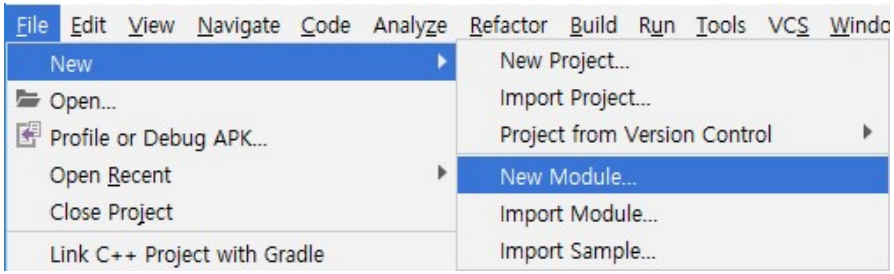
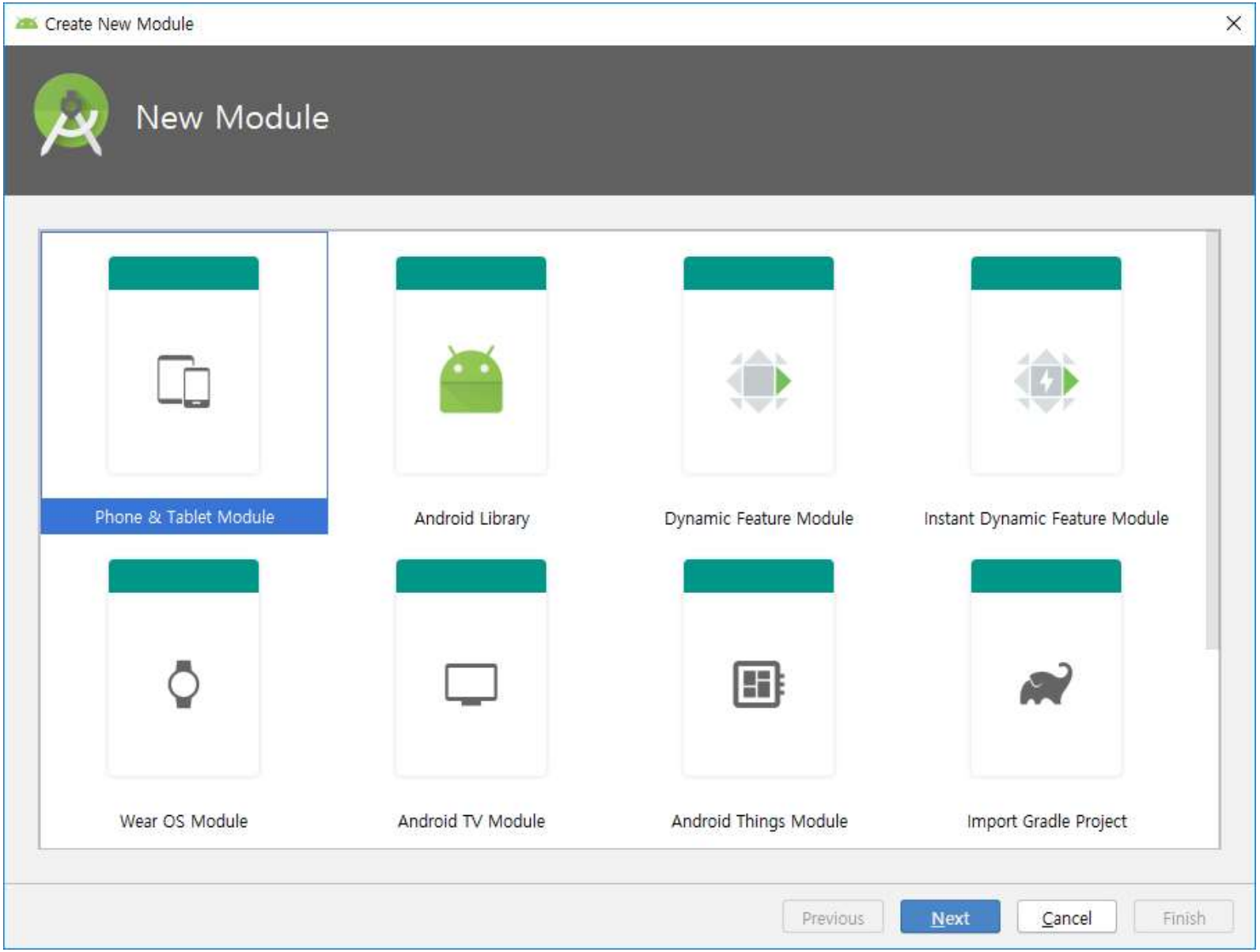
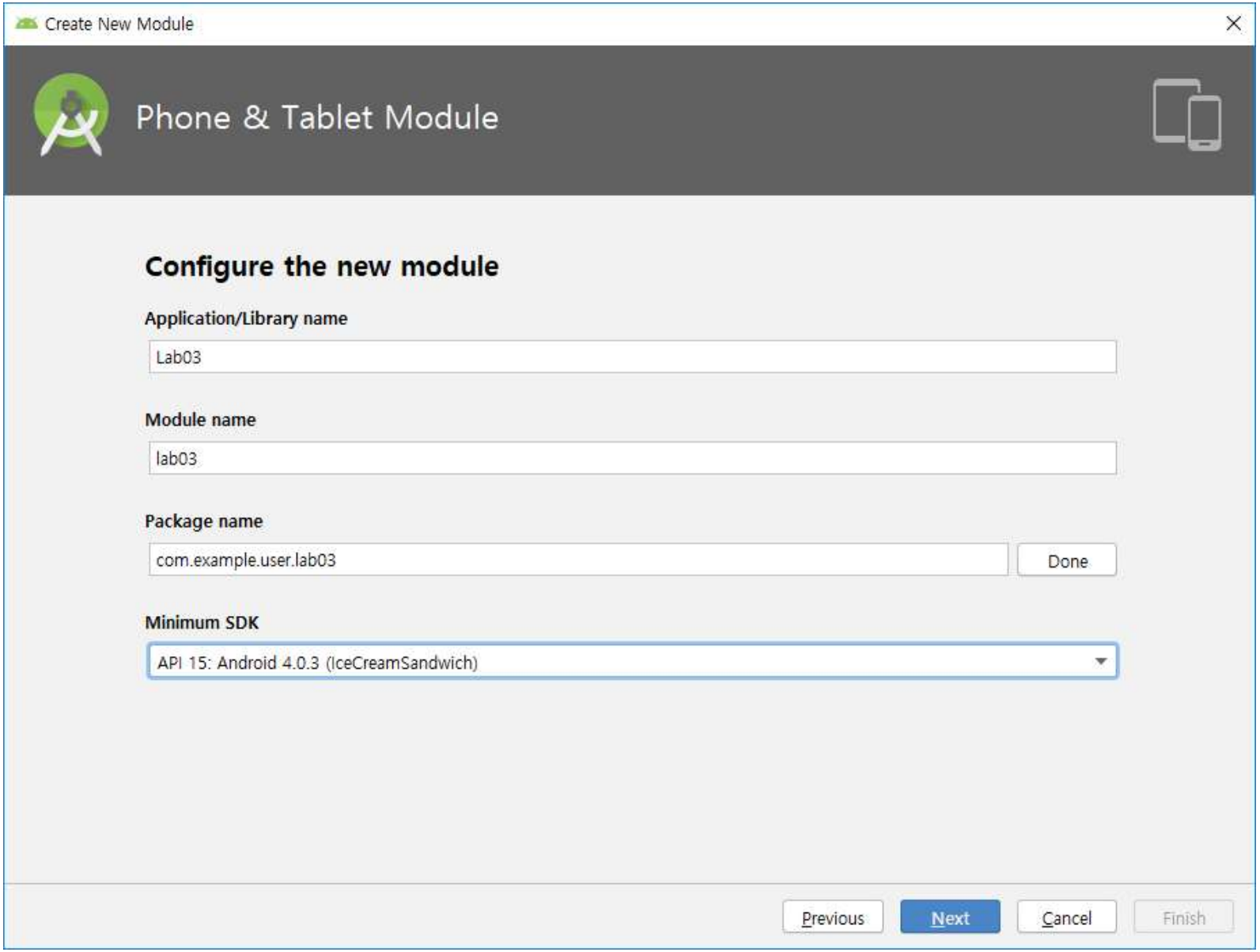
