Slide 9.14: Dynamic checkboxes: layout file

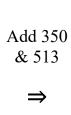
Slide 9.16: Dynamic checkboxes: Java source code (cont.)

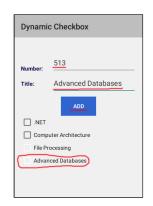
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# **Dynamic Checkboxes: Java Source Code**











# Line 03: import java.util.lterator;

An interface is used to iterate over a collection.

# Line 04: import java.util.LinkedHashMap;

It is the class of hash table and linked list implementation of the Map interface, with predictable iteration order.

# Line 05: import java.util.Map;

An object maps keys to values. A map cannot contain duplicate keys; each key can map to at most one value.

# Line 06: import java.util.Set;

A collection contains no duplicate elements. More formally, sets contain no pair of elements e<sub>1</sub> and e<sub>2</sub> such that e<sub>1</sub>.equals(e<sub>2</sub>), and at most one null element.

### Line 13: import <u>android.widget.LinearLayout</u>;

A linear layout arranges its children in a single column or a single row. The direction of the row can be set by calling <u>setOrientation</u>. The default orientation is horizontal. Gravity, which specifies the alignment of all the child elements, can be specified by <u>setGravity</u>.

### Line 16: import android graphics. Color;

The Color class defines methods for creating and converting color ints. Colors are represented as packed ints, made up of 4 bytes: alpha, red, green, blue.

DynamicCheckbox/app/src/main/java/com/ecs/wenchen/dynamiccheckbox/MainActivity.java

```
package com.ecs.wenchen.dynamiccheckbox;
02
03
    import java.util.Iterator;
    import java.util.LinkedHashMap;
04
    import java.util.Map;
    import java.util.Set;
07
80
   import android.app.Activity;
    import android.os.Bundle;
    import android.view.View;
    import android.widget.Button;
    import android.widget.CheckBox;
    import android.widget.LinearLayout;
    import android.widget.TextView;
14
15
    import android.widget.EditText;
16
    import android.graphics.Color;
17
18
    public class MainActivity extends Activity {
19
      LinearLayout linearBox;
20
      CheckBox
                   checkBox, checkBox1;
21
22
      @Override
23
      protected void onCreate( Bundle savedInstanceState ) {
24
        super.onCreate( savedInstanceState );
25
        setContentView( R.layout.activity main );
26
27
        linearBox = (LinearLayout) findViewById( R.id.linearBox );
28
        final EditText number = (EditText) findViewById( R.id.number );
29
        final EditText title = (EditText) findViewById( R.id.title );
30
        final Button button = (Button)
                                           findViewById( R.id.add );
31
32
        button.setOnClickListener( new View.OnClickListener( ) {
33
          public void onClick( View v ) {
            checkBox1 = new CheckBox( getApplicationContext( ) );
35
            checkBox1.setId( Integer.parseInt( number.getText( ).toString( ) ) );
36
            checkBox1.setText( title.getText( ).toString( ) );
            checkBox1.setTextColor( Color.BLACK );
37
            checkBox1.setOnClickListener( getOnClickDoSomething( checkBox1 ) );
38
            linearBox.addView( checkBox1 );
39
40
        } );
41
42
43
        final LinkedHashMap<String, String>
44
          alphabet = new LinkedHashMap<String, String>( );
        alphabet.put( "260", ".NET" );
alphabet.put( "370", "Computer Architecture" );
45
47
48
        Set<?> set = alphabet.entrySet( );
49
        // Get an iterator.
50
        Iterator<?> i = set.iterator( );
51
        // Display elements.
52
        while ( i.hasNext( ) ) {
          @SuppressWarnings( "rawtypes" )
```

```
54
            Map.Entry me = ( Map.Entry ) i.next( );
                          = new CheckBox( this );
55
            checkBox
            checkBox.setId( Integer.parseInt( me.getKey( ).toString( ) );
checkBox.setText( me.getValue( ).toString( ) );
56
57
58
            checkBox.setOnClickListener( getOnClickDoSomething( checkBox ) );
59
            linearBox.addView( checkBox );
60
         }
       }
61
62
63
       View.OnClickListener getOnClickDoSomething( final Button button ) {
64
         return new View.OnClickListener( ) {
            public void onClick( View v ) {
65
              final TextView tvView = (TextView) findViewById( R.id.textView3 );
tvView.setText( button.getId( ) + ": " + button.getText( ).toString( ) );
66
67
68
            }
69
         };
70
       }
71 }
```

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