Menu 구현 (22)

❖ Android 프로젝트 실행





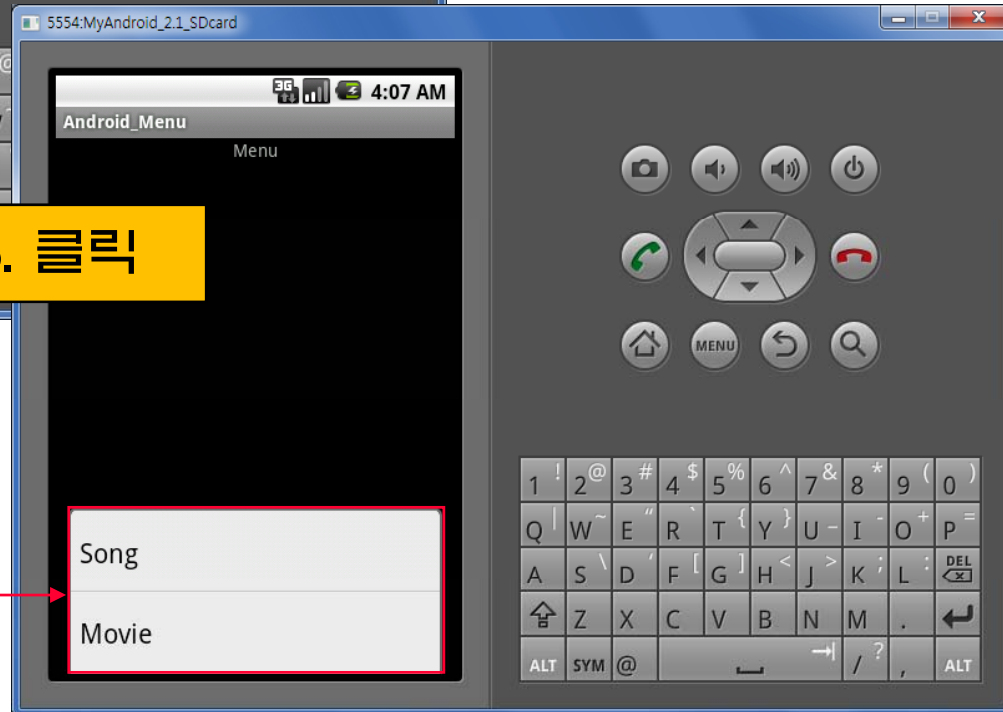
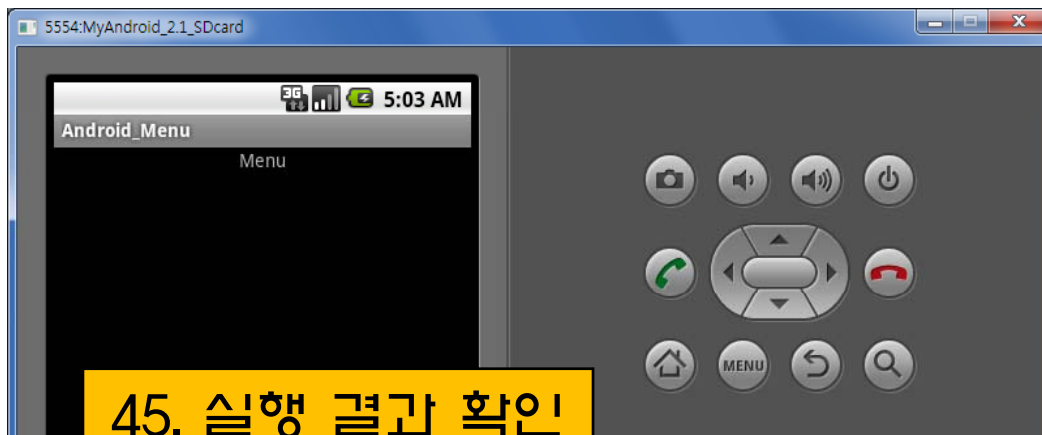
Menu 구현 (23)

❖ 실행 결과





Menu 구현 (24)





