



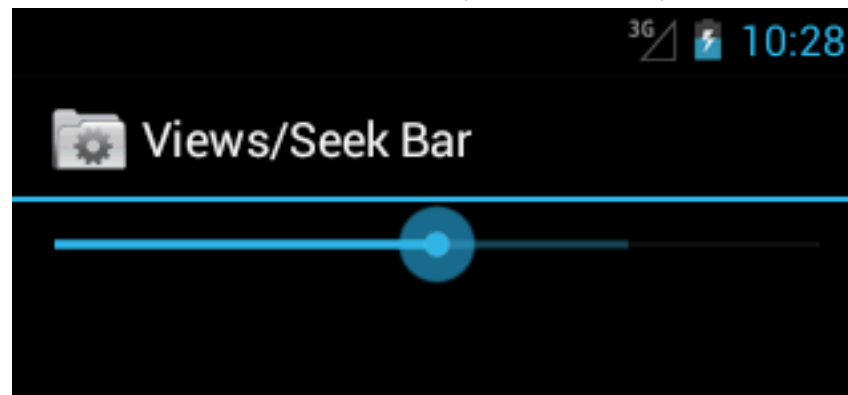
SeekBar 익히기

배 희호 교수
경북대학교
스마트IT과



SeekBar

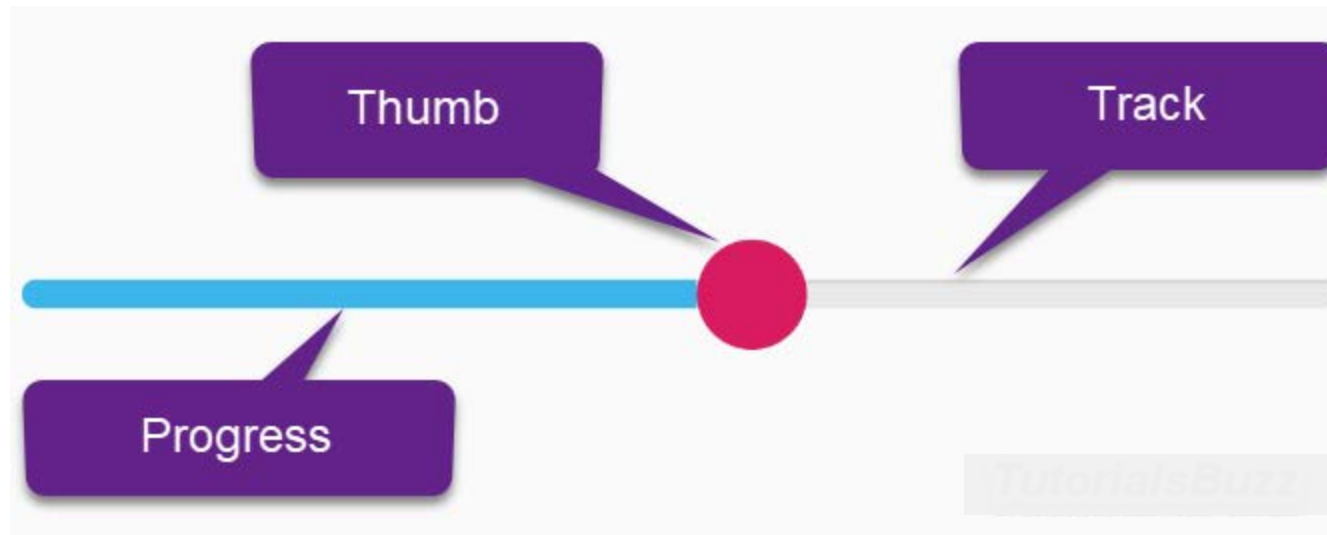
- SeekBar는 Progress Widget을 확장한 서브 클래스로, 사용자가 값을 직접 조정 가능 함
- 예) 핸드폰에서 화면 밝기나 음량 크기 등을 조절할 때 드래그해서 사용하는 객체라고 생각하면 됨
- 볼륨이나 동영상 재생 위치처럼 정확한 값보다는 대충의 값을 신속하게 조정할 때 적합
- 키패드로 조정하는 경우는 드물고 대부분 화면을 터치하여 조정하기 때문에 주변에 가급적이면 터치 입력을 받는 다른 위젯을 배치하지 않는 것이 좋음
- 사용자가 드래그할 수 있는 썸(thumb)이 추가





SeekBar

SeekBar 구성





SeekBar



■ 속성

■ ProgressBar의 파생 위젯이므로 속성도 그대로 물려 받음

속성	설명
max	시크바로 설정할 수 있는 최대 값을 설정 시크바의 배경에 열은 색으로 표시
progress	시크바의 현재 상태를 설정
progressTint	시크바의 현재 상태를 보여주는 직선 형태의 색상을 변경
progressBackgroundTint	시크바에 보여지는 직선 형태의 배경 색상을 변경
secondaryProgress	시크바의 권장 값을 설정 (사용자 조작 불가능) 대표적으로 이어폰을 낀 후 미디어 볼륨 정할 때 청각 보호를 위해 사용
secondaryProgressTint	secondaryProgress로 설정한 값까지의 배경색 을 지정
thumbTint	시크바의 손잡이 색상을 지정 설정하지 않을 경우 values/colors.xml 에 정의되 어 있는 colorAccent의 값으로 설정



SeekBar



■ 속성

■ android:thumb

- SeekBar의 버튼의 이미지를 결정하는 속성
- Thumb(버튼의 이미지) 모양을 별도의 이미지로 장식 가능 (디폴트가 무난함)



SeekBar



- 사용자가 진행 위치를 직접 지정
 - 동영상 재생에서 사용자가 재생 위치 지정할 때
 - 엄지(thumb) : 다른 drawable 이미지(jpg등) 표시 가능

```
<SeekBar  
    android:id="@+id/seekbar1"  
    android:layout_height="wrap_content"  
    android:layout_width="240px"  
    android:max="512"  
    android:thumb="@drawable/android" />
```



SeekBar



■ 메소드

속성	설명
setMax(int max)	시크바의 최대 값을 설정
setMin(int min)	시크바의 최소 값을 설정
setOnSeekBarChangeListener (SeekBar. OnSeekBarChangeListener l)	시크바의 변경된 진행 상태를 받을 수 있는 콜백 리스너를 설정
onProgressChanged(SeekBar seekBar, int progress, boolean fromUser)	사용자가 시크바를 움직일 때 호출 seekBar : 시크바 객체 progress : 시크바의 상태 값 fromUser : 시크바를 사용자가 움직였는지 여부
onStartTrackingTouch (SeekBar seekBar)	사용자가 시크바를 터치할 때 호출
onStopTrackingTouch (SeekBar seekBar)	사용자가 시크바에서 손을 뗄 때 호출



