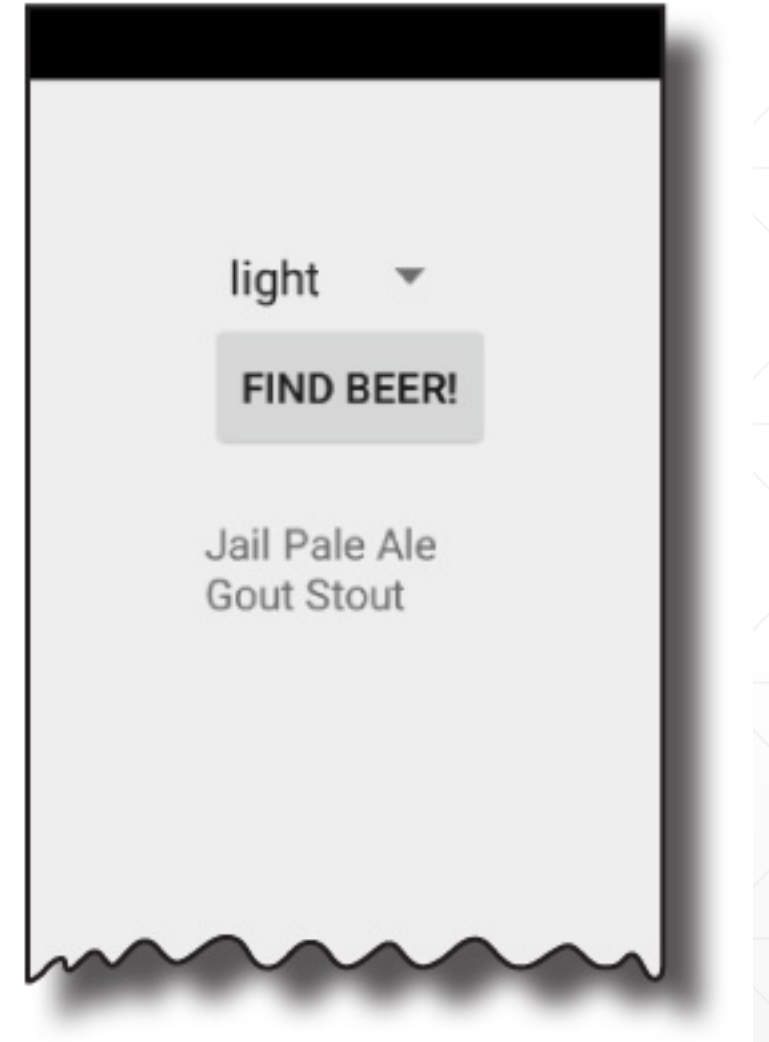


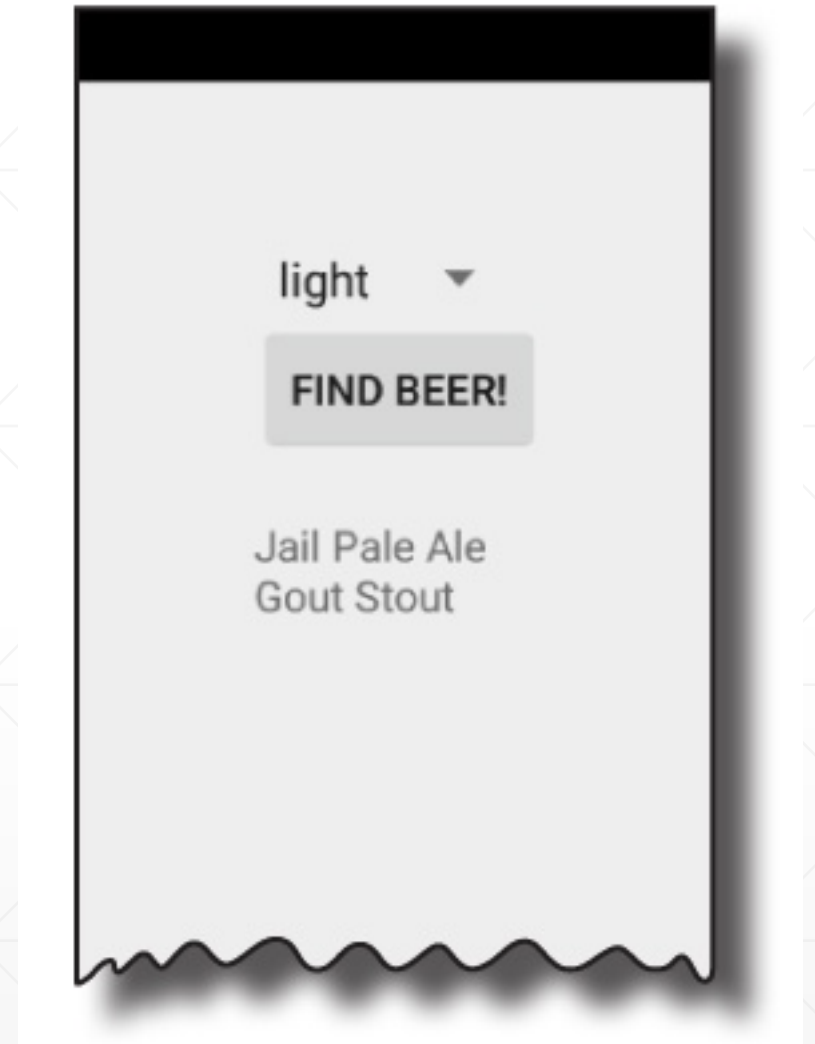
Chap 2 – Building Interactive apps

- Button & Spinner elements
- Array of string values
- String references
- onClick and clickMethod
- R.java
- findViewById()
- setText()
- getItem()
- Adding new Java Class



Chap 2 – Building Interactive apps

- Create Project
- Update layout
- Connect activity
- Write Application Logic



Chap 2 – Create Project

The wizard will take you through these steps, just like before. Call your application "Beer Adviser," make sure it uses a minimum SDK of API 15, then tell it to create a blank activity called "FindBeerActivity" and a layout called "activity_find_beer."