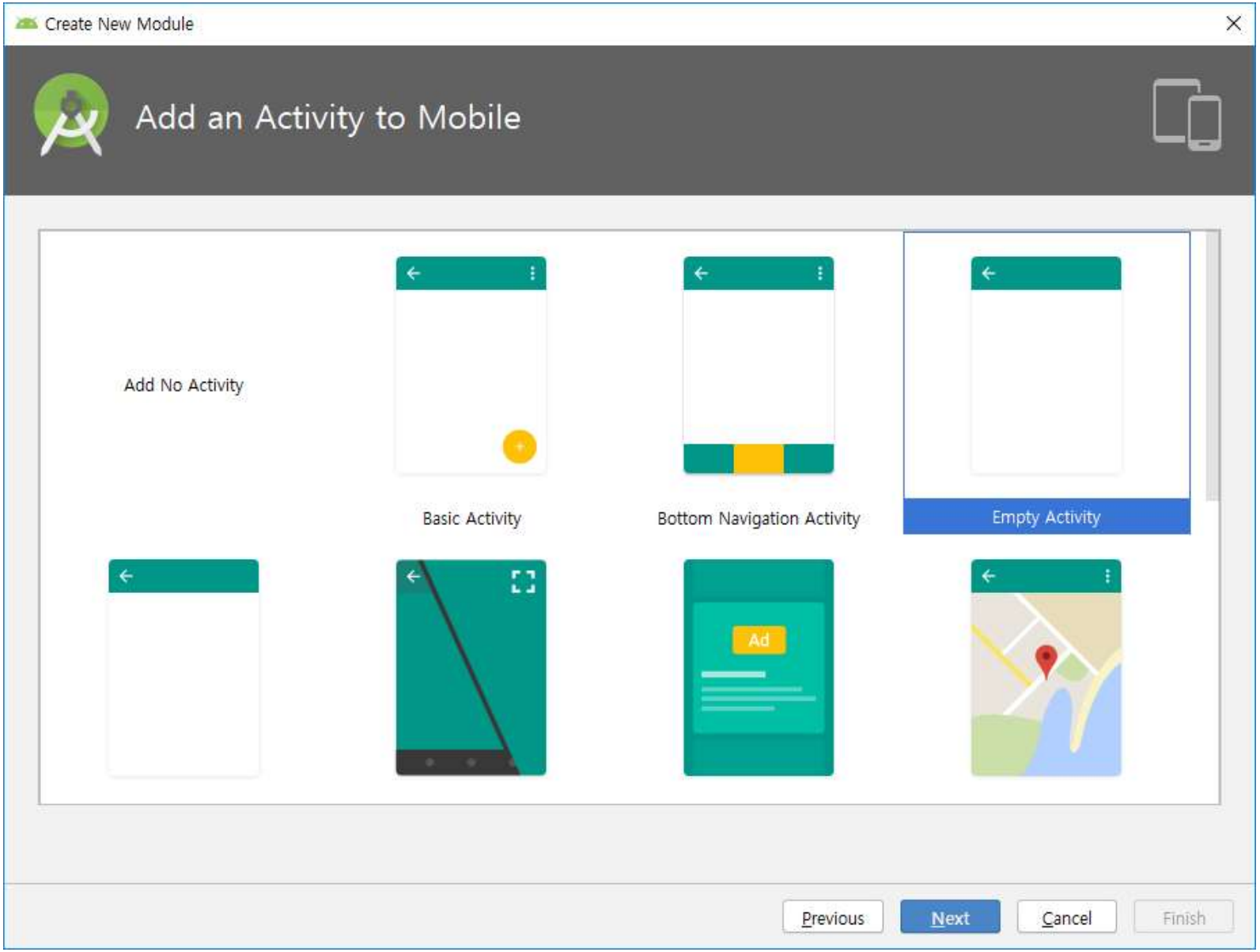
진동, 효과음 울리기