SeekBar



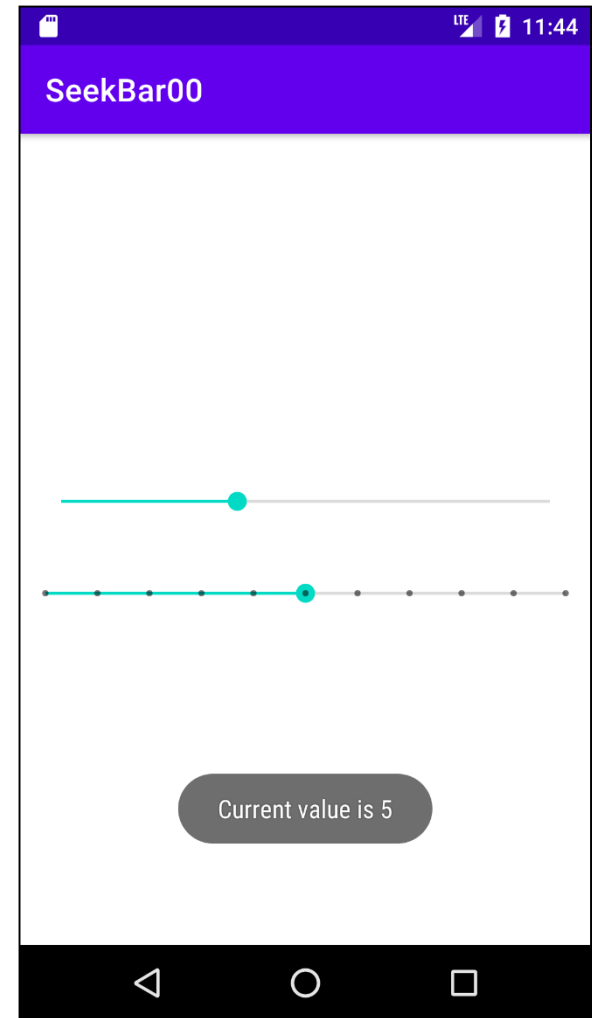
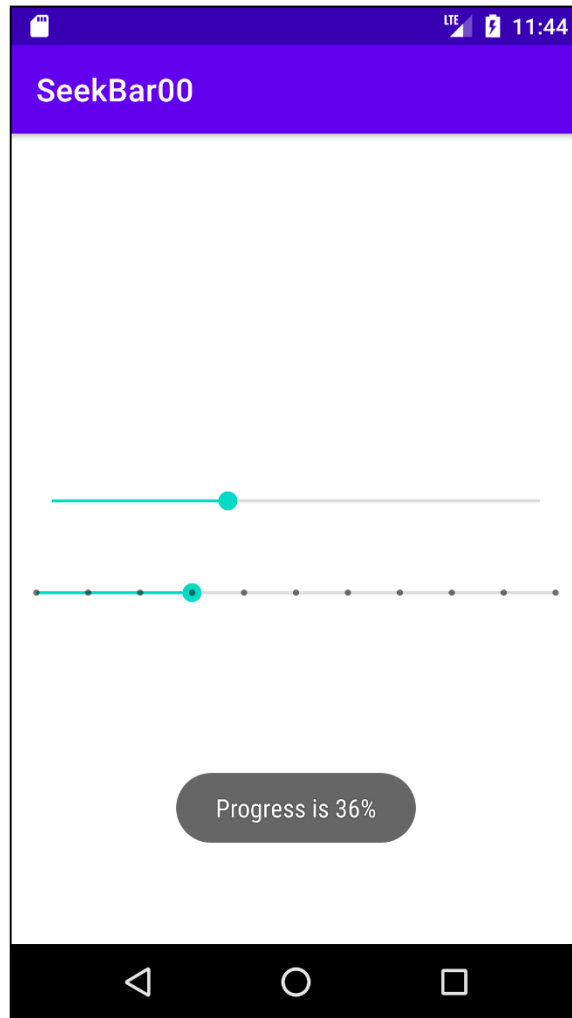
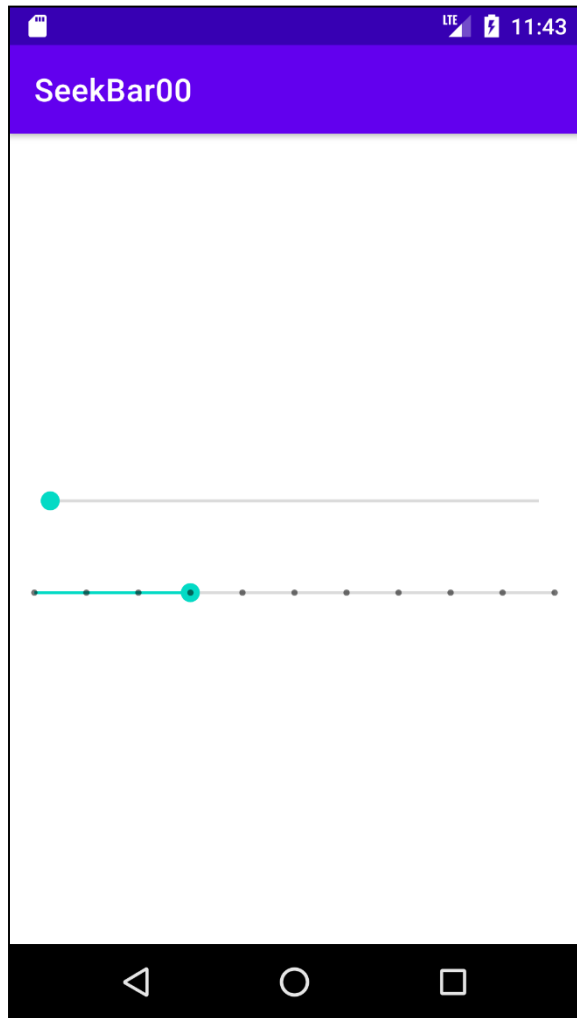
- 사용자가 SeekBar를 조작하면 값이 변하고, OnSeekBarChangeListener 인터페이스의 리스너들이 호출
 - 터치를 시작하거나 끝낼 때 특별한 처리가 필요할 때 사용하며, 가장 실용적인 것은 위치값이 변할 때인데 변경된 위치에 맞게 값을 조정

```
void onStartTrackingTouch(SeekBar seekBar)
void onStopTrackingTouch(SeekBar seekBar)
void onProgressChanged(SeekBar seekBar, int progress,
                        boolean fromUser)
```




SeekBar 예제 0

■ 다음과 같은 SeekBar를 만들어보자





SeekBar 예제 0



■ activity_main.xml

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

    <SeekBar
        android:id="@+id/seekBar1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_margin="10dp" />

    <Space
        android:layout_width="match_parent"
        android:layout_height="30dp"/>
```



SeekBar 예제 0



■ activity_main.xml

```
<SeekBar
    android:id="@+id/seekBar2"
    style="@style/Widget.AppCompat.SeekBar.Discrete"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:max="10"
    android:progress="3"/>
</LinearLayout>
```



SeekBar 예제 0

■ MainActivity.JAVA

```
public class MainActivity extends AppCompatActivity {
```

```
    @Override
```

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

```
        SeekBar seekBar1 = findViewById(R.id.seekBar);
```

```
        if (seekBar1 != null) {  
            seekBar1.setOnSeekBarChangeListener(  
                new SeekBar.OnSeekBarChangeListener() {
```

```
                @Override
```

```
                public void onProgressChanged(SeekBar seekBar, int progress,  
                                                boolean fromUser) {  
                }  
            }  
        }  
    }
```



SeekBar 예제 0

■ MainActivity.JAVA

```
@Override
public void onStartTrackingTouch(SeekBar seekBar) {
}

@Override
public void onStopTrackingTouch(SeekBar seekBar) {
    Toast.makeText(getApplicationContext(), "Progress is " +
        seekBar.getProgress() + "%", Toast.LENGTH_SHORT).show();
}
});
}
```



SeekBar 예제 0

```
SeekBar seekBar2 = findViewById(R.id.seekBar2);
if (seekBar2 != null) {
    seekBar2.setOnSeekBarChangeListener(
        new SeekBar.OnSeekBarChangeListener() {
            @Override
            public void onProgressChanged(SearchBar seekBar, int progress,
                                           boolean fromUser) {
            }
            @Override
            public void onStartTrackingTouch(SearchBar seekBar) {
            }
            @Override
            public void onStopTrackingTouch(SearchBar seekBar) {
                Toast.makeText(getApplicationContext(), "Current value is " +
                    seekBar.getProgress(), Toast.LENGTH_SHORT).show();
            }
        });
}
```



SeekBar 예제 0

■ activity_main2.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/container"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:gravity="center"
    android:orientation="vertical"
    tools:context=".MainActivity2">

</LinearLayout>
```