Application name:

Company Domain:

Package name:

Project location: ☒ Phone and Tablet

Minimum SDK:

Lower API levels target more devices, but have fewer features available. By targeting API 15 and later, your app will run on approximately 87.9% of the devices that are active on the Google Play Store. [Help me choose.](#)

Activity Name:

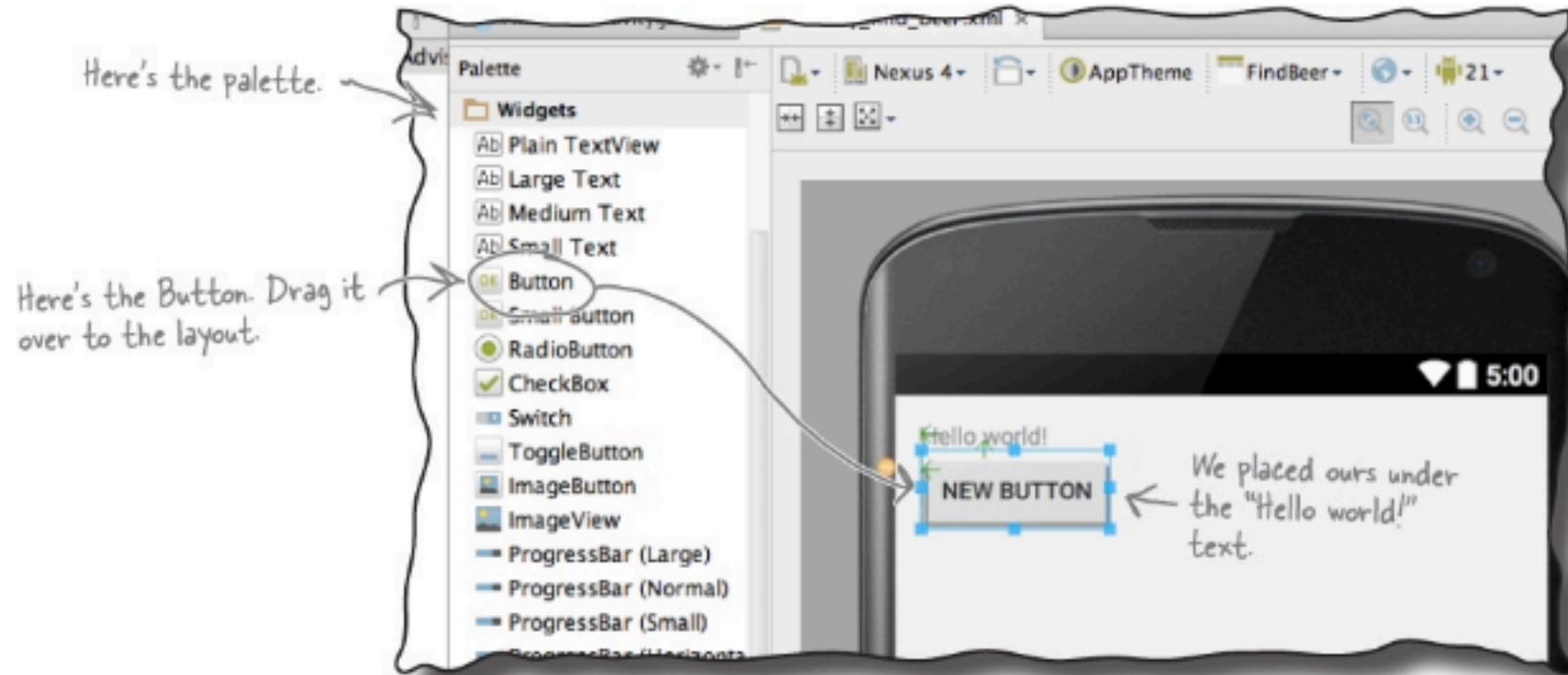
Layout Name:

Title:

Menu Resource Name:

Blank Activity

Chap 2 – Update Layout



```
<?xml version="1.0" encoding="utf-8"?>
<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:paddingBottom="16dp"
    android:paddingLeft="16dp"
    android:paddingRight="16dp"
    android:paddingTop="16dp"
    tools:context="edu.ltu.beeradviser.FindBeerActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        android:id="@+id/textView" />

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="New Button"
        android:id="@+id/button"
        android:layout_below="@+id/textView"
        android:layout_alignParentLeft="true"
        android:layout_alignParentStart="true" />

</RelativeLayout>
```

```

<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:paddingBottom="16dp"
    android:paddingLeft="16dp"
    android:paddingRight="16dp"
    android:paddingTop="16dp"
    tools:context=".FindBeerActivity" >

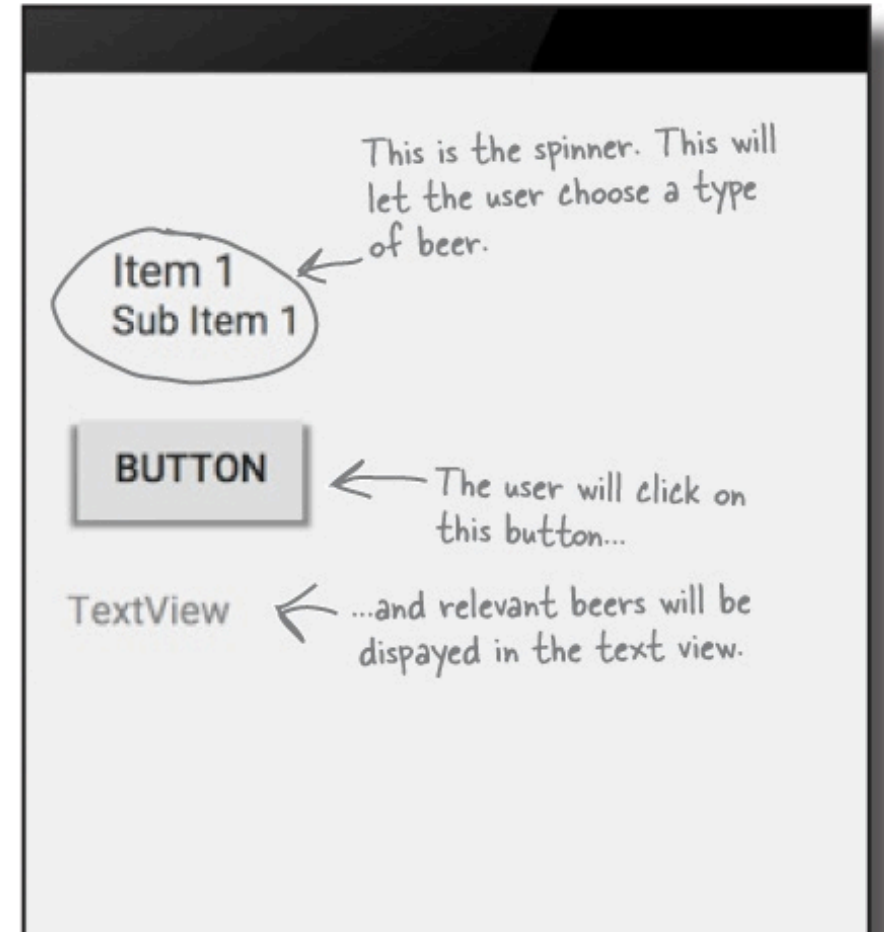
    <Spinner android:id="@+id/color"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="37dp"
        android:entries="@array/beer_colors" />

    <Button android:id="@+id/find_beer"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/color"
        android:layout_below="@+id/color"
        android:text="Find Beer!"
        android:onClick="onClickFindBeer" />

    <TextView android:id="@+id/brands"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/find_beer"
        android:layout_below="@+id/find_beer"
        android:layout_marginTop="18dp"
        android:text="" />

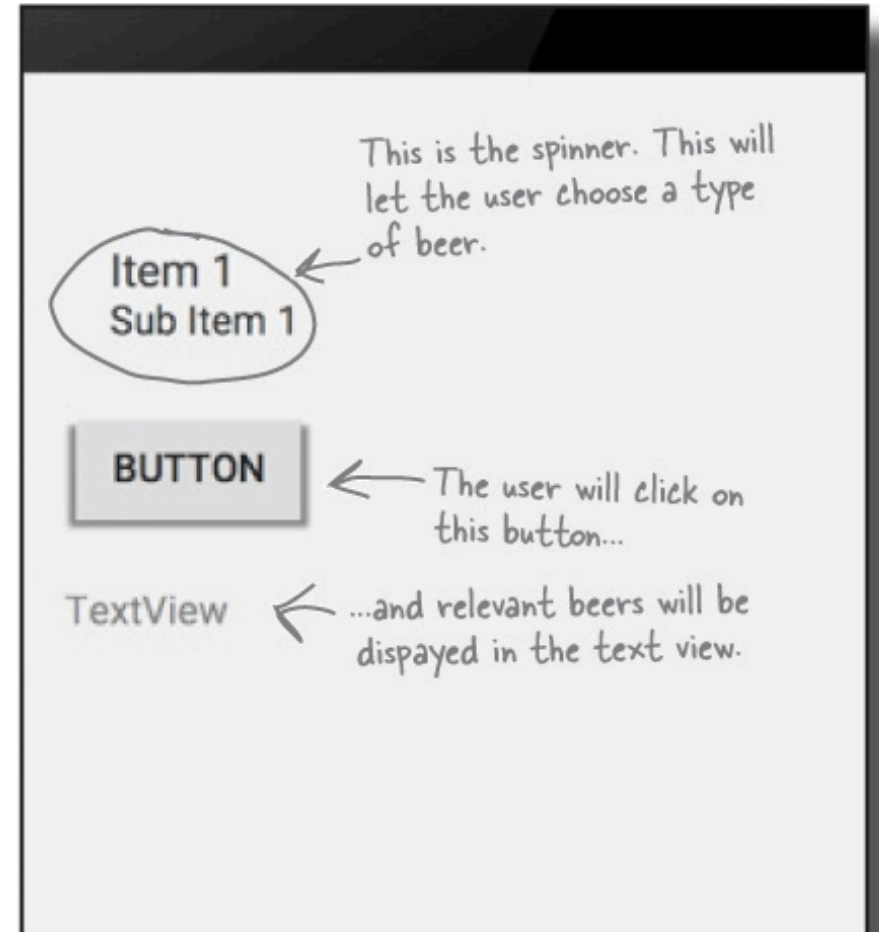
</RelativeLayout>

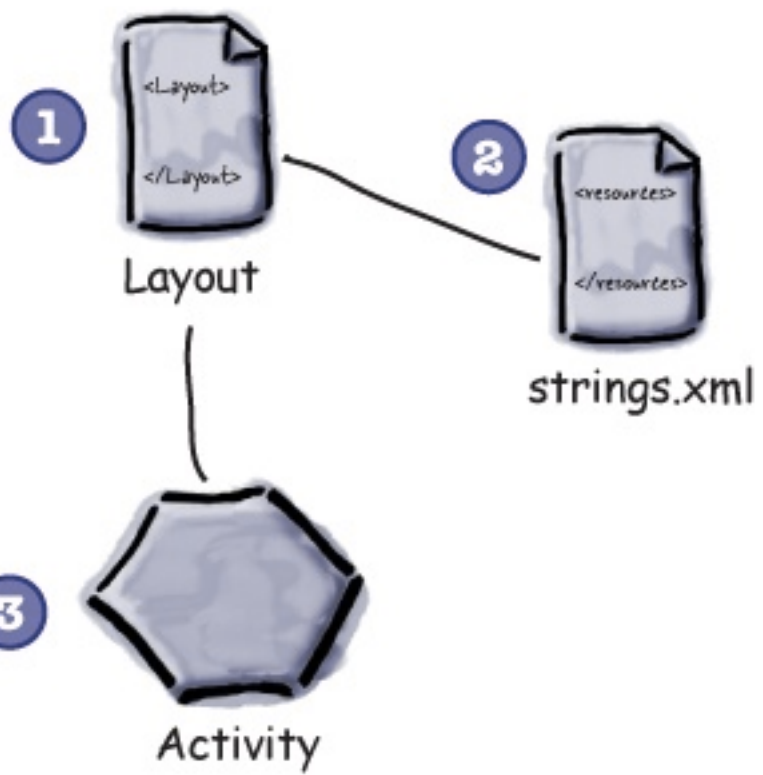
```