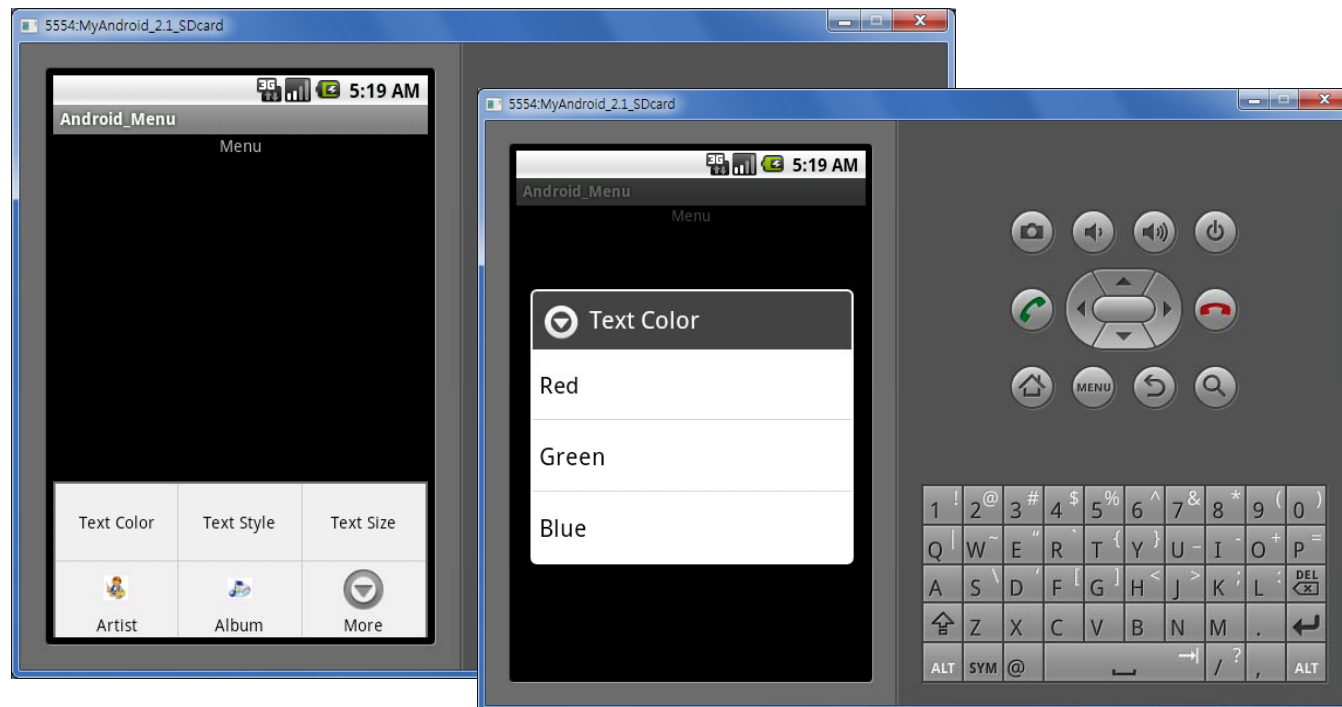
실습 I : Text Color 메뉴의 SubMenu 구현

■ Android_Menu (실습 시간 : 30분)

❖ 아래 그림과 같이 Text Color 메뉴의 SubMenu와 Menu Item Event Handler를 구현하시오.

◆ SubMenu 구현

◆ SubMenu Item Click Event Handler 구현





Text Color 메뉴의 SubMenu 구현 (1)

■ SubMenu 구현

❖ Group No 지정

❖ Text Color Item No 지정

```
*Android_Menu.java X
1 package com.inhatc.android_Menu;
2
3 import android.app.Activity;
4
10
11 public class Android_Menu extends Activity {
12     // Group No.
13     public static final int ID_GROUP_TEXT_COLOR = 1;
14     public static final int ID_GROUP_TEXT_STYLE = 2;
15     public static final int ID_GROUP_TEXT_SIZE = 3;
16     public static final int ID_GROUP_ARTIST = 4;
17     public static final int ID_GROUP_ALBUM = 5;
18     public static final int ID_GROUP_SONG = 6;
19     public static final int ID_GROUP_MOVIE = 7;
20
21     // Text Color Item No.
22     public static final int ID_COLOR_RED = 11;
23     public static final int ID_COLOR_GREEN = 12;
24     public static final int ID_COLOR_BLUE = 13;
25
26     TextView objTextView; //TextView 객체 선언
27
```

1. Coding





Text Color 메뉴의 SubMenu 구현 (2)

❖ onCreateOptionsMenu() Method 구현

```
*Android_Menu.java 38
39 //Options Menu 생성 및 Item 생성
40 public boolean onCreateOptionsMenu(Menu menu) {
41     SubMenu mnuTextColor = menu.addSubMenu("Text Color");
42     mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID_COLOR_RED, 1, "Red");
43     mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID_COLOR_GREEN, 2, "Green");
44     mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID_COLOR_BLUE, 3, "Blue");
45
46     SubMenu mnuTextStyle = menu.addSubMenu("Text Style");
47
48     SubMenu mnuTextSize = menu.addSubMenu("Text Size");
49
50     SubMenu mnuArtist = menu.addSubMenu("Artist");
51     mnuArtist.setIcon(R.drawable.artist);
52
53     SubMenu mnuAlbum = menu.addSubMenu("Album");
54     mnuAlbum.setIcon(R.drawable.album);
55
56     SubMenu mnuSong = menu.addSubMenu("Song");
57     mnuSong.setIcon(R.drawable.song);
58
59     SubMenu mnuMovie = menu.addSubMenu("Movie");
60
61     return super.onCreateOptionsMenu(menu);
62 }
```

2. Coding



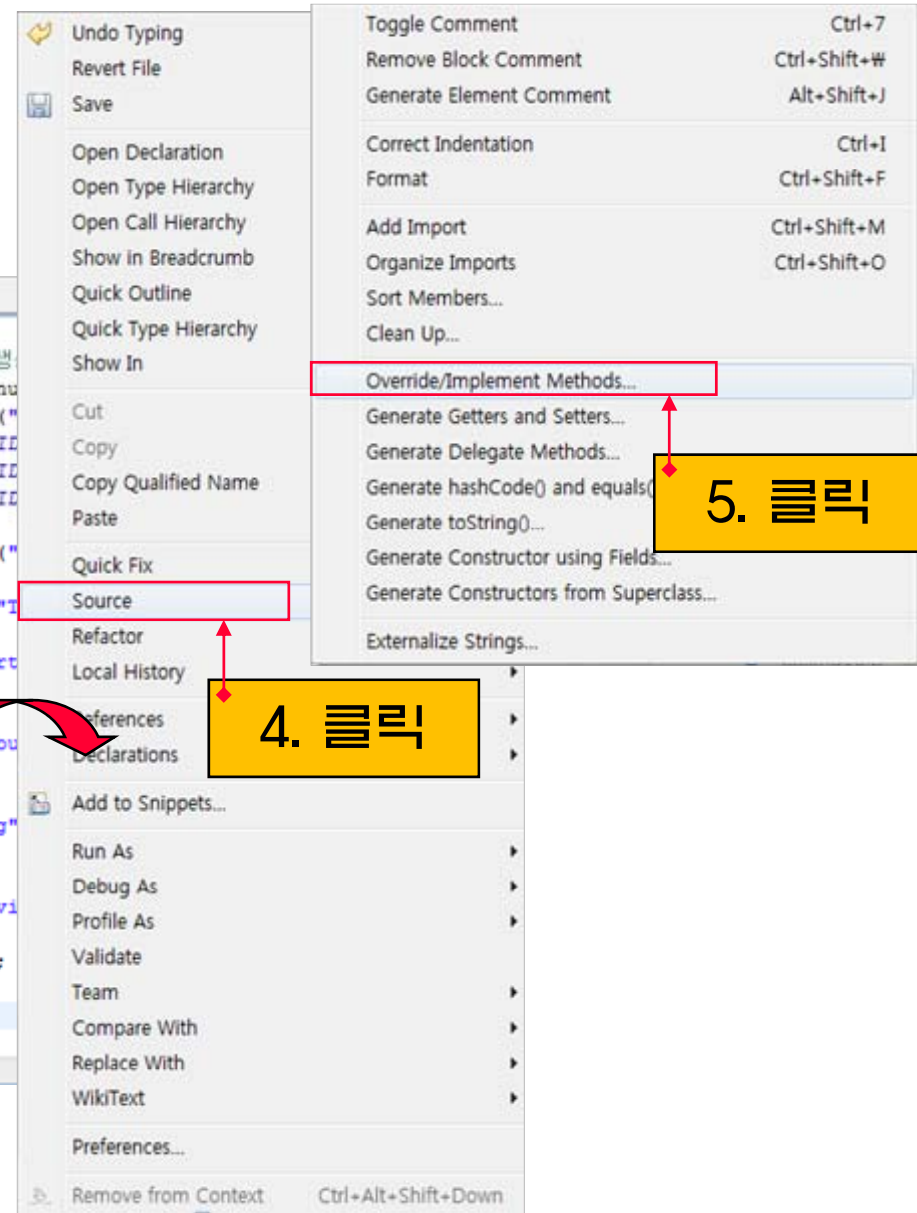


Text Color 메뉴의 SubMenu 구현 (3)

