User Interface Widgets

Introduction

- The Android 3.0 SDK includes new widgets we can use when developing the user interface of our application.
- These new widgets include the following:

  `AdapterViewAnimator`, `AdapterViewFlipper`, `CalendarView`, `ListPopupMenu`, `NumberPicker`, `PopupMenu`, `SearchView` and `StackView`.

The `AdapterViewAnimator` Class

- The `AdapterViewAnimator` class extends `AdapterView`. The `AdapterViewAnimator` class allows us to get animated transition when switching between the views it refers.
- When instantiating this class we can switch between the views by calling the `showNext()` and the `showPrevious()` methods.

The `AdapterViewFlipper` Class

- This class extends `AdapterViewAnimator` class. Using an object instantiated from this class we can get the views automatically flipped at a regular interval.
- We can set the interval by calling the `setFlipInterval()` method.

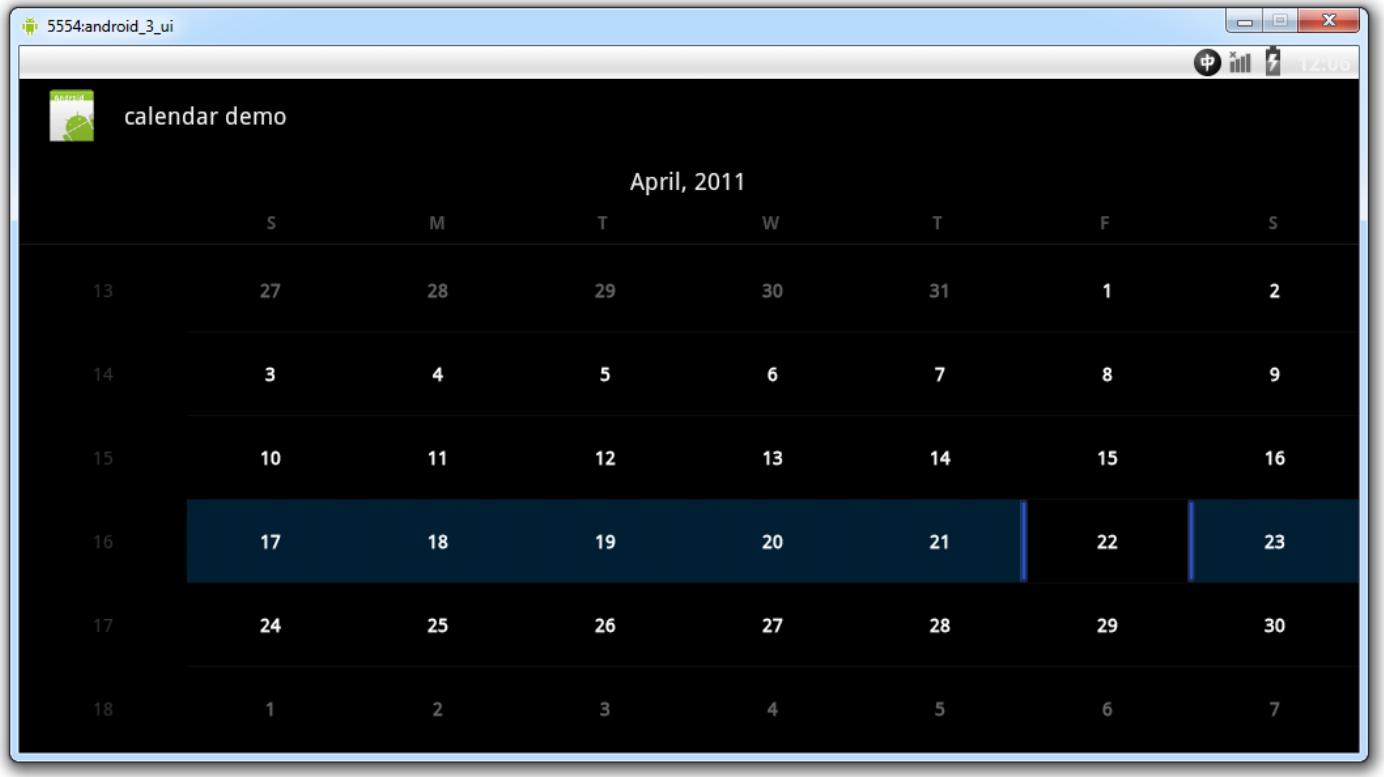
The `CalendarView` Class

- This class allows the user to select a date from a calendar.
- We can configure the object instantiated from this class to fit our needs, such as allowing the user to select a date from a specific range.

The `CalendarView` Class

```
package com.abelski.samples;

import android.app.Activity;
import android.os.Bundle;
import android.widget.CalendarView;

public class CalendarDemo extends Activity
{
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        CalendarView calendar = new CalendarView(this);
        setContentView(calendar);
    }
}
```