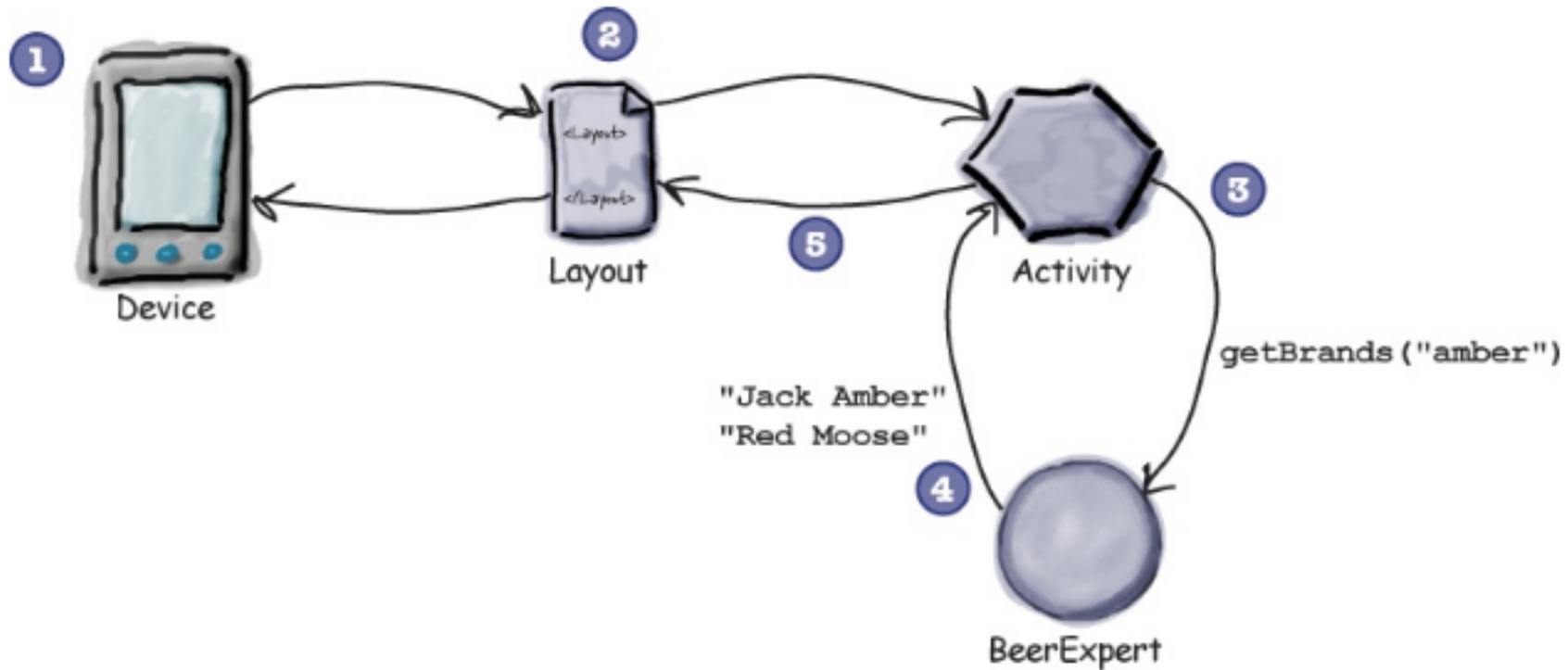
```
<resources>
  <string name="app_name">Beer Adviser</string>

  <string name="action_settings">Settings</string>
  <string name="find_beer">Find Beer!</string>
  <string name="brands"></string>
  <string-array name="beer_colors">
    <item>light</item>
    <item>amber</item>
    <item>brown</item>
    <item>dark</item>
  </string-array>
</resources>
```





Chap 2 – Connect Activity



Chap 2 – Connect Activity

...

```
<Button  
    android:id="@+id/find_beer"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_alignLeft="@+id/color"  
    android:layout_below="@+id/color"  
    android:text="@string/find_beer"  
    android:onClick="onClickFindBeer" />
```

...

