

진동

진동



진동을 위해서는 `AndroidManifest.xml` 에 퍼미션이 추가되어 함.

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



진동 울리기 기능

- 시스템서비스로부터 Vibrator 객체를 얻어야 함.
- Vibrator 클래스의 vibrate 메소드를 이용하여 진동을 발생
- cancel 메소드로 울리고 있는 진동을 멈춤

public void **vibrate** (long milliseconds) // 지정시간 동안 진동을 울린다.

public void **vibrate** (long[] pattern, int repeat) // 배열에 지정한 패턴대로 진동을 울린다.

Pattern[0] Pattern[1] Pattern[2] Pattern[3] Pattern[4] Pattern[5]

50	100	100	200	100	300
----	-----	-----	-----	-----	-----

대기시간

울림시간

대기시간

울림시간

대기시간

울림시간

Pattern[0] Pattern[1] Pattern[2] Pattern[3] Pattern[4] Pattern[5]

50

100

100

200

100

300

대기시간

울림시간

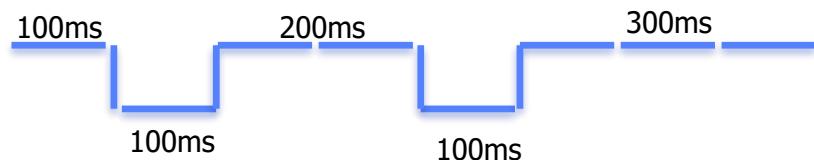
대기시간

울림시간

대기시간

울림시간

public void `vibrate` (long milliseconds)

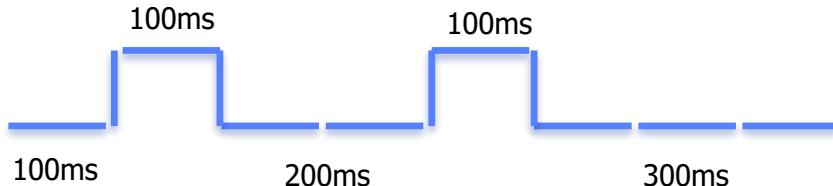


public void `vibrate` (3000) // 3초 동안 진동

repeat : 반복을 시작할 index

public void `vibrate` (long[] pattern, int repeat)

public void `vibrate` (pattern, 1)



Pattern[0] Pattern[1] Pattern[2] Pattern[3] Pattern[4] Pattern[5]

50

100

100

200

100

300

대기시간

울림시간

대기시간

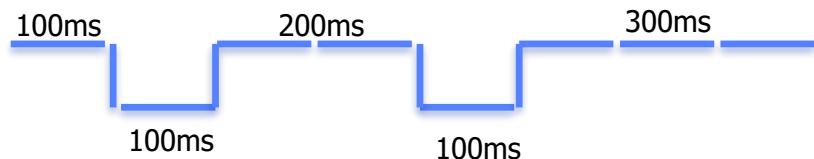
울림시간

대기시간

울림시간

배열의 패턴으로 진동

public void **vibrate** (pattern, 0)



한번만 배열 패턴으로 진동

public void **vibrate** (pattern, -1)

프로젝트 생성



Application name: **Vibrate**

Company Domain: admid.example.com

Project location: C:\Android\StdWork\Vibrate

Target Android Devices

- Phone and Tabet
- Minimun SDK API 17 : Android 4.0.3

Add an activity to Mobile : **Empty Activity**

Customize the Activity

Activity Name: **MainActivity**

Layout Name: **activity_main**



AndroidManifest.xml

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

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

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="My Application"
        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>
```

```
 MainActivity.java x

1 package com.example.admin.myapplication;
2
3 import ...
4
5
6
7
8 public class MainActivity extends AppCompatActivity {
9
10    @Override
11    protected void onCreate(Bundle savedInstanceState) {
12        super.onCreate(savedInstanceState);
13        setContentView(R.layout.activity_main);
14
15        Vibrator vibe=(Vibrator) getSystemService(Context.VIBRATOR_SERVICE);
16        vibe.vibrate(3000);
17    }
18}
```

```
>MainActivity.java x

1 package com.example.admin.myapplication;
2
3 import ...
7
8 public class MainActivity extends AppCompatActivity {
9
10    @Override
11    protected void onCreate(Bundle savedInstanceState) {
12        super.onCreate(savedInstanceState);
13        setContentView(R.layout.activity_main);
14
15        long[] pattern = {50,100,100,200,100,300};
16
17        Vibrator vibe=(Vibrator) getSystemService(Context.VIBRATOR_SERVICE);
18        vibe.vibrate(pattern,0);
19    }
20}
```

```
>MainActivity.java x

1 package com.example.admin.myapplication;
2
3 import ...
4
5
6
7
8 public class MainActivity extends AppCompatActivity {
9
10    @Override
11    protected void onCreate(Bundle savedInstanceState) {
12        super.onCreate(savedInstanceState);
13        setContentView(R.layout.activity_main);
14
15        long[] pattern = {50,100,100,200,100,300};
16
17        Vibrator vibe=(Vibrator) getSystemService(Context.VIBRATOR_SERVICE);
18        vibe.vibrate(pattern,-1);
19    }
20}
```

```
>MainActivity.java ×
```

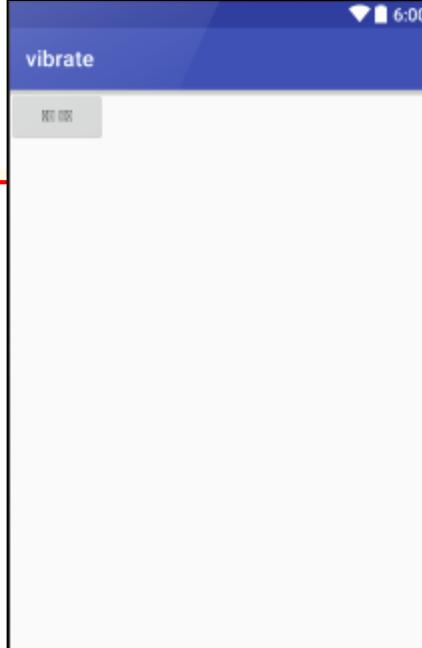
```
1 package com.example.admin.myapplication;
2
3 import ...
4
5
6
7
8 public class MainActivity extends AppCompatActivity {
9
10    @Override
11    protected void onCreate(Bundle savedInstanceState) {
12        super.onCreate(savedInstanceState);
13        setContentView(R.layout.activity_main);
14
15        long[] pattern = {50,100,100,200,100,300};
16
17        Vibrator vibe=(Vibrator) getSystemService(Context.VIBRATOR_SERVICE);
18        vibe.vibrate(pattern,1);
19    }
20}
```

진도 끄기(화면 설계)

activity_main.xml

```
<?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">

    <Button
        android:id="@+id	btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="진동 끄기" />
</LinearLayout>
```



MainActivity.java x

```
1 package com.example.admin.myapplication;
2
3 import ...
9
10 public class MainActivity extends AppCompatActivity {
11     Button btn;
12     Vibrator vibe;
13
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_main);
18
19         long[] pattern = {50, 100, 100, 200, 100, 300};
20
21         vibe = (Vibrator) getSystemService(Context.VIBRATOR_SERVICE);
22         vibe.vibrate(pattern, 0);
23
24         btn = (Button) findViewById(R.id.btn);
25         btn.setOnClickListener(new View.OnClickListener() {
26             @Override
27             public void onClick(View v) {
28                 vibe.cancel();
29             }
30         });
31
32     }
33 }
```