SeekBar 예제 0

■ MainActivity2.JAVA

```
public class MainActivity2 extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main2);
```

```
        SeekBar seekBar = new SeekBar(this);  
        LinearLayout.LayoutParams layoutParams =  
            new LinearLayout.LayoutParams(  
                ViewGroup.LayoutParams.MATCH_PARENT,  
                ViewGroup.LayoutParams.WRAP_CONTENT);  
        layoutParams.setMargins(30, 30, 30, 30);  
        seekBar.setLayoutParams(layoutParams);  
        LinearLayout linearLayout = findViewById(R.id.container);  
        if (linearLayout != null) {  
            linearLayout.addView(seekBar);  
        }
```




SeekBar 예제 0

■ MainActivity2.JAVA

```
SeekBar.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SearchBar seekBar, int progress,  
                                       boolean fromUser) {  
        }  
  
        @Override  
        public void onStartTrackingTouch(SearchBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SearchBar seekBar) {  
            Toast.makeText(getApplicationContext(), "Progress is " +  
                seekBar.getProgress() + "%", Toast.LENGTH_SHORT).show();  
        }  
    });  
}
```



SeekBar 예제 1

- 다음과 같은 SeekBar를 만들어보자





SeekBar 예제 1

- SeekBar를 레이아웃에 넣을 때
 - android:max는 SeekBar 최대치일때의 수치 설정
 - android:thumb은 SeekBar를 드래그 하는 아이콘 설정
- SeekBar 사용시, SeekBar.setOnSeekBarChangeListener() 사용시 주요 이벤트에 몇가지에 대해 언제 발생하는지 확인 하는 예제
 - onStartTrackingTouch() : 최초로 탭하여 드래그 시작 할 때 발생
 - onProgressChanged() : 드래그 하는 중에 발생
 - onStopTrackingTouch() : 드래그를 멈출 때 발생



SeekBar 예제 1



■ 이미지 준비





SeekBar 예제 1



■ drawable/custom_seek_bar.xml

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list xmlns:android="http://schemas.android.com/apk/res/android">
  <item
    android:id="@android:id/background">
    <shape>
      <corners
        android:radius="10dip" />
      <gradient
        android:startColor="#ffffff"
        android:centerColor="#ffdddd"
        android:centerY="0.50"
        android:endColor="#ffffff"
        android:angle="270" />
    </shape>
  </item>
```



SeekBar 예제 1



■ drawable/custom_seek_bar.xml

```
<item
  android:id="@android:id/secondaryProgress">
  <clip>
    <shape>
      <corners
        android:radius="10dip" />
      <gradient
        android:startColor="#77bf0d0d"
        android:endColor="#77ef5555"
        android:angle="90" />
    </shape>
  </clip>
</item>
```



SeekBar 예제 1



■ drawable/custom_seek_bar.xml

```
<item
    android:id="@android:id/progress">
    <clip>
        <shape>
            <corners
                android:radius="10dip" />
            <gradient
                android:startColor="#ffbf0d0d"
                android:endColor="#ffef5555"
                android:angle="90" />
        </shape>
    </clip>
</item>
</layer-list>
```

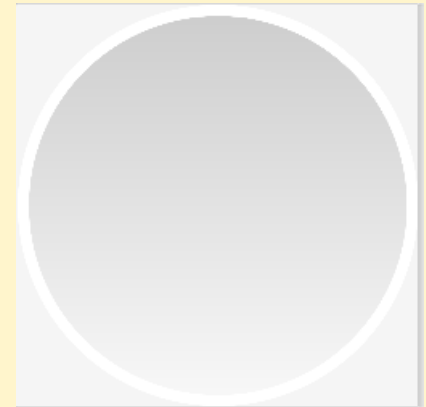


SeekBar 예제 1



■ drawable/custom_thumb_state_default.xml

```
<?xml version="1.0" encoding="utf-8"?>
<shape
  xmlns:android="http://schemas.android.com/apk/res/android"
  android:shape="oval">
  <size
    android:width="35dip"
    android:height="35dip" />
  <stroke
    android:width="1dip"
    android:color="#ffffff" />
  <gradient
    android:startColor="#ffcdcdcd"
    android:endColor="#fff8f8f8"
    android:angle="270"
    android:type="linear" />
</shape>
```

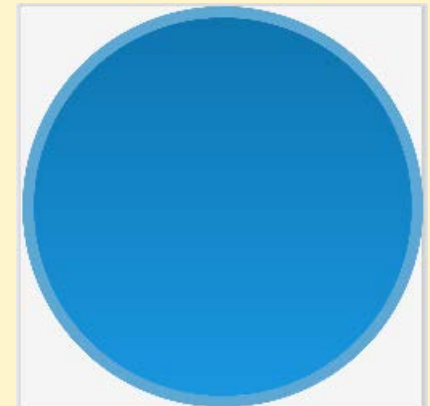




SeekBar 예제 1

■ drawable/custom_thumb_state_pressed.xml

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="oval">
    <size
        android:width="35dip"
        android:height="35dip" />
    <stroke
        android:width="1dip"
        android:color="#ff5da8d4" />
    <gradient
        android:angle="270"
        android:endColor="#ff1997e1"
        android:startColor="#ff0e75af"
        android:type="linear" />
</shape>
```

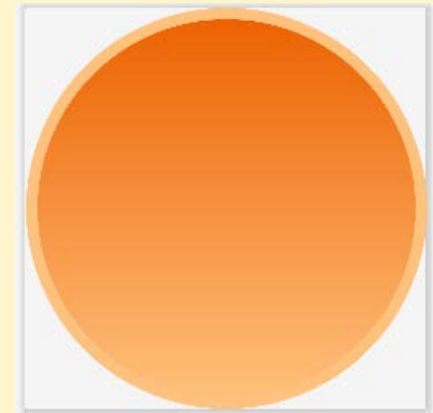




SeekBar 예제 1

■ drawable/custom_thumb_state_selected

```
?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="oval">
    <size
        android:width="35dip"
        android:height="35dip" />
    <stroke
        android:width="1dip"
        android:color="#ffffc27e" />
    <gradient
        android:angle="270"
        android:endColor="#ffffc27e"
        android:startColor="#ffed6100"
        android:type="linear" />
</shape>
```





SeekBar 예제 1

■ drawable/seek_bar_thumb.xml

```
<?xml version="1.0" encoding="utf-8"?>
<selector xmlns:android="http://schemas.android.com/apk/res/android">
  <item android:state_pressed="true"
    android:drawable="@drawable/custom_thumb_state_pressed" />
  <item android:state_focused="true"
    android:drawable="@drawable/custom_thumb_state_selected" />
  <item android:state_selected="true"
    android:drawable="@drawable/custom_thumb_state_selected" />
  <item android:drawable="@drawable/custom_thumb_state_default" />
</selector>
```



SeekBar 예제 1



■ style/CustomSeekBar.xml

```
<resources>
  <!-- Base application theme. -->
  <style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">
    <!-- Customize your theme here. -->
    <item name="colorPrimary">@color/colorPrimary</item>
    <item name="colorPrimaryDark">@color/colorPrimaryDark</item>
    <item name="colorAccent">@color/colorAccent</item>
  </style>

  <style name="CustomSeekBar" parent="android:Widget.SeekBar">
    <item name="android:progressDrawable">@drawable/custom_seek_bar</item>
    <item name="android:thumb">@drawable/seek_bar_thumb</item>
    <item name="android:thumbOffset">0dip</item>
  </style>
</resources>
```