When the button is clicked,
call method `onClickFindBeer()`
in the activity. We'll create
the method in the activity
over the next few pages.



Chap 2 – Connect Activity

```
package com.hfad.beeradviser;
```

```
import android.os.Bundle;
```

```
import android.app.Activity;
```

```
public class FindBeerActivity extends Activity {
```

```
    @Override
```

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

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

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

```
    }
```

```
}
```

The class extends the Android Activity class.

This is the onCreate() method. It's called when the activity is first created.

setContentView tells Android which layout the activity uses. In this case, it's activity_find_beer.

Chap 2 – Connect Activity

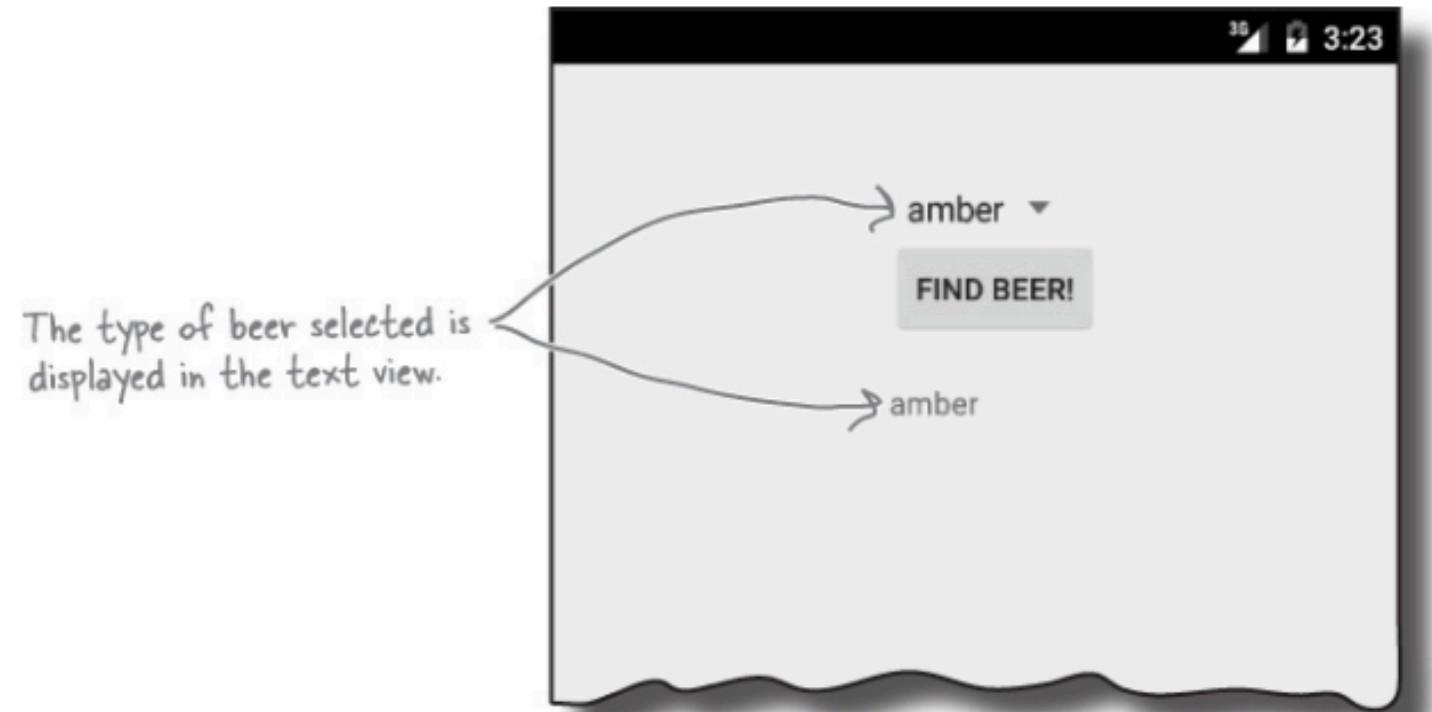
```
//Call when the button gets clicked
public void onClickFindBeer(View view) {
    //Get a reference to the TextView
    TextView brands = (TextView) findViewById(R.id.brands);

    //Get a reference to the Spinner
    Spinner color = (Spinner) findViewById(R.id.color);

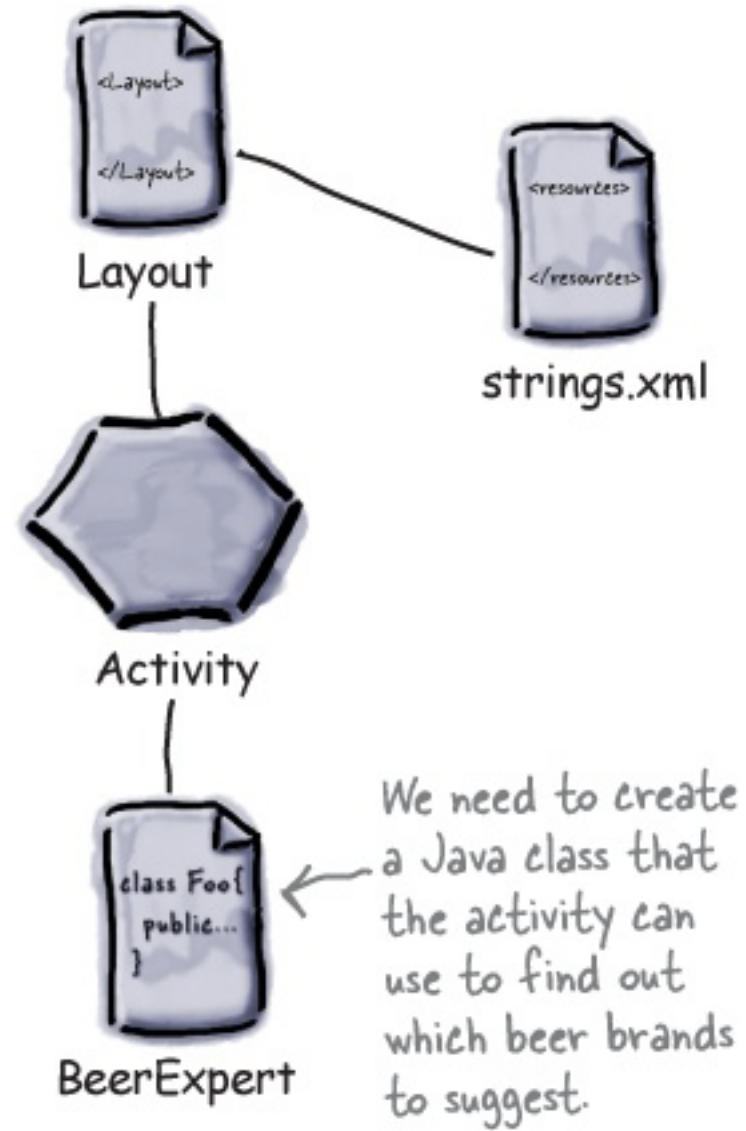
    //Get the selected item in the Spinner
    String beerType = String.valueOf(color.getSelectedItem());

    //Display the beers
    brands.setText(beerType);
}
```