- Item Click Event Handler 구현
 - ❖ override Method 추가

```
38
39 @Override //Options Menu 생성 및 Item 생
40 public boolean onCreateOptionsMenu(Menu menu)
41 {
42     SubMenu mnuTextColor = menu.addSubMenu("
43     mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID
44     mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID
45
46     SubMenu mnuTextStyle = menu.addSubMenu("
47
48     SubMenu mnuTextSize = menu.addSubMenu("
49
50     SubMenu mnuArtist = menu.addSubMenu("Art
51     mnuArtist.setIcon(R.drawable.artist);
52
53     SubMenu mnuAlbum = menu.addSubMen Album
ong"
Movie
60
61     return super.onCreateOptionsMenu(menu);
62 }
63
64 }
```

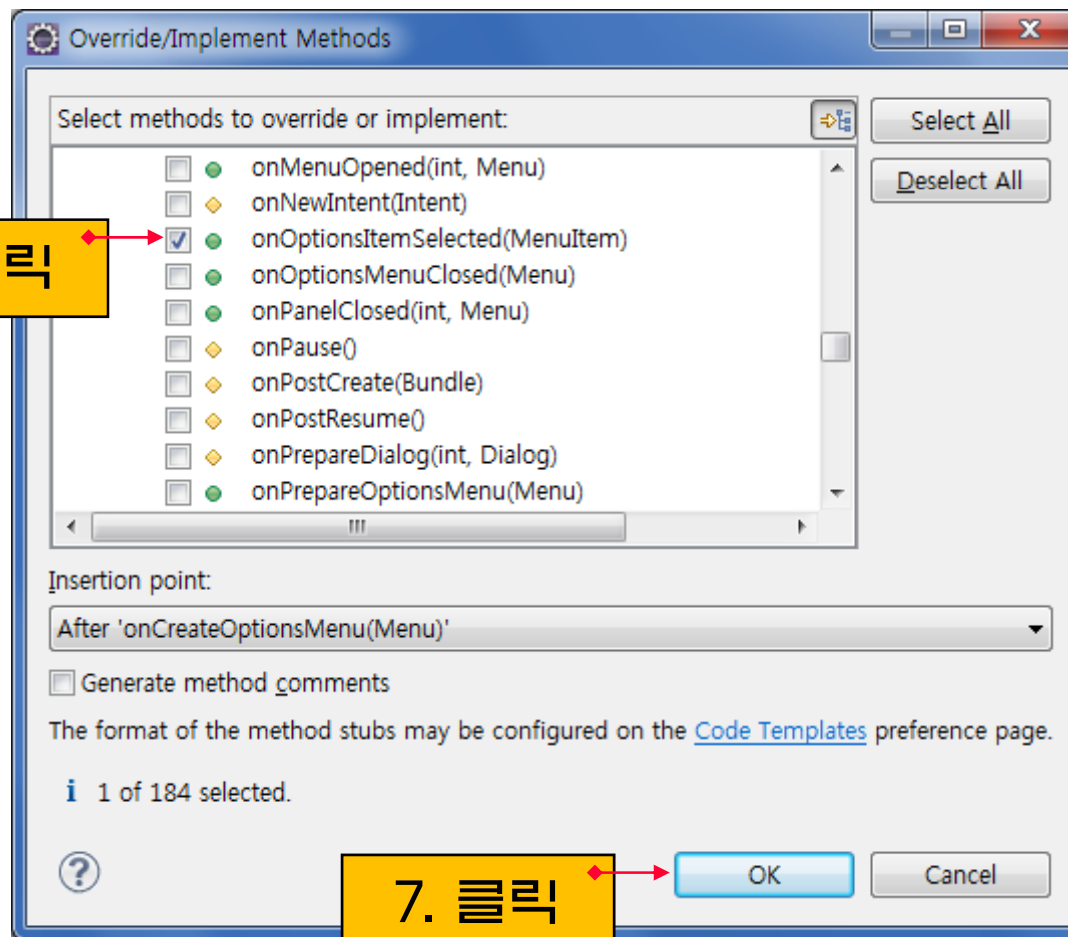
3. Cursor 위치에서
마우스 오른쪽 버튼 클릭





Text Color 메뉴의 SubMenu 구현 (4)

❖ Override / Implement Methods 추가



6. 클릭

7. 클릭



Text Color 메뉴의 SubMenu 구현 (5)

❖ onOptionsItemSelected() Method 구현

- ◆ Text Color > RED
- ◆ Text Color > GREEN
- ◆ Text Color > BLUE

```
*Android_Menu.java X
63
64 @Override // Option menu item 의 Click event handler
65 public boolean onOptionsItemSelected(MenuItem item) {
66     switch (item.getItemId()) {
67         case ID_COLOR_RED:
68             objTxtView.setTextColor(Color.RED);
69             return true;
70         case ID_COLOR_GREEN:
71             objTxtView.setTextColor(Color.GREEN);
72             return true;
73         case ID_COLOR_BLUE:
74             objTxtView.setTextColor(Color.BLUE);
75             return true;
76     }
77     return super.onOptionsItemSelected(item);
78 }
79 }
```