SeekBar 예제 1

■ 사용자 인터페이스

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="10dp"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:padding="5dp"
        android:text="SeekBar테스트"
        android:textColor="#FFFFFF"
        android:background="#0044FF"
        android:textSize="20sp" />
```



SeekBar 예제 1



■ 사용자 인터페이스

```
<SeekBar
    android:id="@+id/seekBar"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"/>
<TextView
    android:id="@+id/textView1"
    android:text="현재 값 : "
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"/>
<SeekBar
    android:id="@+id/seekBar2"
    style="@style/Widget.AppCompat.SeekBar.Discrete"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="30dp"
    android:max="10"
    android:progress="0" />
```



SeekBar 예제 1



■ 사용자 인터페이스

```
<TextView
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="현재 값 : " />
<SeekBar
    android:id="@+id/seekBar3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:progress="0"
    android:max="100"
    android:secondaryProgress="80"
    android:layout_marginTop="30dp" />
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="현재 값 : " />
```



SeekBar 예제 1

■ 사용자 인터페이스

```
<SeekBar
    android:id="@+id/seekBar4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:max="100"
    android:progress="50"
    android:thumb="@drawable/logo"
    android:layout_marginTop="30dp" />
```

```
<TextView
    android:id="@+id/textView4"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="현재 값 : 50" />
```




SeekBar 예제 1

■ 사용자 인터페이스

```
<SeekBar
    android:id="@+id/seekBar5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:progress="50"
    android:max="100"
    style="@style/CustomSeekBar"
    android:secondaryProgress="80"
    android:layout_marginTop="30dp"/>
```

```
<TextView
    android:id="@+id/textView5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="현재 값 : 50" />
```

```
</LinearLayout>
```



SeekBar 예제 1

■ 프로그램

```
public class MainActivity extends AppCompatActivity {  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
  
        SeekBar seekBar = findViewById(R.id.seekBar);  
        final TextView textView = findViewById(R.id.textView1);  
        SeekBar seekBar1 = findViewById(R.id.seekBar2);  
        final TextView textView1 = findViewById(R.id.textView2);  
        final SeekBar seekBar2 = findViewById(R.id.seekBar3);  
        final TextView textView2 = findViewById(R.id.textView3);  
        final SeekBar seekBar3 = findViewById(R.id.seekBar4);  
        final TextView textView3 = findViewById(R.id.textView4);  
        final SeekBar seekBar4 = findViewById(R.id.seekBar5);  
        final TextView textView4 = findViewById(R.id.textView5);  
    }  
}
```



SeekBar 예제 1

■ 프로그램

```
seekBar.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SeekBar seekBar, int progress,  
                                       boolean fromUser) {  
            textView.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SeekBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SeekBar seekBar) {  
        }  
    });
```



SeekBar 예제 1

■ 프로그램

```
seekBar1.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SeekBar seekBar, int progress,  
                                       boolean fromUser) {  
            textView1.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SeekBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SeekBar seekBar) {  
        }  
    });
```



SeekBar 예제 1

■ 프로그램

```
seekBar2.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SeekBar seekBar, int progress,  
                                       boolean fromUser) {  
            seekBar2.setSecondaryProgress(progress+ 10);  
            textView2.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SeekBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SeekBar seekBar) {  
        }  
    });
```



SeekBar 예제 1

■ 프로그램

```
seekBar3.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SeekBar seekBar, int progress,  
                                       boolean fromUser) {  
            seekBar3.setSecondaryProgress(progress+ 10);  
            textView3.setText("현재 값 : "+progress);  
        }  
        @Override  
        public void onStartTrackingTouch(SeekBar seekBar) {  
        }  
        @Override  
        public void onStopTrackingTouch(SeekBar seekBar) {  
        }  
    });
```



SeekBar 예제 1

■ 프로그램

```
seekBar4.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SeekBar seekBar, int progress,  
            boolean fromUser) {  
            seekBar4.setSecondaryProgress(progress+ 10);  
            textView4.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SeekBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SeekBar seekBar) {  
        }  
    });  
}
```



SeekBar 예제 2

■ 다음과 같은 SeekBar를 만들어보자





SeekBar 예제 2

■ 사용자 인터페이스

```
<?xml version="1.0" encoding="utf-8" ?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="10dp"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:padding="5dp"
        android:text="SeekBar테스트"
        android:textColor="#FFFFFF"
        android:background="#0044FF"
        android:textSize="20sp" />
```



SeekBar 예제 2

■ 사용자 인터페이스

```
<SeekBar
    android:id="@+id/seekBar1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:max="100"
    android:progress="0"
    android:secondaryProgress="0"
    android:layout_marginTop="30dp"
    style="@android:style/Widget.Holo.Light.SeekBar"/>

<TextView
    android:id="@+id/textView1"
    android:text="현재 값 : "
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"/>
```



SeekBar 예제 2

■ 사용자 인터페이스

<SeekBar

```
    android:id="@+id/seekBar2"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:max="100"  
    android:progress="0"  
    android:secondaryProgress="0"  
    android:layout_marginTop="30dp"  
    style="@android:style/Widget.Holo.Light.SeekBar" />
```

<TextView

```
    android:id="@+id/textView2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="현재 값 : " />
```



SeekBar 예제 2

■ 사용자 인터페이스

<SeekBar

```
    android:id="@+id/seekBar3"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:max="100"  
    android:progressDrawable="@drawable/seekbar_drawable_progress"  
    android:thumb="@drawable/seekbar_drawable_thumb"  
    android:background="@color/colorPrimary"  
    android:layout_marginTop="30dp" />
```

<TextView

```
    android:id="@+id/textView3"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="현재 값 : " />
```



SeekBar 예제 2

■ 사용자 인터페이스

<SeekBar

```
    android:id="@+id/seekBar4"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    style="@android:style/Widget.Holo.Light.SeekBar"  
    android:thumb="@drawable/star1"  
    android:layout_marginTop="30dp"  
    android:max="100"  
    android:progress="10" />
```

<TextView

```
    android:id="@+id/textView4"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="현재 값 : " />
```



SeekBar 예제 2

■ 사용자 인터페이스

```
<SeekBar
    android:id="@+id/seekBar5"
    android:layout_marginTop="30dp"
    android:progress="5"
    android:max="100"
    android:thumb="@drawable/seekbar1_thumb"
    android:progressDrawable="@drawable/seekbar1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content" />

<TextView
    android:id="@+id/textView5"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="현재 값 :" />

</LinearLayout>
```



SeekBar 예제 2



■ drawable/seekbar1.xml

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list xmlns:android="http://schemas.android.com/apk/res/android">
    <!--시크바 배경-->
    <item android:id="@android:id/background">
        <shape android:shape="line"> <!--선 : 길이 0/6dp -->
            <stroke
                android:width="6dp"
                android:color="#D5D5D5" />
        </shape>
    </item>
```



SeekBar 예제 2

■ drawable/seekbar1.xml

```
<!-- 시크바 배경2 -->
<item android:id="@android:id/secondaryProgress">
    <clip>
        <shape android:shape="line">
            <stroke
                android:width="6dp"
                android:color="#B2CCFF" />
        </shape>
    </clip>
</item>
```




SeekBar 예제 2

■ drawable/seekbar1.xml

```
<!-- 시크바 프로그래스 -->
<item android:id="@android:id/progress">
    <clip>
        <shape android:shape="line">
            <stroke
                android:width="6dp"
                android:color="#6799FF" />
        </shape>
    </clip>
</item>
</layer-list>
```



