String resources

- A string resource provides text strings for our application with optional text styling and formatting.
- String
  - XML resource that provides a single string.
- String Array
  - XML resource that provides an array of strings.

String

- A single string that can be referenced from the application or from other resource files (such as an XML layout).

file location:

  - res/values/filename.xml

- The filename is arbitrary. The <string> element's name is used as the resource ID.

resource reference:

In Java: R.string.string_name

In XML:@string/string_name

syntax:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string
        name="string_name"
        >text_string</string>
</resources>
```

example:

- XML file saved at res/values/strings.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <string name="hello">Hello!</string>
</resources>
```

This layout XML applies a string to a View:

```
<TextView
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:text="@string/hello" />
```

- This application code retrieves a string:

```
String string = getString(R.string.hello);
```

String array

- **An array of strings that can be referenced from the application.**

file location:

  - **res/values/filename.xml**

- **The filename is arbitrary. The <string-array> element's name is used as the resource ID.**

resource reference:

- **In Java: R.array.string_array_name**
- **In XML: @[package:]array/string_array_name**
- **syntax:**
- **<?xml version="1.0" encoding="utf-8"?>**
- **<resources>**
- **<string-array**
- **name="string_array_name">**
- **<item**
- **>text_string</item>**
- **</string-array>**
- **</resources>**

example:

- XML file saved at res/values/strings.xml:

```
<?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>
    </string-array>
</resources>
```

This application code retrieves a string array:

```
Resources res = getResources();
String[] planets =
res.getStringArray(R.array.planets_array);
```

Drawable resources

- A drawable resource is a general concept for a graphic that can be drawn to the screen and which you can retrieve with APIs such as getDrawable(int) or apply to another XML resource with attributes such as android:drawable and android:icon. There are several different types of drawables:

- Bitmap File
- A bitmap graphic file (.png, .webp, .jpg, or .gif). Creates a BitmapDrawable.

Bitmap file

- A bitmap file is a .png, .webp, .jpg, or .gif file. Android creates a Drawable resource for any of these files when you save them in the res/drawable/ directory.

file location:

  - res/drawable/filename.png (.png, .webp, .jpg, or .gif)
  - The filename is used as the resource ID.

resource reference:

  - In Java: R.drawable.filename
- In XML: @[package:]drawable/filename

- example:
- With an image saved at res/drawable/myimage.png, this layout XML applies the image to a View:

- <ImageView
  android:layout_height="wrap_content"
  android:layout_width="wrap_content"
  android:src="@drawable/myimage" />