Chap 2 – Write Logic



Chap 2 – Write Logic



Chap 2 – Write Logic

```
package com.hfad.beeradviser;
import java.util.ArrayList;
import java.util.List;

public class BeerExpert {
    List<String> getBrands(String color) {
        List<String> brands = new ArrayList<>();
        if (color.equals("amber")) {
            brands.add("Jack Amber");
            brands.add("Red Moose");
        } else {
            brands.add("Jail Pale Ale");
            brands.add("Gout Stout");
        }
        return brands;
    }
}
```


Chap 2 – Write Logic

```
//Call when the button gets clicked
public void onClickFindBeer(View view) {
    //Get a reference to the TextView
    TextView brands = (TextView) findViewById(R.id.brands);

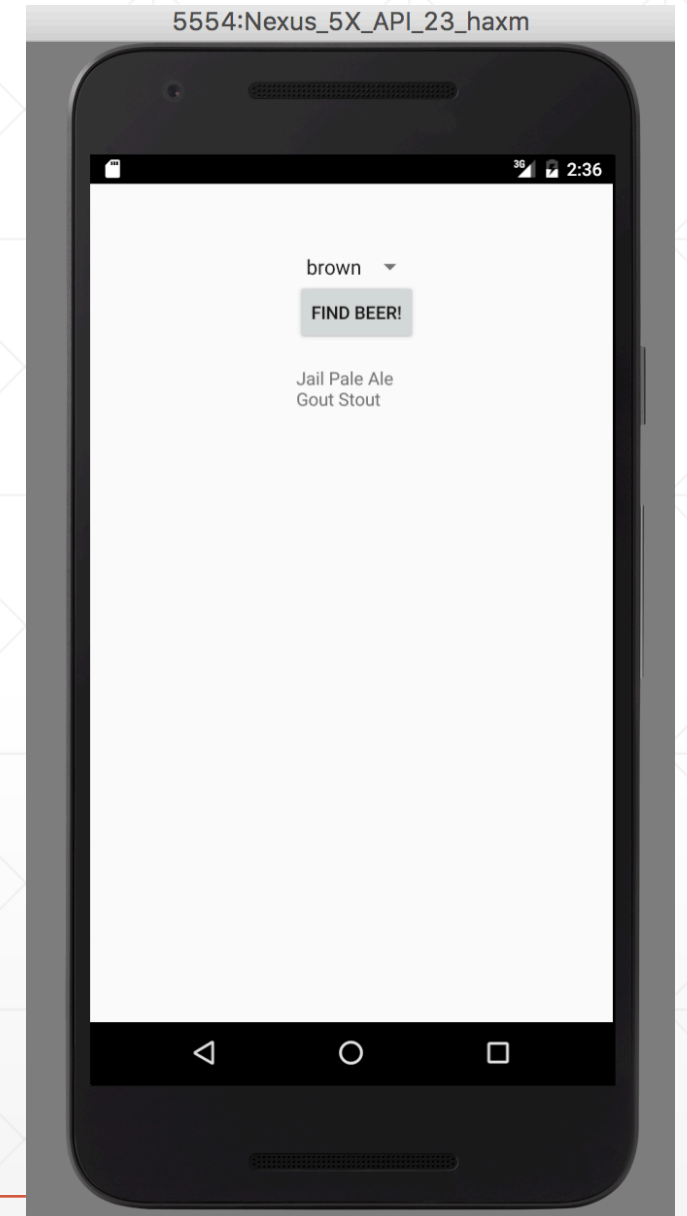
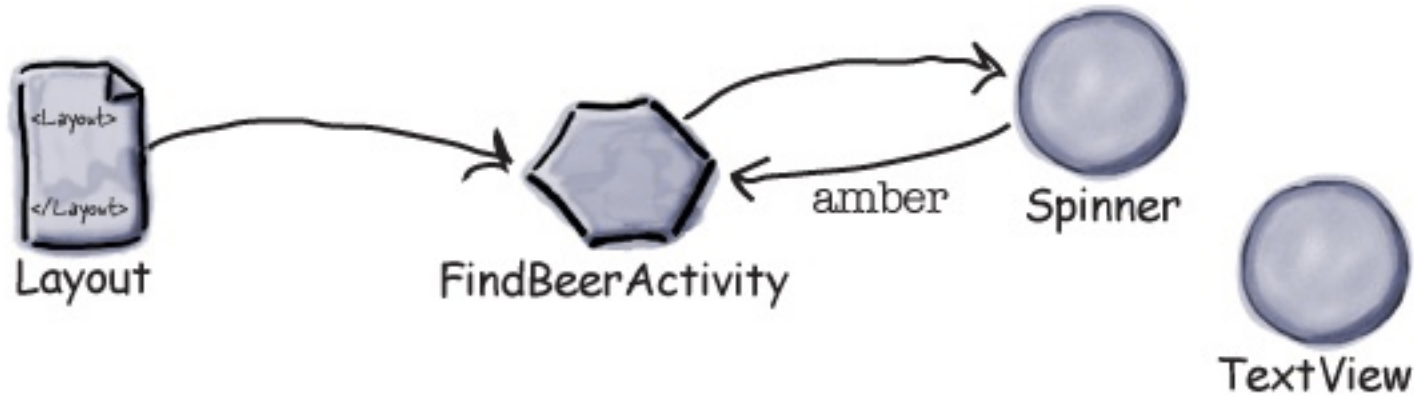
    //Get a reference to the Spinner
    Spinner color = (Spinner) findViewById(R.id.color);

    //Get the selected item in the Spinner
    String beerType = String.valueOf(color.getSelectedItem());

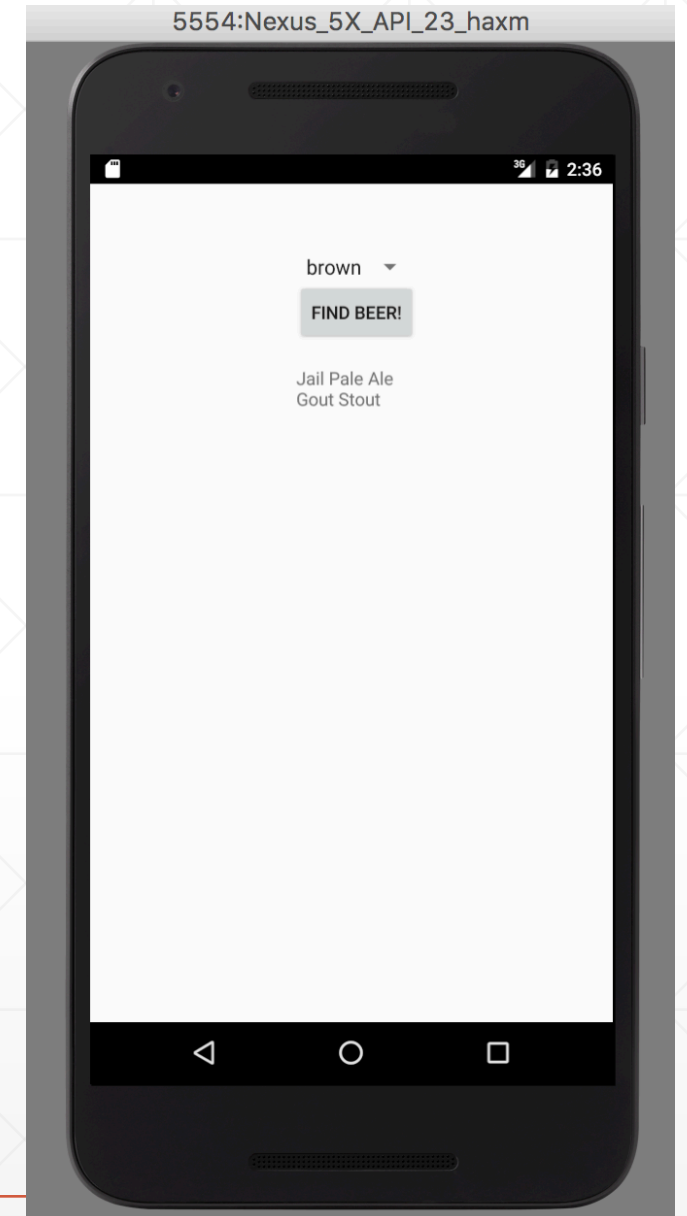
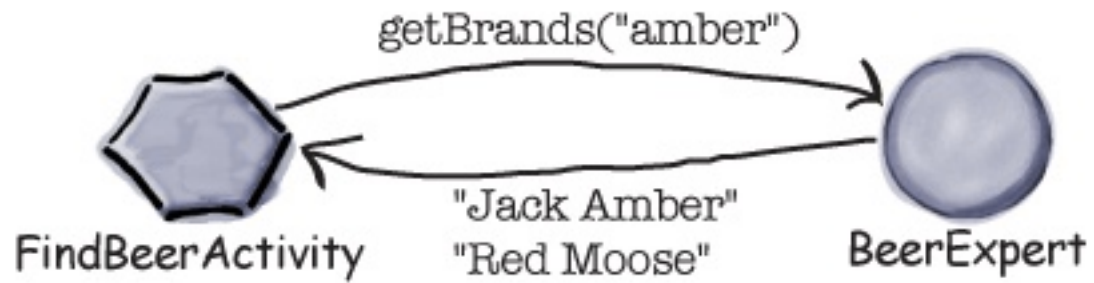
    //Get recommendations from the BeerExpert class
    List<String> brandsList = expert.getBrands(beerType);
    StringBuilder brandsFormatted = new StringBuilder();
    for (String brand : brandsList) {
        brandsFormatted.append(brand).append('\n');
    }

    //Display the beers
    brands.setText(brandsFormatted);
}
```