8. Coding



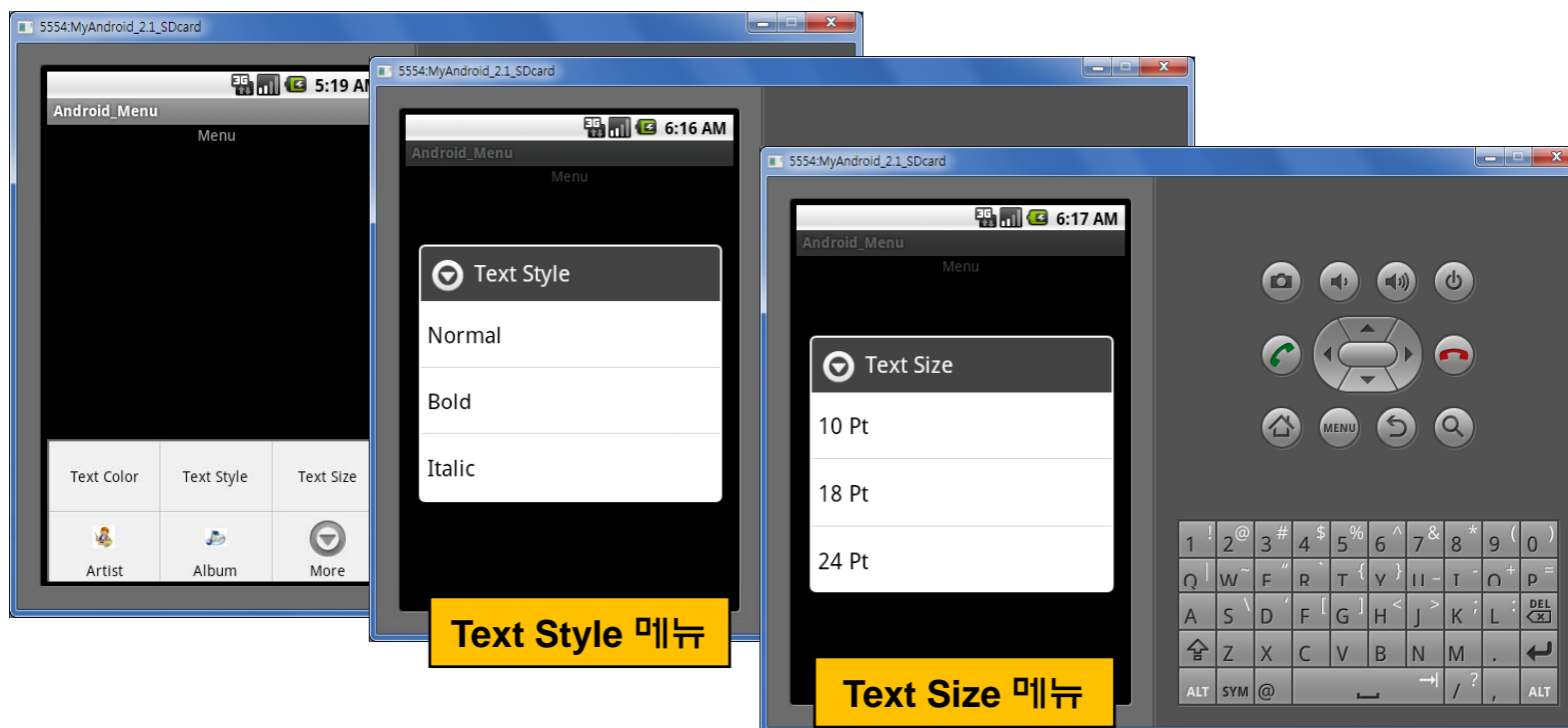
실습 II : Text Style/ Text Size 메뉴의 SubMenu 구현

■ Android_Menu (실습 시간 : 30분)

❖ 아래 그림과 Text Style / Text Size 메뉴의 SubMenu와 Menu Item Event Handler를 구현하시오.

◆ SubMenu 구현

◆ SubMenu Item Click Event Handler 구현





Text Style/ Text Size 메뉴의 SubMenu 구현 (1)

■ SubMenu 구현

❖ Text Style Item No / Text Size Item No 지정

```
Android_Menu.java
1 package com.inhatc.android_Menu;
2
3 import android.app.Activity;
4
11
12 public class Android_Menu extends Activity {
13     // Group No.
14     public static final int ID_GROUP_TEXT_COLOR      = 1;
15     public static final int ID_GROUP_TEXT_STYLE      = 2;
16     public static final int ID_GROUP_TEXT_SIZE      = 3;
17     public static final int ID_GROUP_ARTIST          = 4;
18     public static final int ID_GROUP_ALBUM           = 5;
19     public static final int ID_GROUP_SONG            = 6;
20     public static final int ID_GROUP_MOVIE           = 7;
21
22     // Text Color Item No.
23     public static final int ID_COLOR_RED              = 11;
24     public static final int ID_COLOR_GREEN            = 12;
25     public static final int ID_COLOR_BLUE            = 13;
26
27     // Text Style Item No.
28     public static final int ID_TEXT_NORMAL            = 21;
29     public static final int ID_TEXT_BOLD              = 22;
30     public static final int ID_TEXT_ITALIC            = 23;
31
32     // Text Size Item No.
33     public static final int ID_TEXTSIZE_10P          = 31;
34     public static final int ID_TEXTSIZE_18P          = 32;
35     public static final int ID_TEXTSIZE_24P          = 33;
36
37     TextView objTextView;    //TextView 객체 선언
```

1. Coding



Text Style/ Text Size 메뉴의 SubMenu 구현 (2)

