

## #3 EVENT HANDLER

### Event Registration From Layout

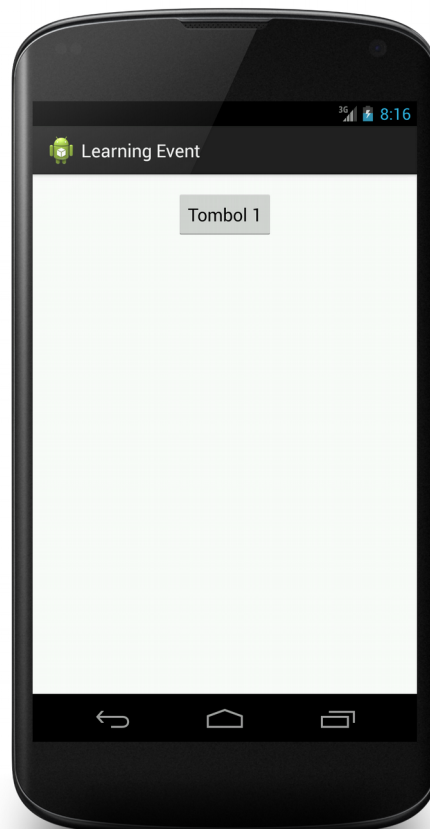
1. Create new project **Learning Event Handler** with main activity **MainActivity.java** and layout file **activity\_main.xml**

```
<RelativeLayout 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:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    tools:context=".MainActivity">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Tombol 1"
        android:id="@+id/button1"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:onClick="pencet"/>

</RelativeLayout>
```

2. Create button and register that button to call "pencet" method at **activity\_main.xml**



### 3. Create method "pencet" at MainActivity.java

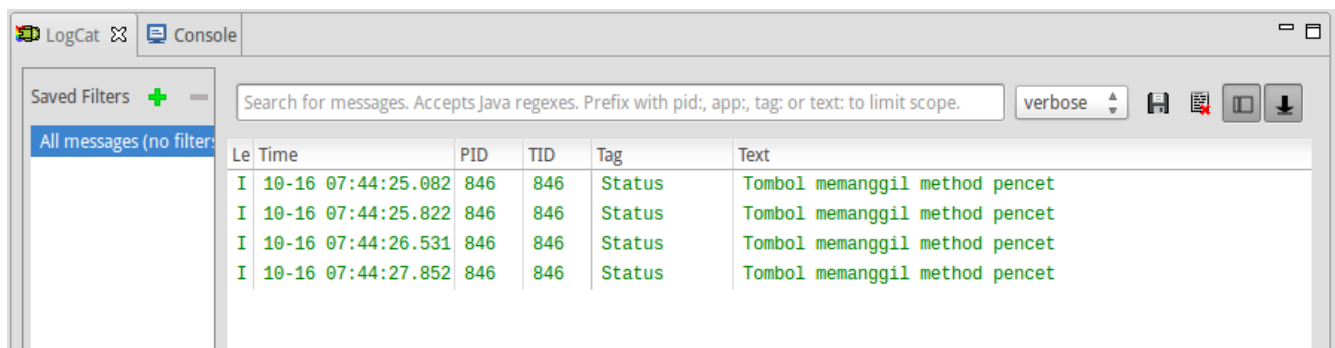
```
public class MainActivity extends Activity {

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

    /**
     * pencet method, call from layout
     */
    public void pencet(View v){
        //show message on logcat
        Log.i("Status", "Tombol memanggil method pencet");
    }

}
```

### 4. Run and see messages at logcat window



### 5. Modify activity\_main.xml to add another button with same handler

```
<RelativeLayout 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:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    tools:context=".MainActivity">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Tombol 1"
        android:id="@+id/button1"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:onClick="pencet" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Tombol 2"
        android:id="@+id/button2"
        android:onClick="pencet"
        android:layout_below="@+id/button1"
        android:layout_alignLeft="@+id/button1" />

</RelativeLayout>
```



6. Modify "pencet" method to display button text that call method

```
/**
 * pencet method, call from layout
 */
public void pencet(View v){
    //cast v to Button and get its label
    String label = ((Button)v).getText().toString();
    //show message on logcat
    Log.i("Status", label+" memanggil method pencet");
}
```

7. Run and see messages at logcat window

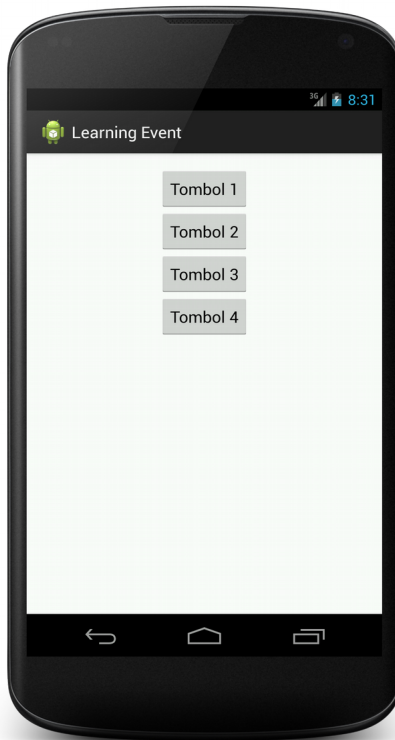
```
logcat
I/Status: Tombol 2 memanggil method pencet
I/Status: Tombol 2 memanggil method pencet
I/Status: Tombol 2 memanggil method pencet
I/Status: Tombol 1 memanggil method pencet
I/Status: Tombol 1 memanggil method pencet
I/Status: Tombol 2 memanggil method pencet
I/Status: Tombol 2 memanggil method pencet
I/Status: Tombol 1 memanggil method pencet
```