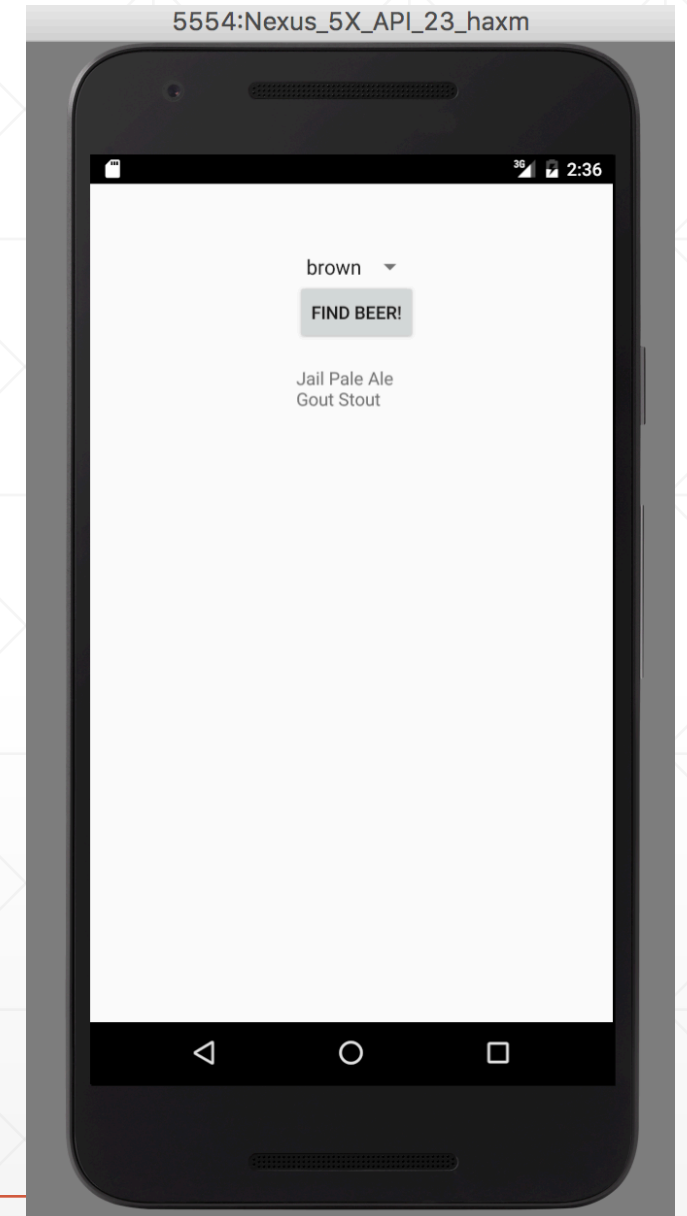
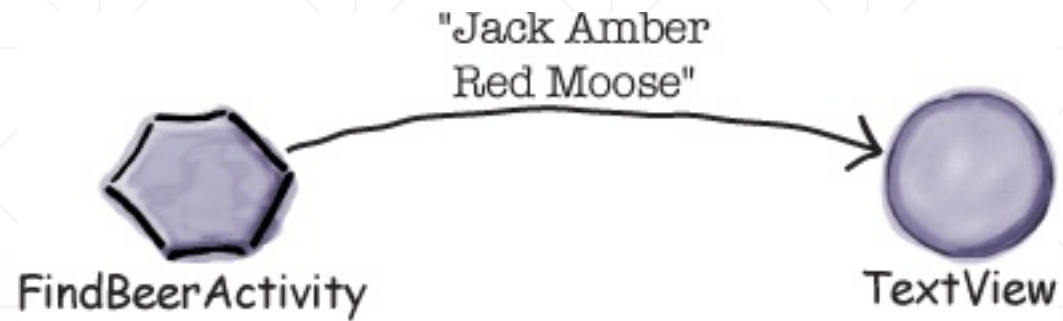
Chap 2 – Building Interactive apps



Chap 2 – Building Interactive apps



Chap 2 – Building Interactive apps



Chap 2 – Building Interactive apps

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