onCreateOptionsMenu() Method 구현

```
*Android_Menu.java
52
53  @Override      //Options Menu 생성 및 Item 생성
54  public boolean onCreateOptionsMenu(Menu menu) {
55      SubMenu mnuTextColor = menu.addSubMenu("Text Color");
56      mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID_COLOR_RED, 1, "Red");
57      mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID_COLOR_GREEN, 2, "Green");
58      mnuTextColor.add(ID_GROUP_TEXT_COLOR, ID_COLOR_BLUE, 3, "Blue");
59
60      SubMenu mnuTextStyle = menu.addSubMenu("Text Style");
61      mnuTextStyle.add(ID_GROUP_TEXT_STYLE, ID_TEXT_NORMAL, 1, "Normal").setChecked(true);
62      mnuTextStyle.add(ID_GROUP_TEXT_STYLE, ID_TEXT_BOLD, 2, "Bold");
63      mnuTextStyle.add(ID_GROUP_TEXT_STYLE, ID_TEXT_ITALIC, 3, "Italic");
64      mnuTextStyle.setGroupCheckable(ID_GROUP_TEXT_STYLE, true, true);
65
66      SubMenu mnuTextSize = menu.addSubMenu("Text Size");
67      mnuTextSize.add(ID_GROUP_TEXT_SIZE, ID_TEXTSIZE_10P, 1, "10 Pt");
68      mnuTextSize.add(ID_GROUP_TEXT_SIZE, ID_TEXTSIZE_18P, 2, "18 Pt");
69      mnuTextSize.add(ID_GROUP_TEXT_SIZE, ID_TEXTSIZE_24P, 3, "24 Pt");
70
71      SubMenu mnuArtist = menu.addSubMenu("Artist");
72      mnuArtist.setIcon(R.drawable.artist);
73
74      SubMenu mnuAlbum = menu.addSubMenu("Album");
75      mnuAlbum.setIcon(R.drawable.album);
76
77      SubMenu mnuSong = menu.addSubMenu("Song");
78      mnuSong.setIcon(R.drawable.song);
79
80      SubMenu mnuMovie = menu.addSubMenu("Movie");
81
82      return super.onCreateOptionsMenu(menu);
83  }
```

2. Coding





Text Style/ Text Size 메뉴의 SubMenu 구현 (2)

onOptionsItemSelected() Method 구현

❖ Text Style

◆ Normal

◆ Bold

◆ Italic

❖ Text Size

◆ 10 Pt

◆ 18 Pt

◆ 24 Pt

Android_Menu.java

```
80
81 @Override // Option menu item 의 Click event handler
82 public boolean onOptionsItemSelected(MenuItem item) {
83     switch (item.getItemId()) {
84         case ID_COLOR_RED:
85             objTextView.setTextColor(Color.RED);
86             return true;
87         case ID_COLOR_GREEN:
88             objTextView.setTextColor(Color.GREEN);
89             return true;
90         case ID_COLOR_BLUE:
91             objTextView.setTextColor(Color.BLUE);
92             return true;
93         case ID_TEXT_NORMAL:
94             objTextView.setTypeface(Typeface.DEFAULT, Typeface.NORMAL);
95             item.setChecked(true);
96             return true;
97         case ID_TEXT_BOLD:
98             objTextView.setTypeface(Typeface.DEFAULT, Typeface.BOLD);
99             item.setChecked(true);
100            return true;
101         case ID_TEXT_ITALIC:
102             objTextView.setTypeface(Typeface.DEFAULT, Typeface.ITALIC);
103             item.setChecked(true);
104             return true;
105         case ID_TEXTSIZE_10P:
106             objTextView.setTextSize(10);
107             return true;
108         case ID_TEXTSIZE_18P:
109             objTextView.setTextSize(18);
110             return true;
111         case ID_TEXTSIZE_24P:
112             objTextView.setTextSize(24);
113             return true;
114     }
115     return super.onOptionsItemSelected(item);
116 }
117 }
```

3. Coding





실습 III : Context Menu 구현

■ Android_Menu (실습 시간 : 30분)

❖ 아래 그림과 같이 Text 배경색을 지정하는 Context Menu를 구현 하시오.





Context Menu 구현 (1)

- Context Menu 구현
 - ❖ override Method 추가
 - ◆ onCreateContextMenu()

```
*Android_Menu.java X
38
39 @Override
40 public void onCreate(Bundle savedInstanceState) {
41     super.onCreate(savedInstanceState);
42     setContentView(R.layout.main);
43
44     objTextView = (TextView) findViewById(R.
45
46
47
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72
73
74
75
76
77
78
79
80
81
82 public boolean onPrepareOptionsMenu(Menu menu) {
83
84
85
86
87 public boolean onOptionsItemSelected(MenuItem item) {
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103 }
```