The `CalendarView` Class



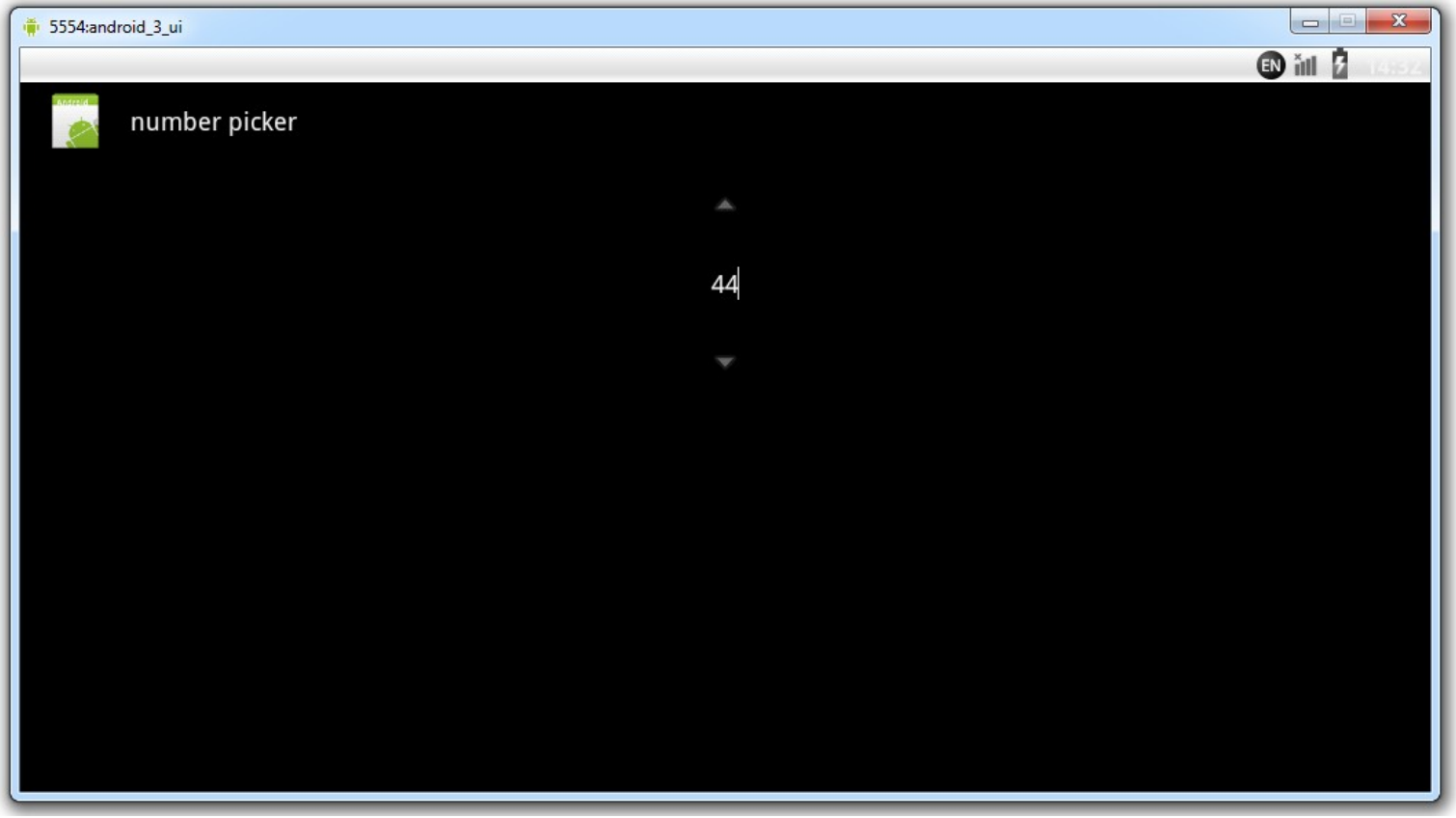
The `NumberPicker` Class

- This class describes a widget that allows the user to select a number from a predefined range.

The `NumberPicker` Class

```
package com.abelski.samples;

import android.app.Activity;
import android.os.Bundle;
import android.widget.NumberPicker;

public class NumberPickerDemo extends Activity
{
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        NumberPicker ob = new NumberPicker(this);
        ob.setMinValue(0);
        ob.setMaxValue(100);
        setContentView(ob);
    }
}
```

The `NumberPicker` Class



The `PopupMenu` Class

- This class describes a modal popup window that refers a specific view on our screen.
- The popup menu will be displayed below the view it refers. If there isn't enough room then it will be displayed above it.

The PopupMenu Class

PopyActivity.java

```
public class PopyActivity extends Activity
{
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    }

    public void onPopupBtClick(View view)
    {
        PopupMenu menu = new PopupMenu(this, view);
        menu.getMenuInflater().
            inflate(R.menu.mymenu, menu.getMenu());
```

The `PopupMenu` Class

```
        menu.setOnMenuItemClickListener(
            new PopupMenu.OnMenuItemClickListener()
            {
                public boolean onMenuItemClick(MenuItem item)
                {
                    Toast toast = Toast.makeText(PopyActivity.this,
                        item.getTitle() + " was pressed",
                        Toast.LENGTH_SHORT);
                    toast.show();
                    return true;
                }
            });
        menu.show();
    }
}
```

