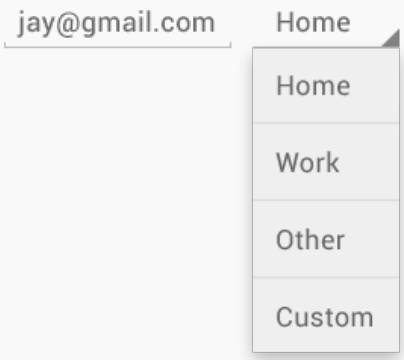
Spinners

Spinners provide a quick way to select one value from a set. In the default state, a spinner shows its currently selected value. Touching the spinner displays a dropdown menu with all other available values, from which the user can select a new one.



You can add a spinner to your layout with the Spinner object. You should usually do so in your XML layout with a <Spinner> element. For example:

```
<Spinner
    android:id="@+id/planets_spinner"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content" />
```

To populate the spinner with a list of choices, you then need to specify a SpinnerAdapter in your Activity or Fragment source code.

Populate the Spinner with User Choices

The choices you provide for the spinner can come from any source, but must be provided through an SpinnerAdapter, such as an ArrayAdapter if the choices are available in an array or a CursorAdapter if the choices are available from a database query.

For instance, if the available choices for your spinner are pre-determined, you can provide them with a string array defined in a string resource file:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string-array name="planets_array">
        <item>Mercury</item>
        <item>Venus</item>
        <item>Earth</item>
        <item>Mars</item>
        <item>Jupiter</item>
        <item>Saturn</item>
        <item>Uranus</item>
        <item>Neptune</item>
    </string-array>
</resources>
```

With an array such as this one, you can use the following code in your Activity or Fragment to supply the spinner with the array using an instance of ArrayAdapter:

```
Spinner spinner = (Spinner) findViewById(R.id.spinner);
// Create an ArrayAdapter using the string array and a default spinner layout
ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
        R.array.planets_array, android.R.layout.simple_spinner_item);
// Specify the layout to use when the list of choices appears
adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);
// Apply the adapter to the spinner
spinner.setAdapter(adapter);
```

The createFromResource() method allows you to create an ArrayAdapter from the string array. The third argument for this method is a layout resource that defines how the selected choice appears in the spinner control. The simple_spinner_item layout is provided by the platform and is the default layout you should use unless you'd like to define your own layout for the spinner's appearance.

You should then call setDropDownViewResource(int) to specify the layout the adapter should use to display the list of spinner choices (simple_spinner_dropdown_item is another standard layout defined by the platform).

Call setAdapter() to apply the adapter to your Spinner.

Responding to User Selections

When the user selects an item from the drop-down, the Spinner object receives an on-item-selected event.

To define the selection event handler for a spinner, implement the AdapterView.OnItemSelectedListener interface and the corresponding onItemSelected() callback method. For example, here's an implementation of the interface in an Activity:

```
public class SpinnerActivity extends Activity implements OnItemSelectedListener {
    ...

    public void onItemSelected(AdapterView<?> parent, View view,
            int pos, long id) {
        // An item was selected. You can retrieve the selected item using
        // parent.getItemAtPosition(pos)
    }

    public void onNothingSelected(AdapterView<?> parent) {
        // Another interface callback
    }
}
```

The AdapterView.OnItemSelectedListener requires the onItemSelected() and onNothingSelected() callback methods.

Then you need to specify the interface implementation by calling setOnItemSelectedListener():

```
Spinner spinner = (Spinner) findViewById(R.id.spinner);
spinner.setOnItemSelectedListener(this);
```

If you implement the AdapterView.OnItemSelectedListener interface with your Activity or Fragment (such as in the example above), you can pass this as the interface instance.