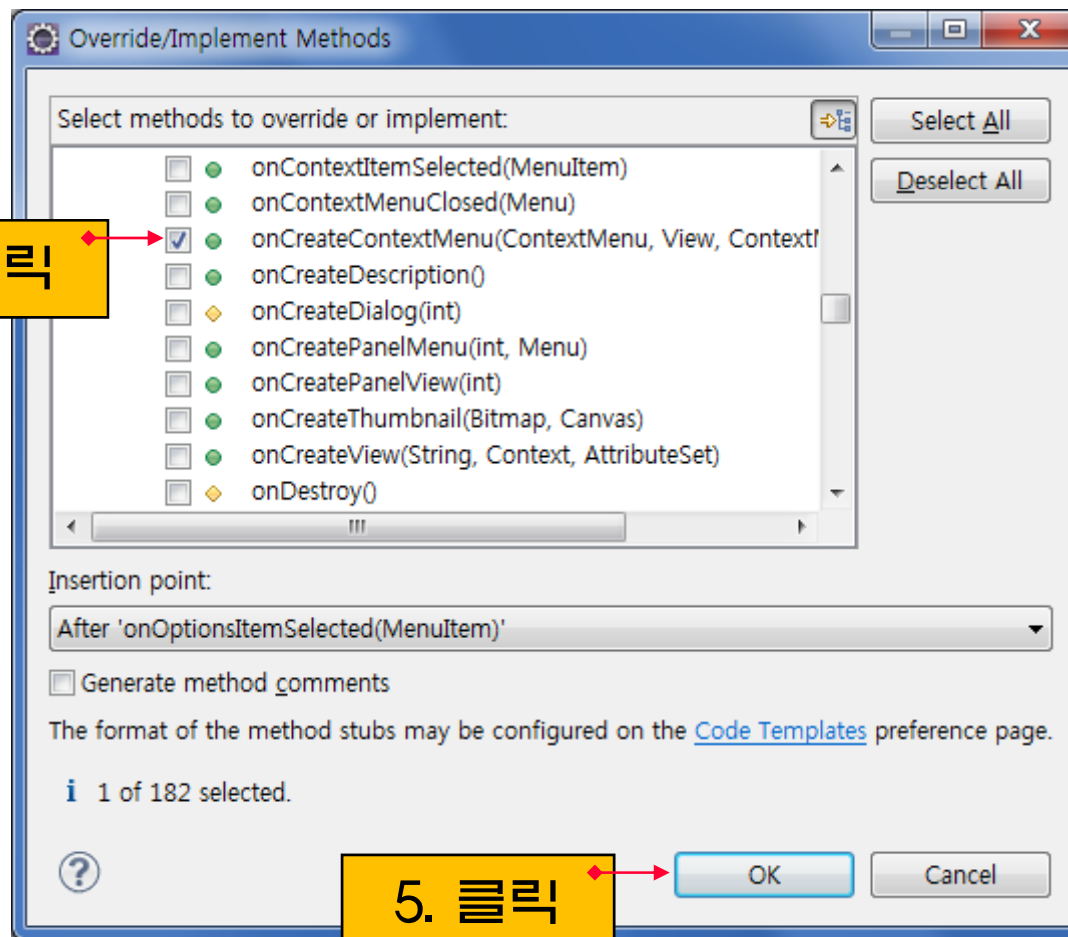
1. Cursor 위치에서
마우스 오른쪽 버튼 클릭

The screenshot shows a context menu in an IDE. A red box highlights the 'Source' option, with a yellow box labeled '2. 클릭' (Click 2) and an arrow pointing to it. Another red box highlights the 'Override/Implement Methods...' option, with a yellow box labeled '3. 클릭' (Click 3) and an arrow pointing to it. The menu also includes options like 'Undo Typing', 'Save', 'Cut', 'Copy', 'Paste', 'Quick Fix', 'Refactor', 'Local History', 'References', 'Declarations', 'Add to Snippets...', 'Run As', 'Debug As', 'Profile As', 'Validate', 'Team', 'Compare With', 'Replace With', 'WikiText', 'Preferences...', and 'Remove from Context'.



Context Menu 구현 (2)

❖ Override / Implement Methods 추가





Context Menu 구현 (3)

■ onCreateContextMenu() Method 구현

❖ Text 배경색

◆ RED

◆ GREEN

◆ BLUE

```
Android_Menu.java
127 @Override
128 public void onCreateContextMenu(ContextMenu menu, View v, ContextMenuInfo menuInfo) {
129     SubMenu mnuTextBackGroundColor = menu.addSubMenu("Text 배경색");
130     mnuTextBackGroundColor.add(Menu.NONE, ID_COLOR_RED, Menu.NONE, "Red");
131     mnuTextBackGroundColor.add(Menu.NONE, ID_COLOR_GREEN, Menu.NONE, "Green");
132     mnuTextBackGroundColor.add(Menu.NONE, ID_COLOR_BLUE, Menu.NONE, "Blue");
133
134     super.onCreateContextMenu(menu, v, menuInfo);
135 }
136
137 }
```

6. Coding

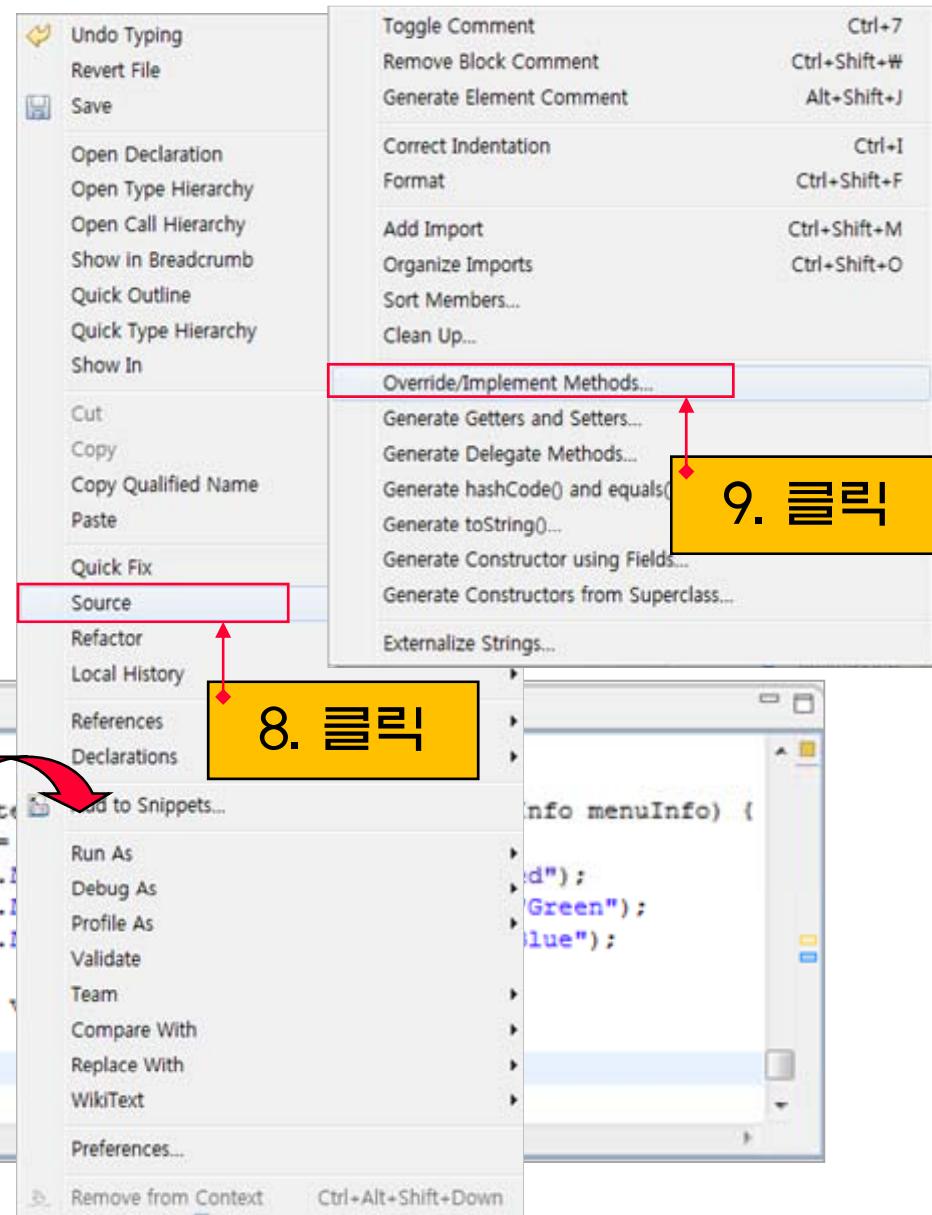


Context Menu 구현 (4)