The PopupMenu Class

main.xml

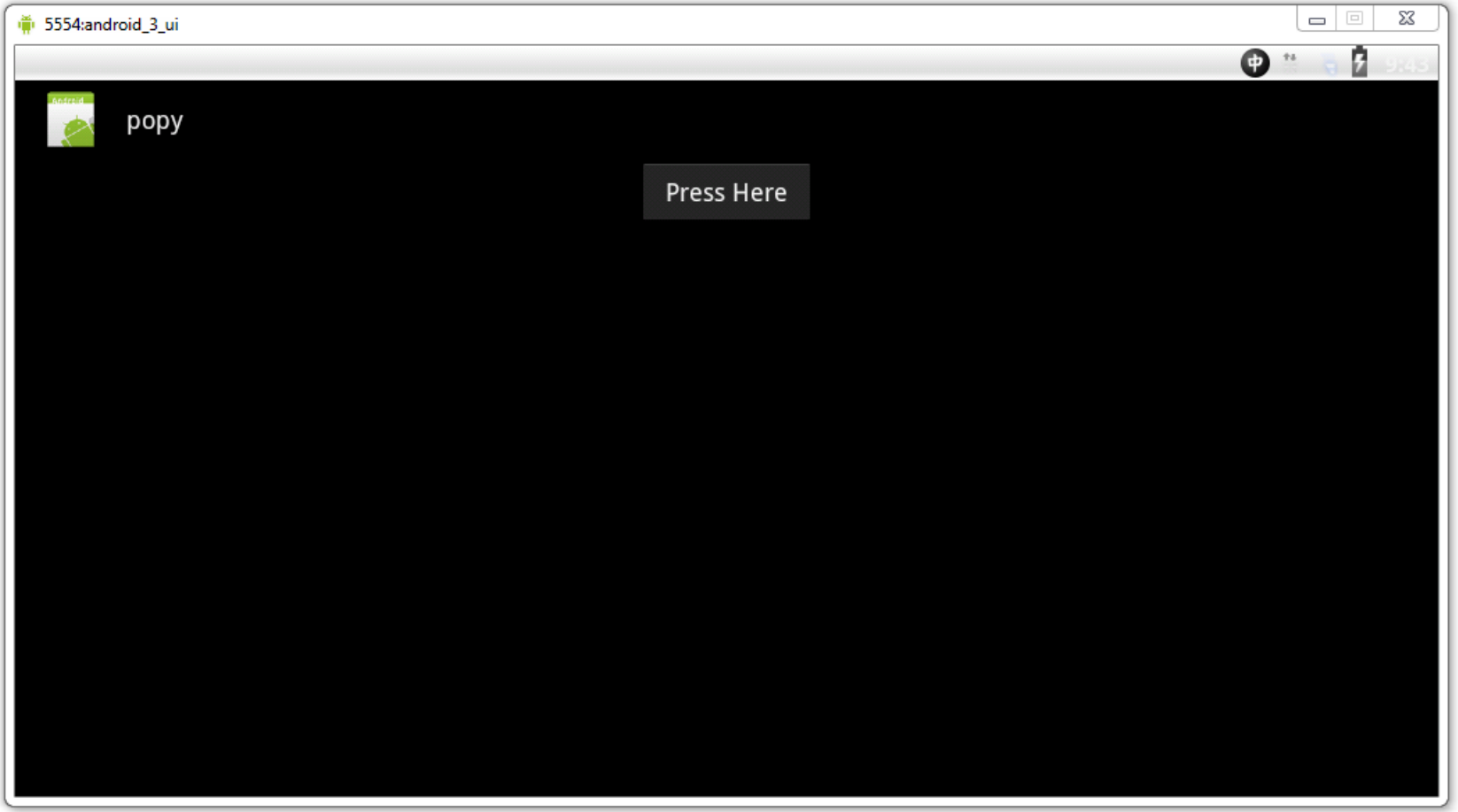
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    >
<Button android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