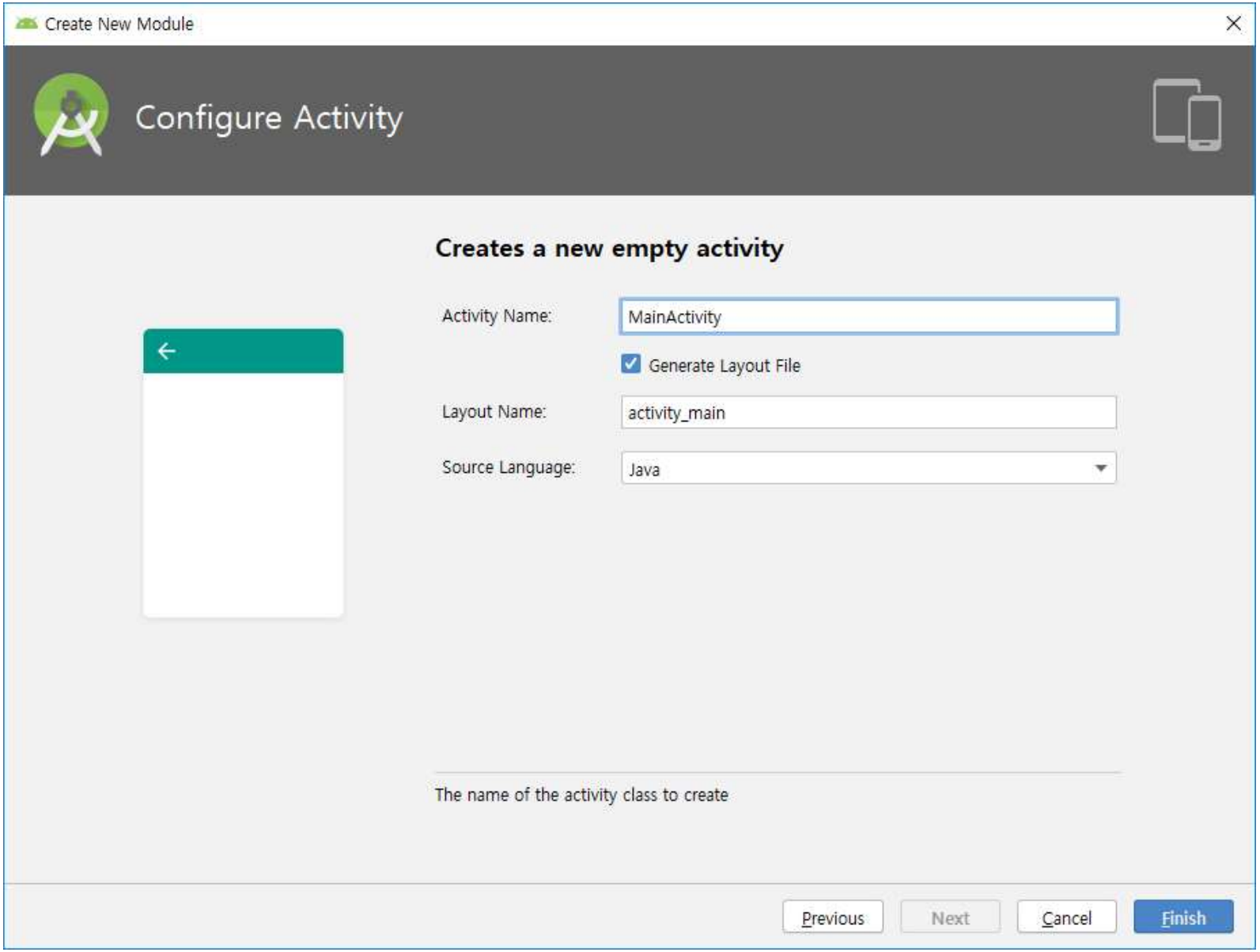
Step 1 _ 모듈 생성


File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Windo
New
Open...
Profile or Debug APK...
Open Recent
Close Project
Link C++ Project with Gradle
New Project...
Import Project...
Project from Version Control
New Module...
Import Module...
Import Sample...