❖ Override Method 추가

◆ onContextItemSelected()

7. Cursor 위치에서
마우스 오른쪽 버튼 클릭



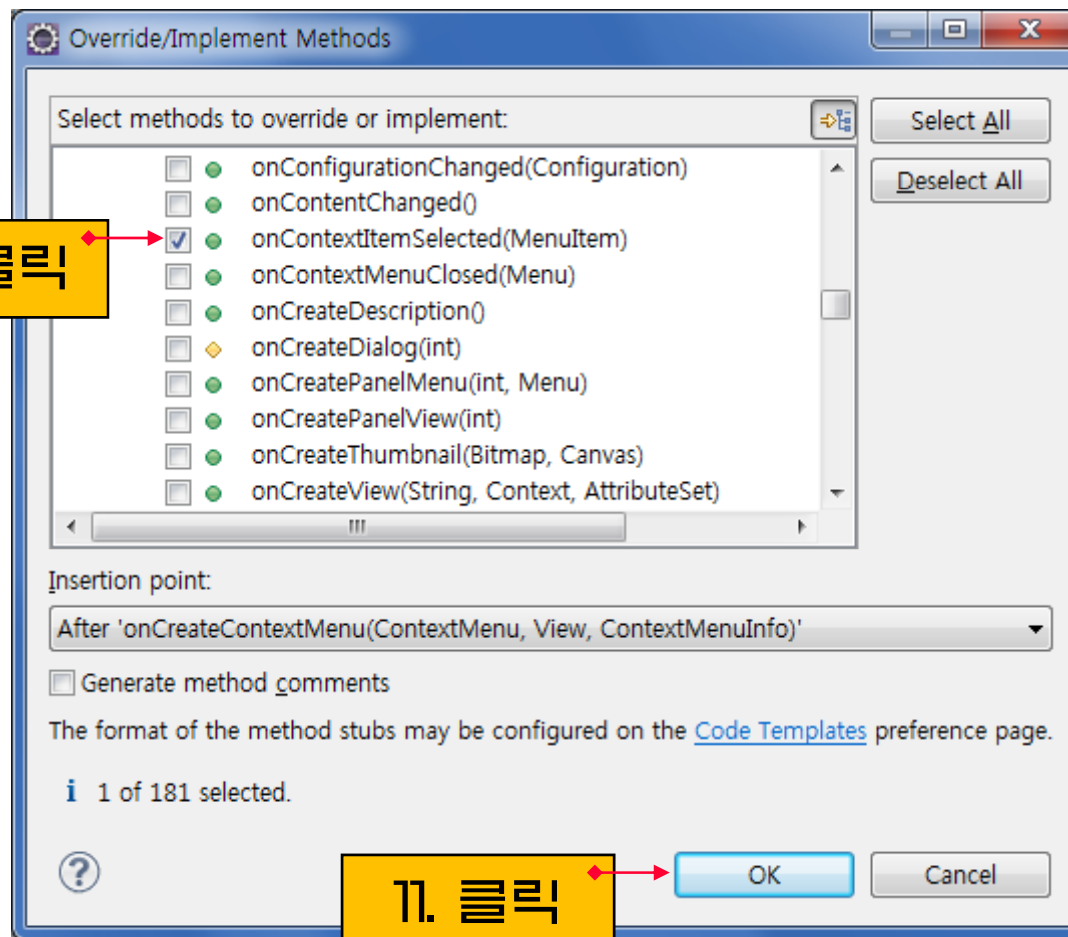
9. 클릭

8. 클릭



Context Menu 구현 (5)

❖ Override / Implement Methods 추가



10. 클릭

11. 클릭



Context Menu 구현 (6)

■ onOptionsItemSelected() Method 구현

❖ Text 배경색

◆ RED

◆ GREEN

◆ BLUE

```
Android_Menu.java
136
137 @Override
138 public boolean onOptionsItemSelected(MenuItem item) {
139     switch (item.getItemId()) {
140     case ID_COLOR_RED:
141         objTextView.setBackgroundColor(Color.RED);
142         return true;
143     case ID_COLOR_GREEN:
144         objTextView.setBackgroundColor(Color.GREEN);
145         return true;
146     case ID_COLOR_BLUE:
147         objTextView.setBackgroundColor(Color.BLUE);
148         return true;
149     }
150     return super.onOptionsItemSelected(item);
151 }
152
153 }
```