:onClick="onPopupBtClick"
            android:text="@string/bt_txt" />
</LinearLayout>
```

The PopupMenu Class

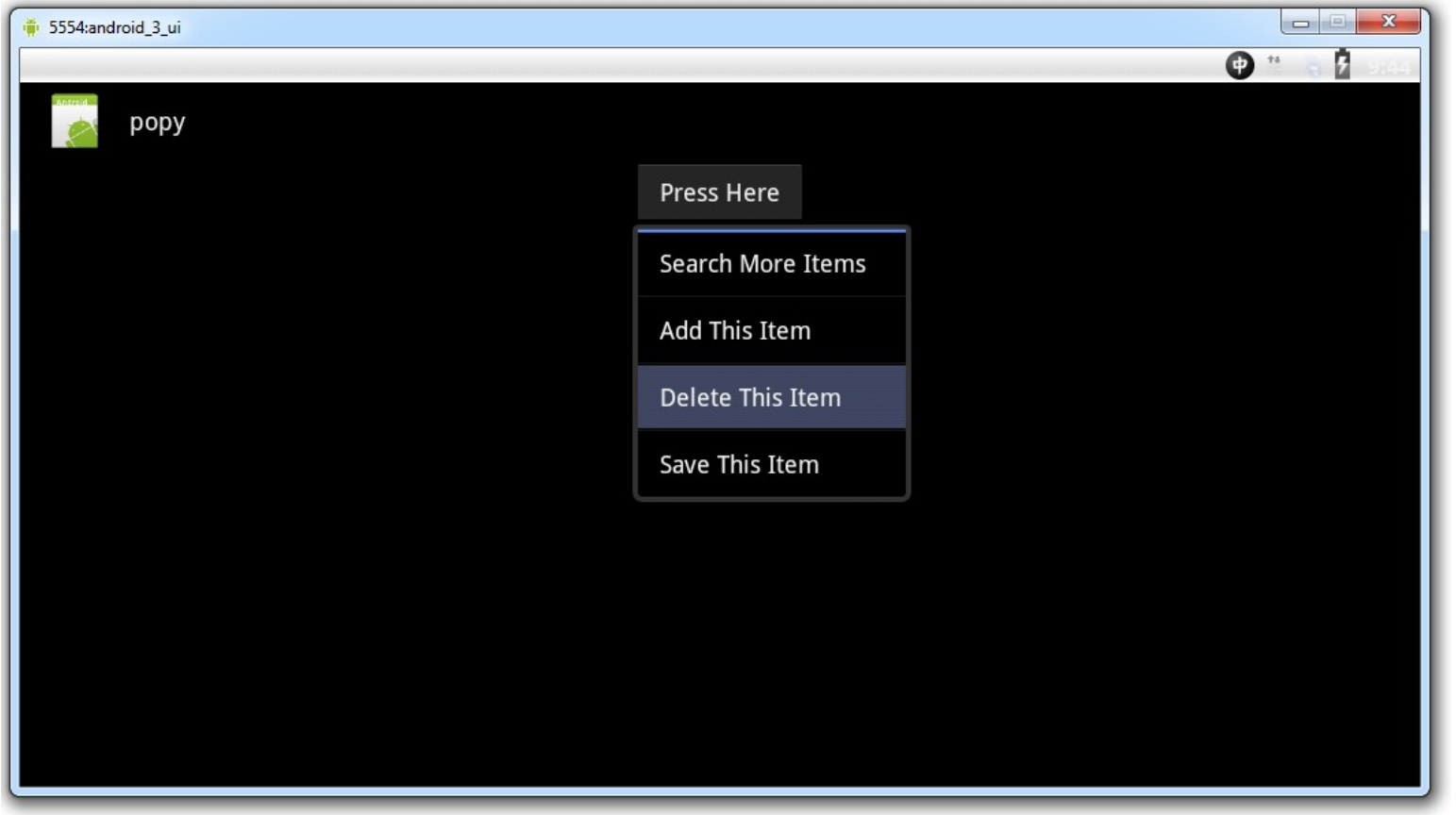
mymenu.xml