SeekBar 예제 2

■ drawable/seekbar1_thumb.xml

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android"
    android:shape="oval"
    android:useLevel="false" >
    <!-- 배경 -->
    <solid
        android:color="#D9E5FF" />
    <!-- 테두리 -->
    <stroke
        android:width="2dp"
        android:color="#0054FF" />
    <!-- 크기 -->
    <size
        android:width="13dp"
        android:height="13dp" />
</shape>
```



SeekBar 예제 2



■ drawable/seekbar_drawable_progress.xml

```
<?xml version="1.0" encoding="utf-8"?>
<layer-list xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:id="@android:id/background">
        <shape android:shape="rectangle">
            <stroke android:color="#dadbdcd" android:width="2dp" />
            <solid android:color="#b7b7b7"/>
            <corners android:radius="10dp"/>
        </shape>
    </item>
    <item android:id="@android:id/progress">
        <clip android:clipOrientation="horizontal" android:gravity="left">
            <shape android:shape="rectangle">
                <stroke android:color="#ffe735" android:width="2dp" />
                <solid android:color="#ff0d00"/>
                <corners android:radius="10dp"/>
            </shape>
        </clip>
    </item>
</layer-list>
```



SeekBar 예제 2



■ drawable/seekbar_drawable_thumb.xml

```
<?xml version="1.0" encoding="utf-8"?>
<selector xmlns:android="http://schemas.android.com/apk/res/android">
  <item>
    <shape android:shape="oval">
      <solid android:color="#585eff" />
      <stroke android:width="3dp" android:color="#99c8f7" />
      <size android:width="30dp" android:height="30dp" />
    </shape>
  </item>
</selector>
```



SeekBar 예제 2

■ JAVA 프로그램

```
public class MainActivity extends AppCompatActivity {  
  
    @RequiresApi(api = Build.VERSION_CODES.JELLY_BEAN)  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
  
        SeekBar seekBar = findViewById(R.id.seekBar1);  
        final TextView textView = findViewById(R.id.textView1);  
        SeekBar seekBar1 = findViewById(R.id.seekBar2);  
        final TextView textView1 = findViewById(R.id.textView2);  
        final SeekBar seekBar2 = findViewById(R.id.seekBar3);  
        final TextView textView2 = findViewById(R.id.textView3);  
        final SeekBar seekBar3 = findViewById(R.id.seekBar4);  
        final TextView textView3 = findViewById(R.id.textView4);  
        final SeekBar seekBar4 = findViewById(R.id.seekBar5);  
        final TextView textView4 = findViewById(R.id.textView5);  
    }  
}
```



SeekBar 예제 2

■ JAVA 프로그램

```
seekBar.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SearchBar seekBar, int progress,  
                                       boolean fromUser) {  
            textView.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SearchBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SearchBar seekBar) {  
        }  
    });
```



SeekBar 예제 2

■ JAVA 프로그램

```
seekBar1.setProgressDrawable().setColorFilter(  
    Color.RED, PorterDuff.Mode.SRC_IN);  
seekBar1.getThumb().setColorFilter(  
    Color.BLUE, PorterDuff.Mode.SRC_IN);  
seekBar1.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SeekBar seekBar, int progress,  
                                       boolean fromUser) {  
            textView1.setText("현재 값 : "+progress);  
        }  
        @Override  
        public void onStartTrackingTouch(SeekBar seekBar) {  
        }  
        @Override  
        public void onStopTrackingTouch(SeekBar seekBar) {  
        }  
    });
```



SeekBar 예제 2

■ JAVA 프로그램

```
seekBar2.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SeekBar seekBar, int progress,  
                                       boolean fromUser) {  
            seekBar2.setSecondaryProgress(progress+ 10);  
            textView2.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SeekBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SeekBar seekBar) {  
        }  
    });
```




SeekBar 예제 2

■ JAVA 프로그램

```
seekBar3.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SearchBar seekBar, int progress,  
                                       boolean fromUser) {  
            seekBar3.setSecondaryProgress(progress+ 10);  
            textView3.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SearchBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SearchBar seekBar) {  
        }  
    });
```



SeekBar 예제 2

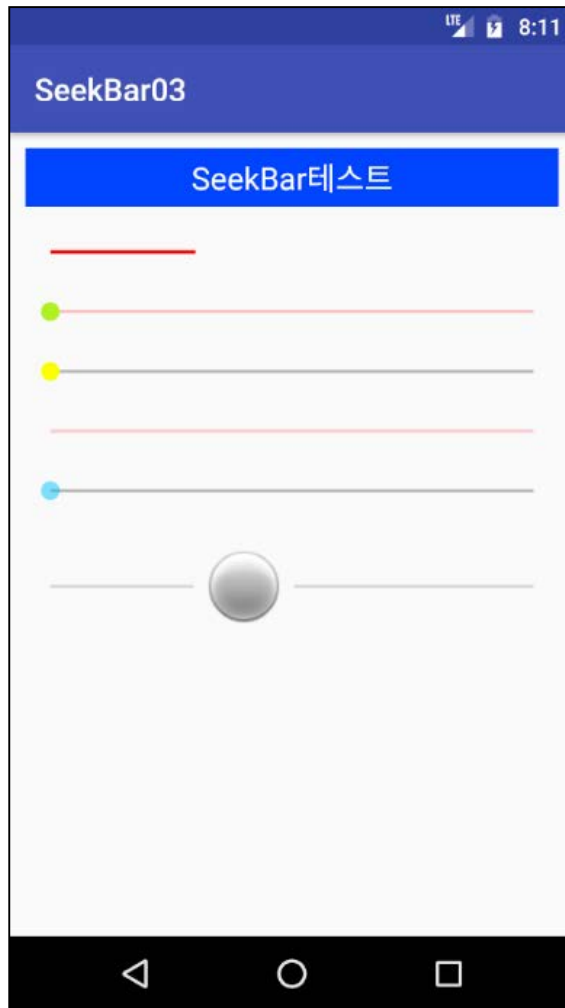
■ JAVA 프로그램

```
seekBar4.setOnSeekBarChangeListener(  
    new SeekBar.OnSeekBarChangeListener() {  
        @Override  
        public void onProgressChanged(SearchBar seekBar, int progress,  
                                       boolean fromUser) {  
            seekBar4.setSecondaryProgress(progress+ 10);  
            textView4.setText("현재 값 : "+progress);  
        }  
  
        @Override  
        public void onStartTrackingTouch(SearchBar seekBar) {  
        }  
  