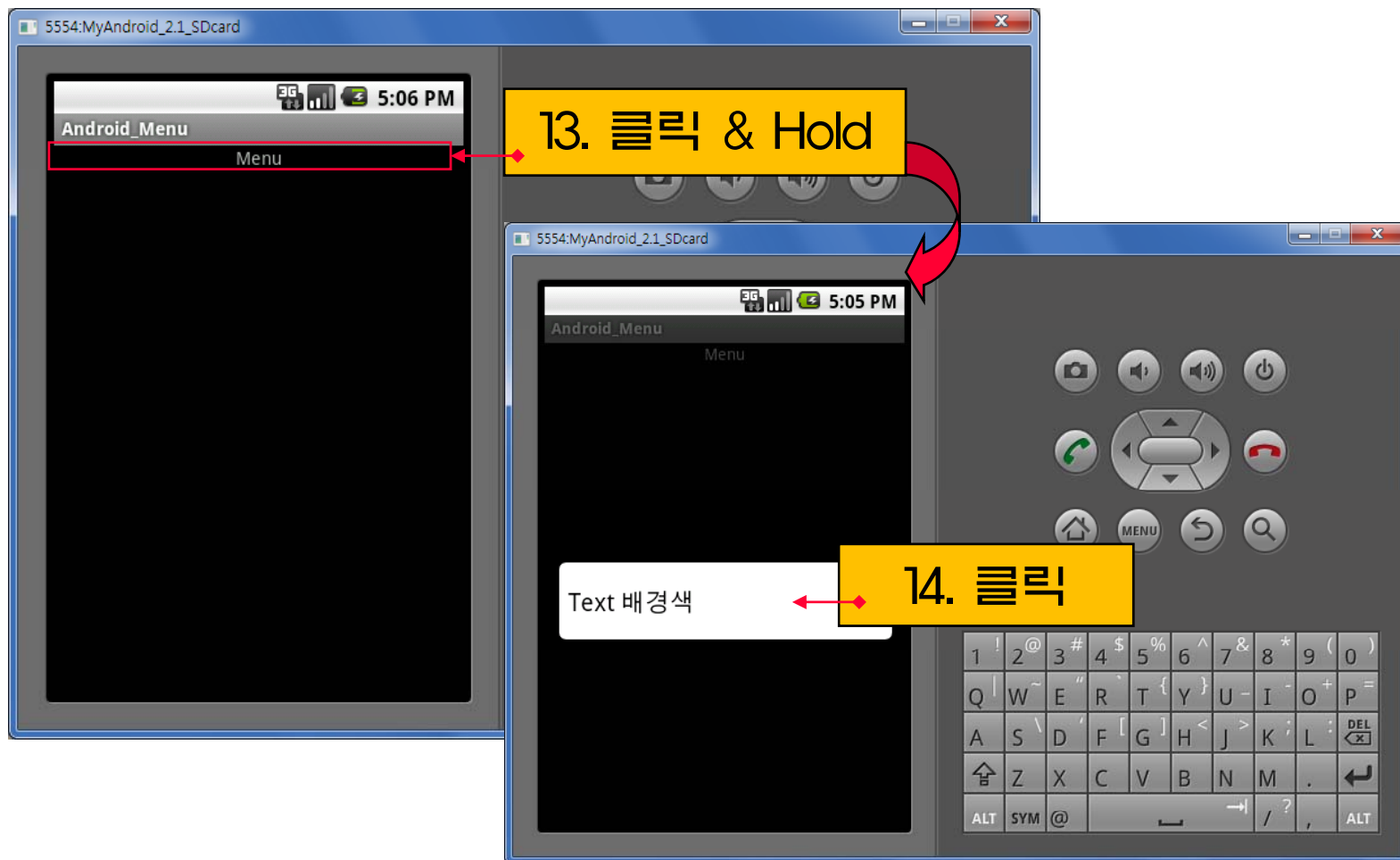
12. Coding





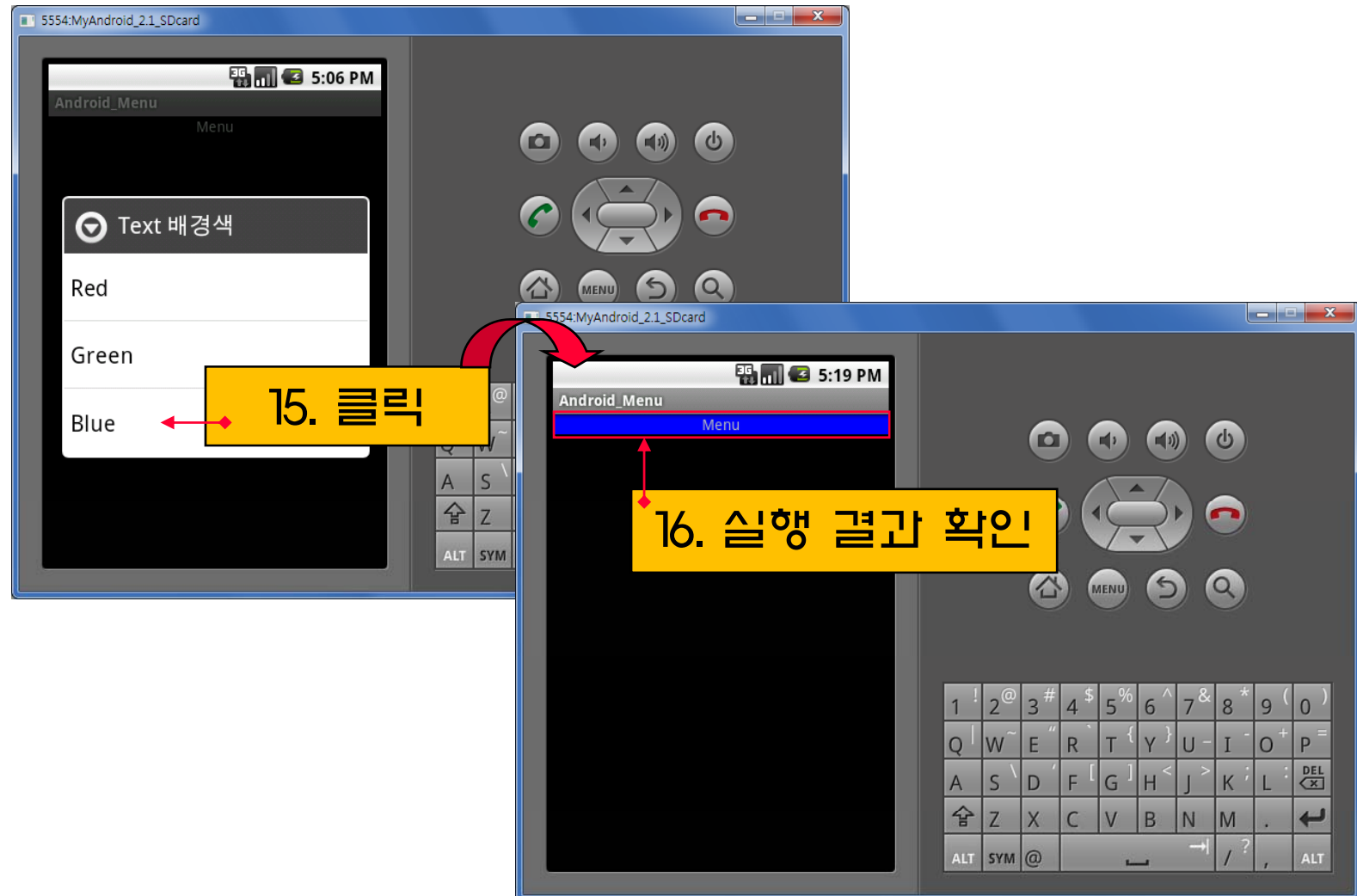
Context Menu 구현 (6)

❖ 실행 결과





Context Menu 구현 (7)





학습 요약

- Menu
- Options Menu
 - ❖ Icon Menu
 - ❖ Expanded Menu
- Context Menu



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