```
<?xml version="1.0" encoding="utf-8"?>
<menu xmlns:android="http://schemas.android.com/apk/res/android">
    <item android:id="@+id/search"
          android:title="@string/search_txt" />
    <item android:id="@+id/add"
          android:title="@string/add_txt" />
    <item android:id="@+id/delete"
          android:title="@string/delete_txt" />
    <item android:id="@+id/save"
          android:title="@string/save_txt" />
</menu>
```

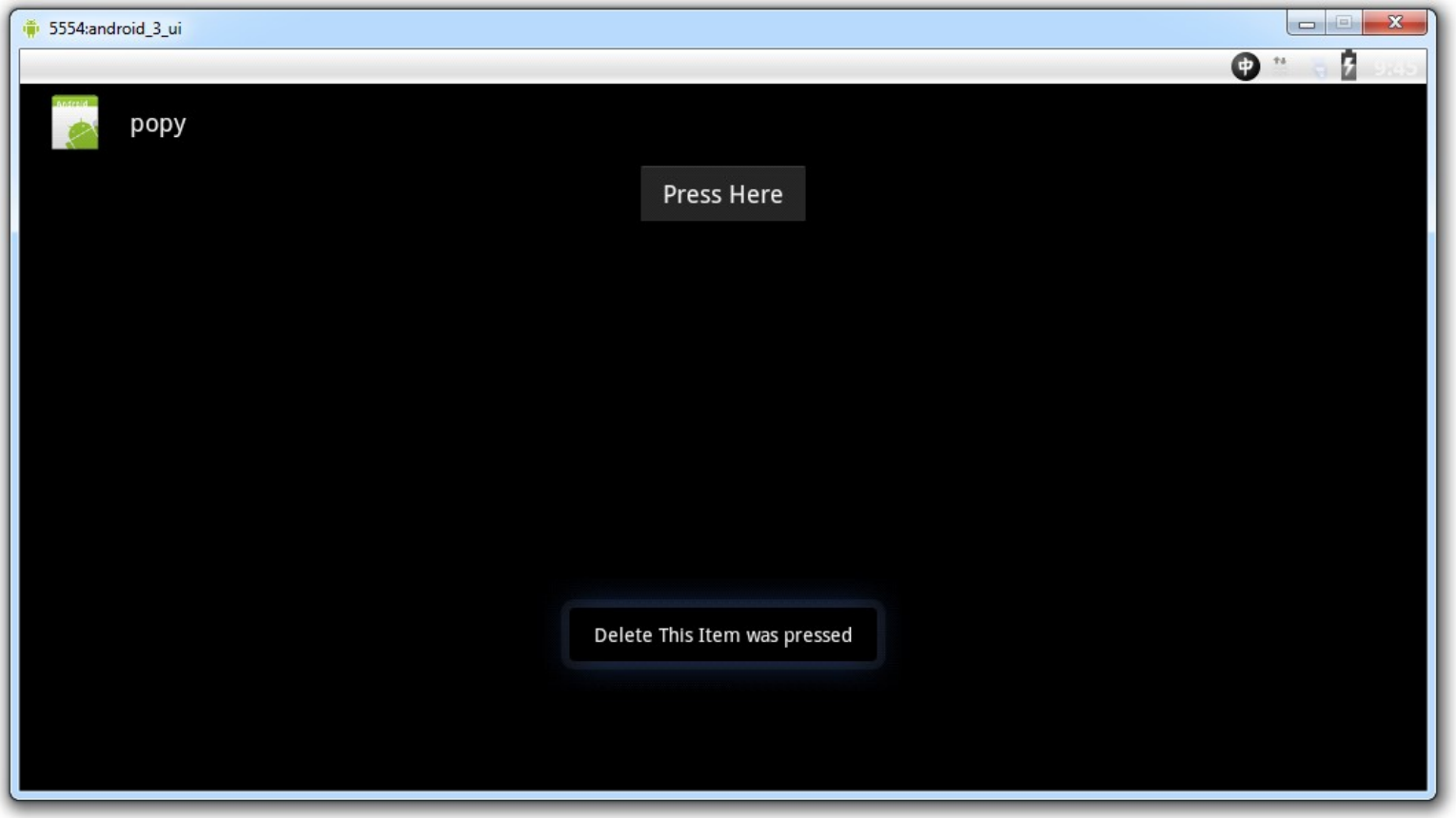
The `PopupMenu` Class



The `PopupMenu` Class



The `PopupMenu` Class



The `SearchView` Class

- This class describes a search text box the user can interact with as if it was the traditional google search box.