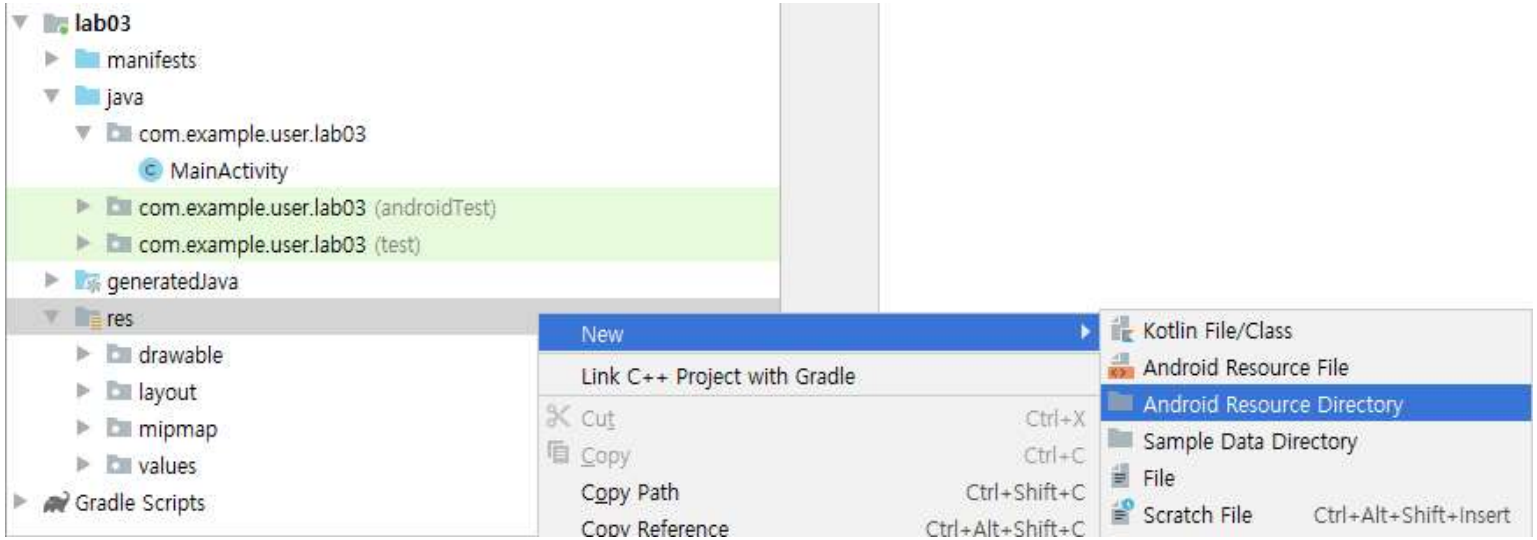

Create New Module
New Module
Phone & Tablet Module
Android Library
Dynamic Feature Module
Instant Dynamic Feature Module
Wear OS Module
Android TV Module
Android Things Module
Import Gradle Project
Previous
Next
Cancel
Finish