        @Override  
        public void onStopTrackingTouch(SearchBar seekBar) {  
        }  
    });  
}
```



SeekBar 예제 3

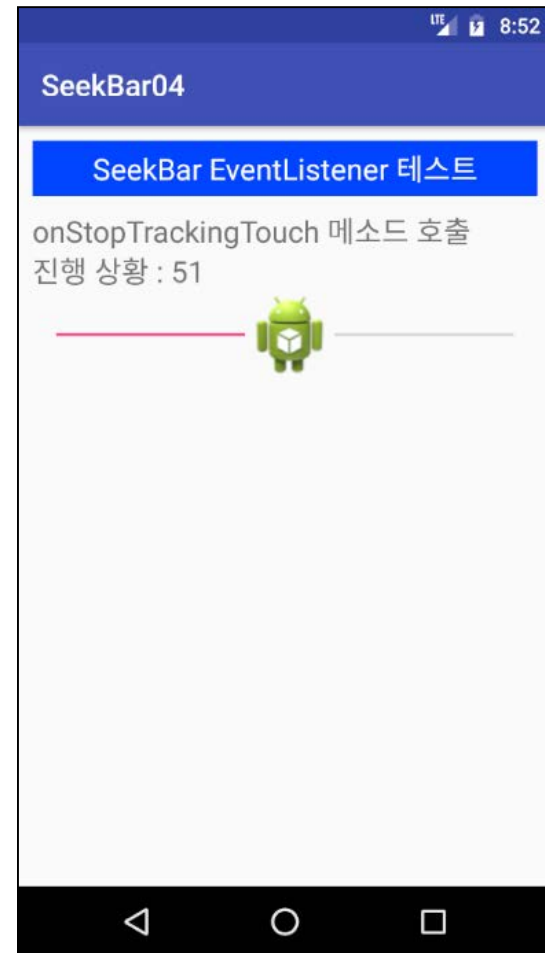
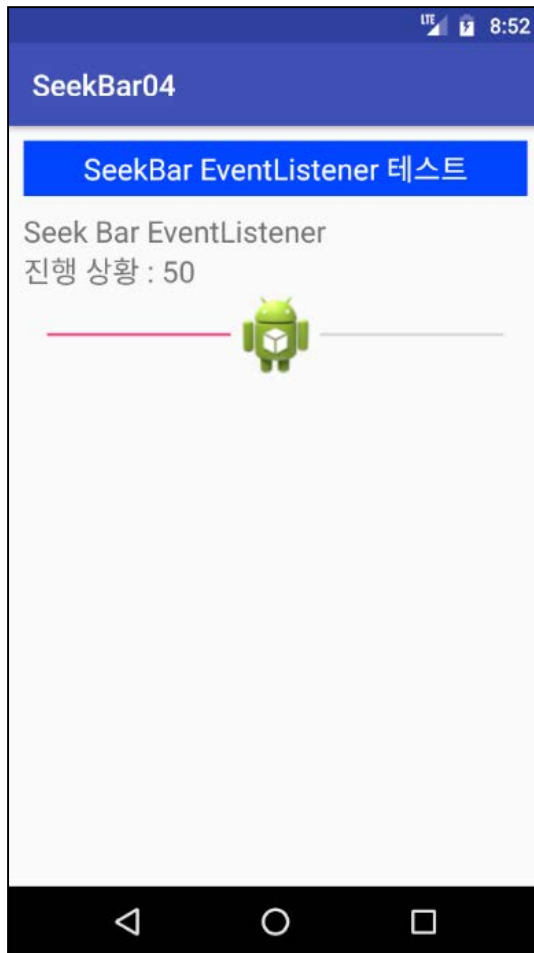
■ 다음과 같은 SeekBar를 만들어보자





SeekBar 예제 4

- 다음과 같은 SeekBar를 만들어보자





SeekBar 예제 4



■ activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="10dp"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:padding="5dp"
        android:text="SeekBar EventListener 테스트"
        android:textColor="#FFFFFF"
        android:background="#0044FF"
        android:textSize="20sp" />
```



SeekBar 예제 4



■ activity_main.xml

```
<TextView
    android:id="@+id/textView"
    android:layout_marginTop="10dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Seek Bar EventListener"
    android:textSize="20dp"/>

<TextView
    android:id="@+id/textView1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="진행 상황 : 50"
    android:textSize="20dp"/>
```



SeekBar 예제 4



■ activity_main.xml

```
<SeekBar  
    android:id="@+id/seekBar"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:max="100"  
    android:progress="50"  
    android:thumb="@drawable/logo"/>  
</LinearLayout>
```





SeekBar 예제 4

■ MainActivity.JAVA

```
public class MainActivity extends AppCompatActivity {  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
  
        final TextView textView = findViewById(R.id.textView);  
        final TextView textView1 = findViewById(R.id.textView1);  
        SeekBar seekBar = findViewById(R.id.seekBar);  
    }  
}
```




SeekBar 예제 4

■ MainActivity.JAVA

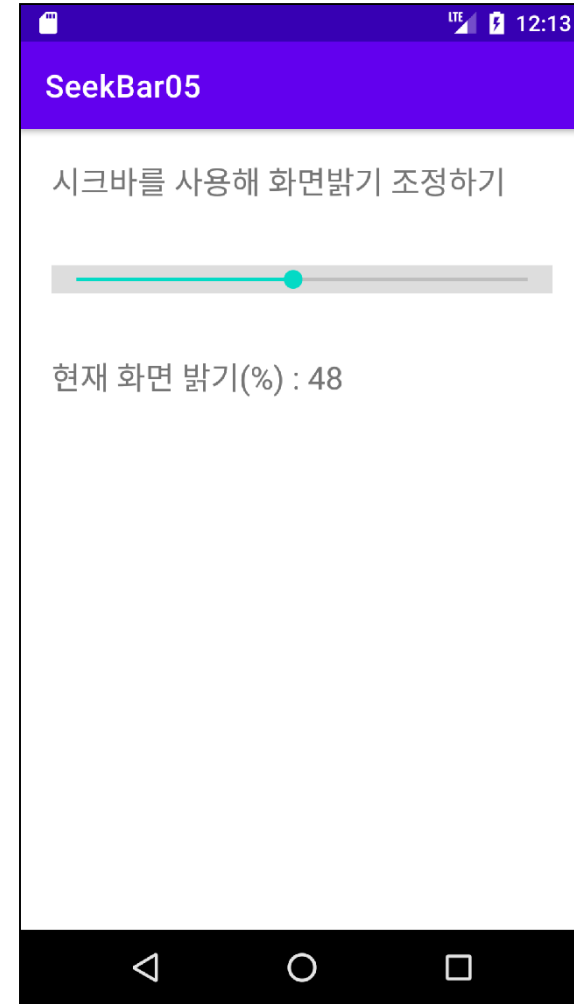
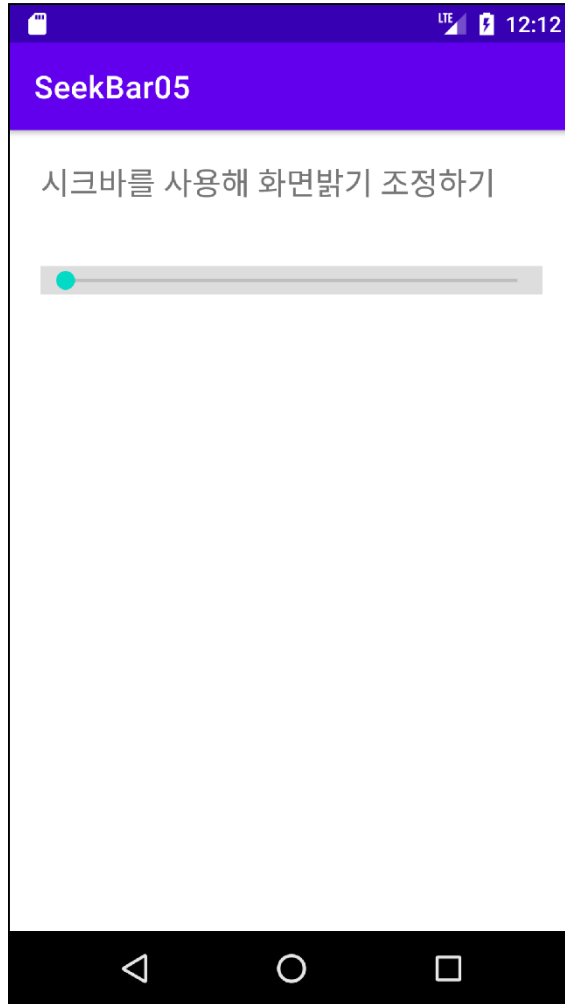
```
seekBar.setOnSeekBarChangeListener(new
    SeekBar.OnSeekBarChangeListener() {
    public void onStopTrackingTouch(SeekBar seekBar) {
        textView.setText("onStopTrackingTouch 메소드 호출");
    }

    public void onStartTrackingTouch(SeekBar seekBar) {
        textView.setText("onStartTrackingTouch 메소드 호출");
    }

    public void onProgressChanged(SeekBar seekBar, int progress,
        boolean fromUser) {
        textView.setText("onProgressChanged 메소드 호출");
        textView1.setText("진행 상황 : " + progress);
    }
    });
}
```