## Event Registration With Anonymous Inner Class

1. Modify `activity_main.xml` to add two more button, but don't register onclick handler

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Tombol 3"
    android:id="@+id/button3"
    android:layout_below="@+id/button2"
    android:layout_centerHorizontal="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Tombol 4"
    android:id="@+id/button4"
    android:layout_below="@+id/button3"
    android:layout_centerHorizontal="true"/>
```



2. Create event handler `"tekan"` with anonymous inner class at `MainActivity.java` inside `onCreate()` method, and register `button3` & `button4` to call `"tekan"` handler

```

public class MainActivity extends Activity {

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

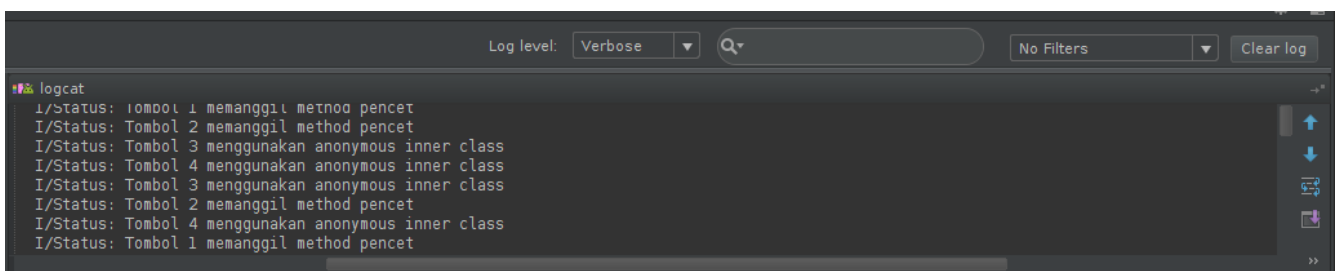
        /** create variable tekan with anonymous inner class */
        View.OnClickListener tekan = new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // Show message to logcat
                Log.i("Status", "Menggunakan anonymous inner class");
            }
        };

        //Register tombol 3 & 4
        Button tbl3 = (Button) findViewById(R.id.button3);
        Button tbl4 = (Button) findViewById(R.id.button4);
        //register handler
        tbl3.setOnClickListener(tekan);
        tbl4.setOnClickListener(tekan);
    }

    /**
     * pencet method, call from layout
     */
    public void pencet(View v){
        //cast v to Button and get its label
        String label = ((Button)v).getText().toString();
        //show message on logcat
        Log.i("Status", label+" memanggil method pencet");
    }
}

```

3. Run and see messages at **logcat** window
4. Modify "**tekan**" handler to show which button that call it. (do it your self, it's just like "**pencet**" method)
5. Run and see messages at logcat window

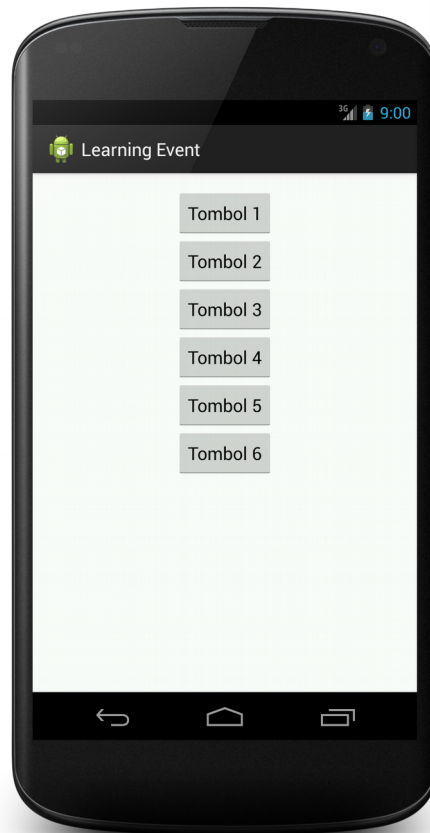


## Activity Class Implement Listener Interface

1. Modify `activity_main.xml` to add two more button.

```
<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Tombol 5"
    android:id="@+id/button5"
    android:layout_below="@+id/button4"
    android:layout_centerHorizontal="true"/>

<Button
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Tombol 6"
    android:id="@+id/button6"
    android:layout_below="@+id/button5"
    android:layout_centerHorizontal="true"/>
```



2. Modify `MainActivity` to implement listener interface.

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

3. Override unimplement method (`onClick()` method)

```
@Override
public void onClick(View view) {
    //show message on logcat
    Log.i("Status", "Menggunakan activity class");
}
```

4. Register **button5** & **button6** listener to use `onClick()` handler inside `onCreate()` method.

```
//Register tombol 5 & 6
Button tbl5 = (Button) findViewById(R.id.button5);
Button tbl6 = (Button) findViewById(R.id.button6);
//register handler
tbl5.setOnClickListener(this);
tbl6.setOnClickListener(this);
```

5. Run and see messages at logcat window.