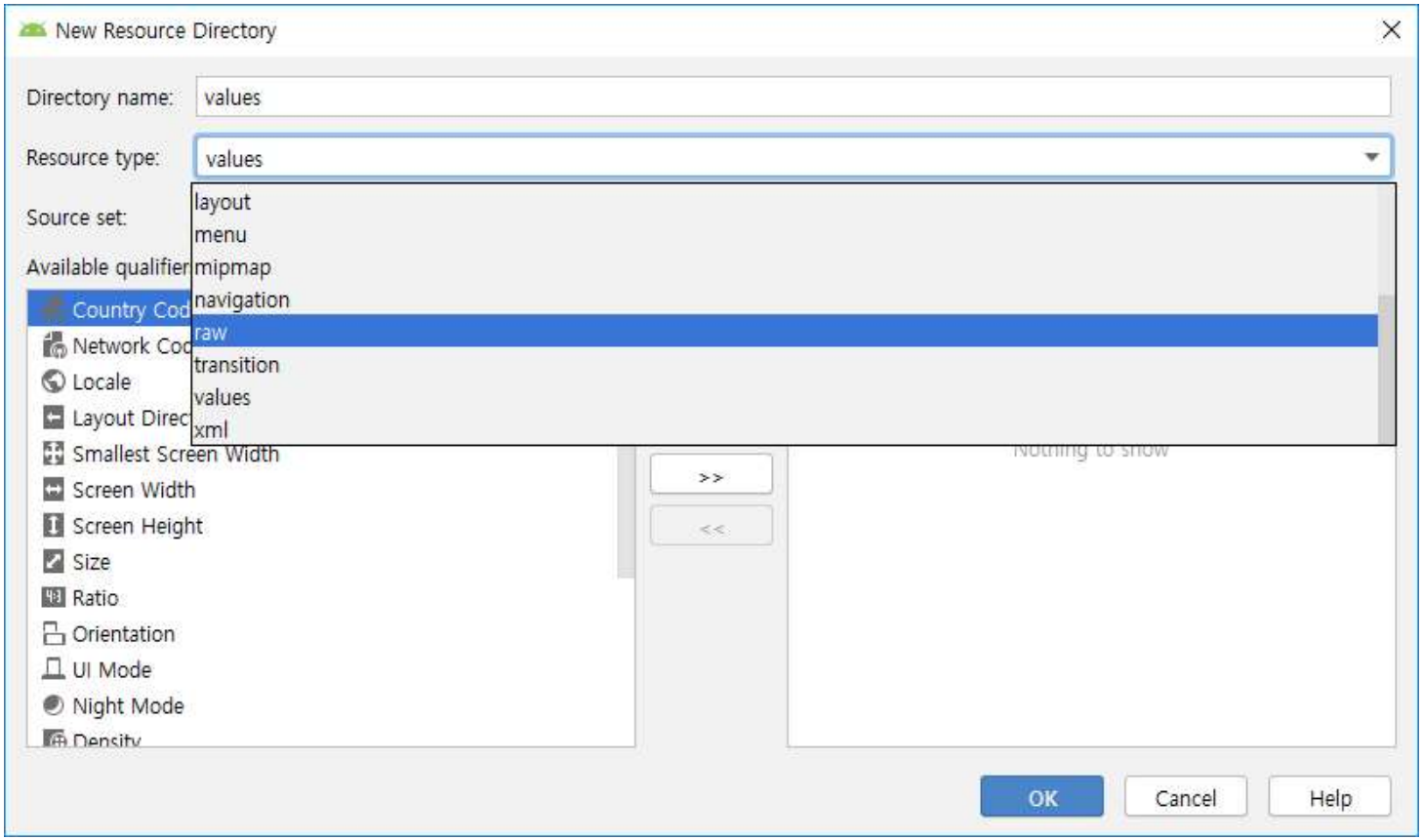

Create New Module
Phone & Tablet Module
Configure the new module
Application/Library name
Lab03
Module name
lab03
Package name
com.example.user.lab03
Done
Minimum SDK
API 15: Android 4.0.3 (IceCreamSandwich)
Previous
Next
Cancel
Finish


Create New Module
Add an Activity to Mobile
Add No Activity
Basic Activity
Bottom Navigation Activity
Empty Activity
Ad
Previous
Next
Cancel
Finish

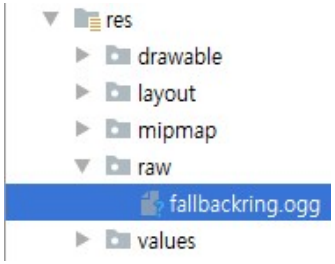

Create New Module
Configure Activity
Creates a new empty activity
Activity Name:
MainActivity
Generate Layout File
Layout Name:
activity_main
Source Language:
Java
The name of the activity class to create
Previous
Next
Cancel
Finish

Step 2 _ raw 폴더 생성




New Resource Directory
Directory name:
values
Resource type:
values
Source set:
Available qualifier
layout
menu
mipmap
navigation
raw
transition
values
xml
Country Cod
Network Cod
Locale
Layout Direc
Smallest Screen Width
Screen Width
Screen Height
Size
Ratio
Orientation
UI Mode
Night Mode
Density
>>
<<
Nothing to show
OK
Cancel
Help

Step 3 _ 음원 파일 복사



Step 4 _ 퍼미션 설정

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.user.lab03">

    <uses-permission android:name="android.permission.VIBRATE" />

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Step 5 _ activity_main.xml 파일 작성

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

    <Button
        android:id="@+id/btn_vibration"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="vibration" />

    <Button
        android:id="@+id/btn_system_beep"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="system beep" />