SeekBar 예제 5





SeekBar 예제 5

■ 사용자 인터페이스

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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="20dp"
        android:text="SeekBar를 사용해 화면밝기 조정하기"
        android:textSize="20dp" />
```



SeekBar 예제 5

■ 사용자 인터페이스

```
<SeekBar
    android:id="@+id/seekBar"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="20dp"
    android:background="#22000000"
    android:max="100"
    android:min="10" />
```

```
<TextView
    android:id="@+id/textView"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="20dp"
    android:textSize="20dp" />
```

```
</LinearLayout>
```



SeekBar 예제 5

■ MainActivity.JAVA

```
public class MainActivity extends AppCompatActivity {
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        TextView textView = findViewById(R.id.textView);
```



SeekBar 예제 5

■ MainActivity.JAVA

```
SeekBar seekBar = findViewById(R.id.seekBar);
seekBar.setOnSeekBarChangeListener(
    new SeekBar.OnSeekBarChangeListener() {
        @Override
        public void onProgressChanged(SearchBar seekBar, int progress,
                                       boolean fromUser) {
            //윈도우 밝기 값 10% ~ 100% 사이로 제한
            if(progress < 10){
                progress = 10;
            }else if(progress>100){
                progress = 100;
            }
            WindowManager.LayoutParams params = getWindow().getAttributes();
            params.screenBrightness = progress / 100.0f;
            getWindow().setAttributes(params); //설정된 밝기 값 적용
            textView.setText("현재 화면 밝기(%) : " + progress);
        }
    }
```



SeekBar 예제 5

■ MainActivity.JAVA

```
@Override
public void onStartTrackingTouch(SeekBar seekBar) {

}

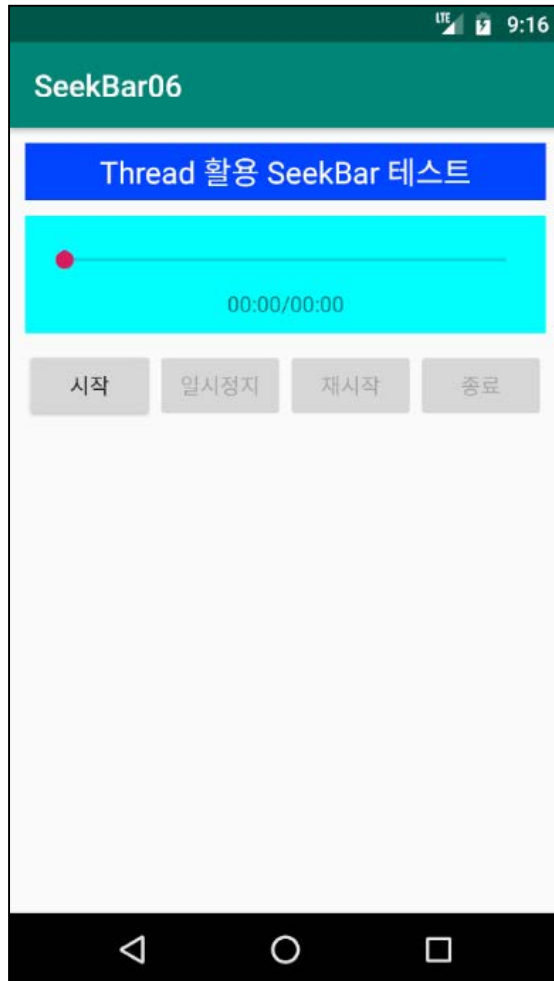
@Override
public void onStopTrackingTouch(SeekBar seekBar) {

}
});
}
```



SeekBar 예제 6

- Thread를 활용하여 음악을 연주하는 프로그램을 만들어보자





SeekBar 예제 6



■ activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_height="match_parent"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:padding="10dp"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:padding="5dp"
        android:text="Thread 활용 SeekBar 테스트"
        android:textColor="#FFFFFF"
        android:background="#0044FF"
        android:textSize="20sp" />
```



SeekBar 예제 6



```
<LinearLayout
    android:layout_marginTop="10dp"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:background="#00FFFF"
    android:padding="10dp">
    <SeekBar
        android:id="@+id/seekBar1"
        android:layout_height="wrap_content"
        android:layout_width="match_parent"
        android:layout_marginTop="10dp"/>
    <TextView
        android:id="@+id/status"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        android:gravity="center"
        android:text="00:00/00:00"/>
</LinearLayout>
```



SeekBar 예제 6

```
<LinearLayout
```

```
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="10dp"  
    android:gravity="center">
```

```
<Button
```

```
    android:layout_height="match_parent"  
    android:layout_width="wrap_content"  
    android:layout_weight="1"  
    android:text="시작"  
    android:id="@+id/button1" />
```

```
<Button
```

```
    android:layout_height="match_parent"  
    android:layout_width="wrap_content"  
    android:layout_weight="1"  
    android:text="일시정지"  
    android:id="@+id/button2"  
    android:enabled="false"/>
```



SeekBar 예제 6



■ activity_main.xml

```
<Button
    android:layout_height="match_parent"
    android:layout_width="wrap_content"
    android:layout_weight="1"
    android:text="재시작"
    android:id="@+id/button3"
    android:enabled="false"/>
```

```
<Button
    android:layout_height="match_parent"
    android:layout_width="wrap_content"
    android:layout_weight="1"
    android:text="종료"
    android:id="@+id/button4"
    android:enabled="false" />
```

```
</LinearLayout>
```

```
</LinearLayout>
```



SeekBar 예제 6

■ MainActivity.JAVA

```
public class MainActivity extends AppCompatActivity {  
    Thread thread = null;  
    MediaPlayer mediaPlayer;  
    SeekBar seekBar;  
    Button start, pause, restart, stop;  
    int size;  
    int pos;  
    TextView textView;  
    boolean flag = false;
```



SeekBar 예제 6

■ MainActivity.JAVA

```
class MyThread extends Thread {  
    Handler handler = new Handler();  
    @Override  
    public void run() {  
        while (flag) {  
            int current= mediaPlayer.getCurrentPosition();  
            try {  
                seekBar.setProgress(current);  
                final String msg = getTime(current)+ "/" +  
                                     getTime(size);  
                handler.post(new Runnable() {  
                    @Override  
                    public void run() {  
                        textView.setText(msg);  
                    }  
                });  
            }  
        }  
    }  
}
```



SeekBar 예제 6

■ MainActivity.JAVA

```
        } catch (Exception e) {  
            ;  
        }  
    }  
};
```



SeekBar 예제 6

■ MainActivity.JAVA

@Override

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setContentView(R.layout.activity_main);  
  
    textView = findViewById(R.id.status);  
    seekBar = findViewById(R.id.seekBar1);  
    seekBar.setOnSeekBarChangeListener(  
        new SeekBar.OnSeekBarChangeListener() {  
            public void onStopTrackingTouch(SeekBar seekBar) {  
                mediaPlayer.seekTo(seekBar.getProgress());  
                mediaPlayer.start();  
                thread = new MyThread();  
                thread.start();  
                flag = true;  
            }  
        }  
    );  
}
```




SeekBar 예제 6

■ MainActivity.JAVA

```
public void onStartTrackingTouch(SeekBar seekBar) {  
    mediaPlayer.pause();  
    flag = false;  
}  
  
public void onProgressChanged(SeekBar seekBar, int progress,  
                             boolean fromUser) {  
    if (seekBar.getMax() == progress) {  
        mediaPlayer.stop();  
        flag = false;  
        start.setEnabled(true);  
        stop.setEnabled(false);  
        pause.setEnabled(false);  
        restart.setEnabled(false);  
    }  
}  
});
```



SeekBar 예제 6

■ MainActivity.JAVA