- It is possible to show a list of query suggestions or results and allow the user to pick the one he wants to launch.

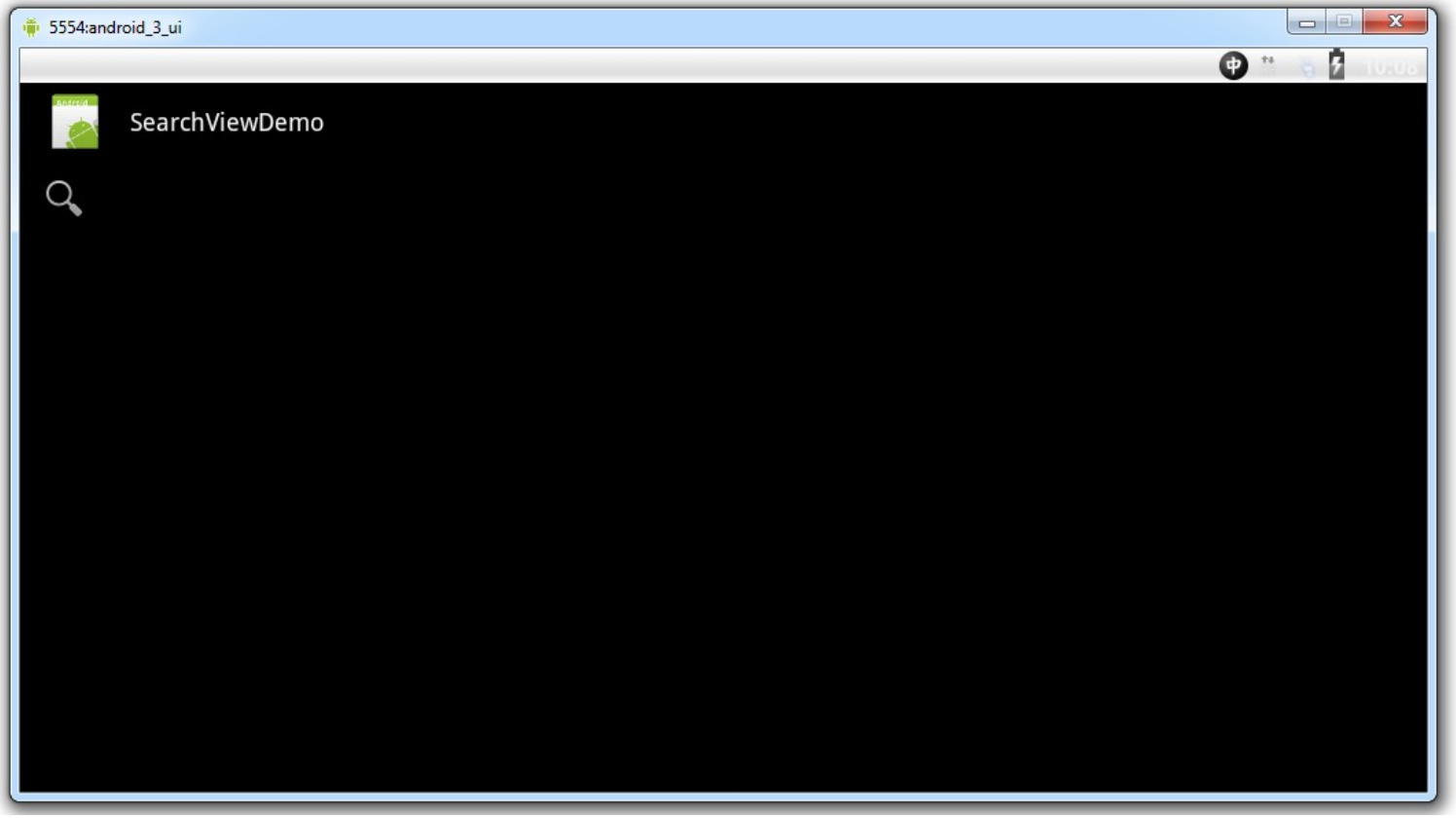
The `SearchView` Class

```
package com.abelski.samples;

import android.app.Activity;
import android.os.Bundle;

public class SearchViewDemo extends Activity
{
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    }
}
```

The `SearchView` Class

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    >
<SearchView android:id="@+id/searchView1"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"></SearchView>
</LinearLayout>
```

The `SearchView` Class



The `StackView` Class

- This widget allows us to display a series of views organized in a 3D stack allowing the user to swipe through those views as if it was a rolodex.