    <Button
        android:id="@+id/btn_custom_sound"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="custom sound" />

</LinearLayout>
```

Step 6 _ MainActivity 작성

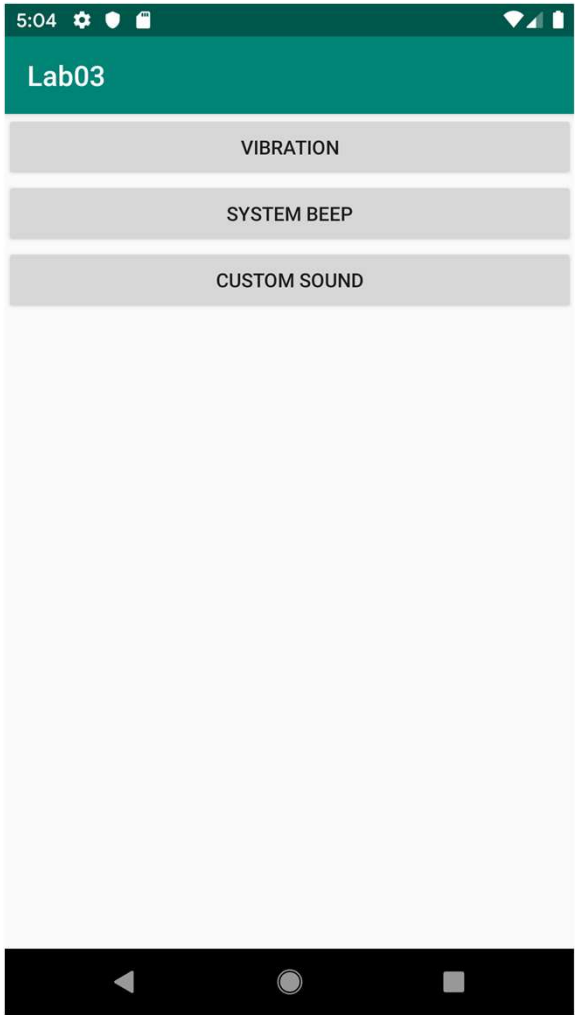
```
public class MainActivity extends AppCompatActivity implements View.OnClickListener {

    Button vibrationBtn;
    Button systemBeepBtn;
    Button customBeepBtn;

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

        vibrationBtn = findViewById(R.id.btn_vibration);
        systemBeepBtn = findViewById(R.id.btn_system_beep);
        customBeepBtn = findViewById(R.id.btn_custom_sound);

        vibrationBtn.setOnClickListener(this);
        systemBeepBtn.setOnClickListener(this);
        customBeepBtn.setOnClickListener(this);
    }

    @Override
    public void onClick(View view) {
        if (view == vibrationBtn) {
            Vibrator vibrator = (Vibrator) getSystemService(Context.VIBRATOR_SERVICE);
            vibrator.vibrate(1000);
        } else if (view == systemBeepBtn) {
            Uri notification = RingtoneManager.getDefaultUri(RingtoneManager.TYPE_NOTIFICATION);
            Ringtone ringtone = RingtoneManager.getRingtone(getApplicationContext(), notification);
            ringtone.play();
        } else if (view == customBeepBtn) {
            MediaPlayer player = MediaPlayer.create(this, R.raw.fallbackring);
            player.start();
        }
    }
}
```

Vibrator

- public void vibrate (long milliseconds)
- public void vibrate (long[] pattern, int repeat)
  - pattern
    - {off, on, off, on, ...}
  - repeat
    - -1: 한 번만 패턴대로 진동
    - 0: 진동이 무한반복
      - 코드에서 적절한 시점에 cancel() 함수를 호출하여 진동 울리기를 멈추어 주어야 함

```
Vibrator vibrator = (Vibrator) getSystemService(Context.VIBRATOR_SERVICE);
vibrator.vibrate(new long[]{500, 1000, 500, 1000}, -1);
```

RingtoneManager

int	TYPE_ALARM Type that refers to sounds that are used for the alarm.
int	TYPE_NOTIFICATION Type that refers to sounds that are used for notifications.
int	TYPE_RINGTONE Type that refers to sounds that are used for the phone ringer.

Step 7 _ 실행