```
start = findViewById(R.id.button1);
start.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mediaPlayer = MediaPlayer.create(getApplicationContext(),
                                           R.raw.davichi);

        mediaPlayer.setLooping(false);
        size = mediaPlayer.getDuration();
        seekBar.setMax(size);
        mediaPlayer.start();
        thread = new MyThread();
        thread.start();
        flag = true;
        start.setEnabled(false);
        stop.setEnabled(true);
        pause.setEnabled(true);
    }
});
```



SeekBar 예제 6

■ MainActivity.JAVA

```
pause = findViewById(R.id.button2);
pause.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mediaPlayer.pause();
        pos = mediaPlayer.getCurrentPosition();
        pause.setEnabled(false);
        restart.setEnabled(true);
        flag = false;
    }
});
```



SeekBar 예제 6

■ MainActivity.JAVA

```
restart = findViewById(R.id.button3);
restart.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mediaPlayer.seekTo(pos);
        mediaPlayer.start();
        restart.setEnabled(false);
        pause.setEnabled(true);
        thread = new MyThread();
        thread.start();
        flag = true;
    }
});
```



SeekBar 예제 6

■ MainActivity.JAVA

```
stop = findViewById(R.id.button4);
stop.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        mediaPlayer.stop();
        mediaPlayer.release();
        flag = false;
        start.setEnabled(true);
        pause.setEnabled(false);
        restart.setEnabled(false);
        stop.setEnabled(false);
        seekBar.setProgress(0); // seek바 초기화
    }
});
}
```



SeekBar 예제 6

■ MainActivity.JAVA

@Override

```
protected void onPause() {  
    super.onPause();  
    if (mediaPlayer != null) {  
        mediaPlayer.release();  
    }  
    start.setEnabled(true);  
    stop.setEnabled(false);  
    pause.setEnabled(false);  
    restart.setEnabled(false);  
}
```



SeekBar 예제 6

■ MainActivity.JAVA

```
static private String addZero(int n) {  
    if(n < 10) return "0"+n;  
    else return String.valueOf(n);  
}
```

```
static public String getTime(int n) {  
    int minute, second;  
    int time = n / 1000;  
    String timer;
```

```
    minute = time %3600;  
    second = minute % 60;  
    minute /= 60;
```

```
    timer = String.format("%2s:%2s", addZero(minute), addZero(second));  
    return timer;
```

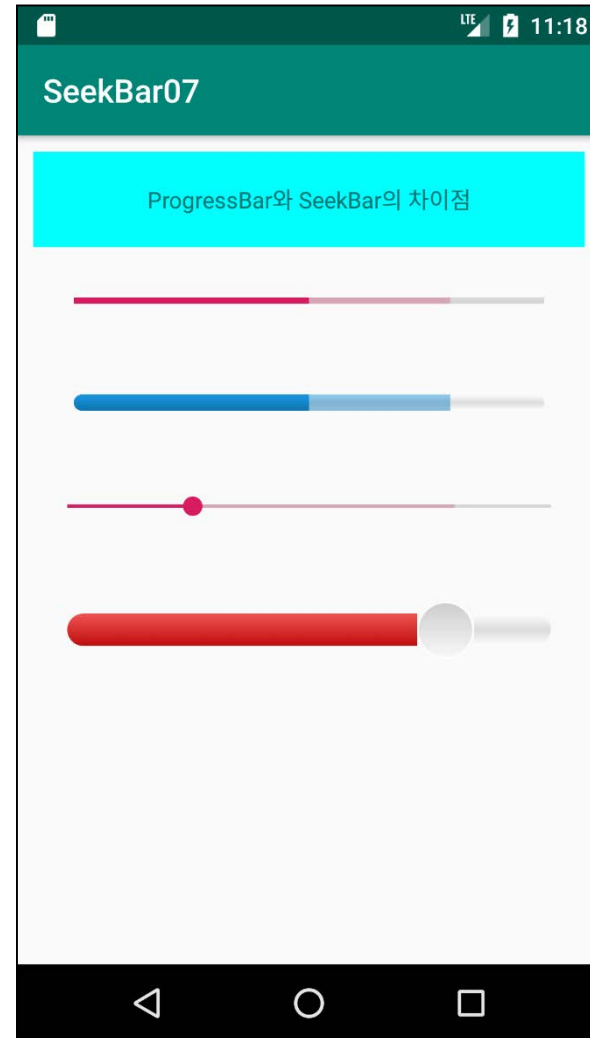
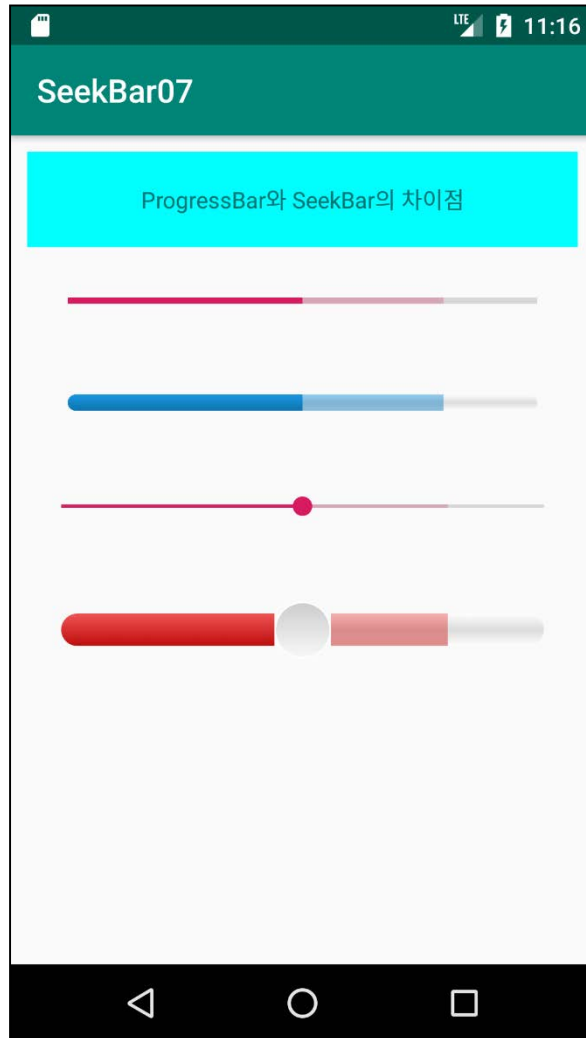
```
}
```

```
}
```



SeekBar 예제 7

■ 다음과 같은 SeekBar를 만들어보자





SeekBar 예제 7



■ activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="10dp"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:background="#00ffff"
        android:gravity="center"
        android:padding="20dp"
        android:text="ProgressBar와 SeekBar의 차이점" />
```



SeekBar 예제 7



■ activity_main.xml

```
<ProgressBar
    style="?android:attr/progressBarStyleHorizontal"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:max="100"
    android:padding="20dp"
    android:progress="50"
    android:secondaryProgress="80" />
<ProgressBar
    style="@style/CustomProgressBar"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:max="100"
    android:padding="20dp"
    android:progress="50"
    android:secondaryProgress="80" />
```



SeekBar 예제 7



■ activity_main.xml

```
<SeekBar
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="5dp"
    android:max="100"
    android:padding="20dp"
    android:progress="50"
    android:secondaryProgress="80" />
<SeekBar
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:progress="50"
    android:max="100"
    style="@style/CustomSeekBar"
    android:secondaryProgress="80"
    android:padding="20dp"
    android:layout_margin="5dp" />
</LinearLayout>
```