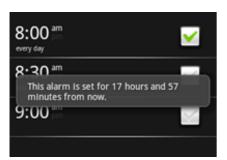


Notifying the User >

Creating Toast Notifications

A toast notification is a message that pops up on the surface of the window. It only fills the amount of space required for the message and the user's current activity remains visible and interactive. The notification automatically fades in and out, and does not accept interaction events.

The screenshot below shows an example toast notification from the Alarm application. Once an alarm is turned on, a toast is displayed to assure you that the alarm was set.



Quickview

A toast is a message that appears on the surface of the screen for a moment, but it does not take focus (or pause the current activity), so it cannot accept user input

You can customize the toast layout to include images

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<u>Toast</u>

A toast can be created and displayed from an <u>Activity</u> or <u>Service</u>. If you create a toast notification from a Service, it appears in front of the Activity currently in focus.

If user response to the notification is required, consider using a Status Bar Notification.

The Basics

First, instantiate a $\underline{\mathtt{Toast}}$ object with one of the $\underline{\mathtt{makeText}}$ methods. This method takes three parameters: the application $\underline{\mathtt{Context}}$, the text message, and the duration for the toast. It returns a properly initialized Toast object. You can display the toast notification with $\underline{\mathtt{show}}$ (), as shown in the following example:

```
Context context = getApplicationContext();
CharSequence text = "Hello toast!";
int duration = Toast.LENGTH_SHORT;

Toast toast = Toast.makeText(context, text, duration);
toast.show();
```

This example demonstrates everything you need for most toast notifications. You should rarely need anything else. You may, however, want to position the toast differently or even use your own layout instead of a simple text message. The following sections describe how you can do these things.

You can also chain your methods and avoid holding on to the Toast object, like this:

```
Toast.makeText(context, text, duration).show();
```

Positioning your Toast

A standard toast notification appears near the bottom of the screen, centered horizontally. You can change this position with the setGravity(int, int, int) method. This accepts three parameters: a Gravity constant, an x-position offset, and a y-position offset.

For example, if you decide that the toast should appear in the top-left corner, you can set the gravity like this:

```
toast.setGravity(Gravity.TOP|Gravity.LEFT, 0, 0);
```

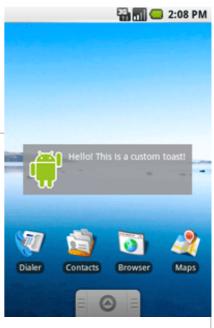
If you want to nudge the position to the right, increase the value of the second parameter. To nudge it down, increase the value of the last parameter.

Creating a Custom Toast View

If a simple text message isn't enough, you can create a customized layout for your toast notification. To create a custom layout, define a View layout, in XML or in your application code, and pass the root View object to the SetView (View) method.

For example, you can create the layout for the toast visible in the screenshot to the right with the following XML (saved as *toast_layout.xml*):

<LinearLayout</pre>



```
xmlns:android="http://schemas.android.com/apk/res/android"
              android:id="@+id/toast layout root"
              android:orientation="horizontal"
              android:layout width="fill parent"
              android:layout height="fill parent"
              android:padding="10dp"
              android:background="#DAAA"
    <ImageView android:id="@+id/image"</pre>
               android:layout width="wrap content"
               android:layout height="fill parent"
               android:layout marginRight="10dp"
               />
    <TextView android:id="@+id/text"
              android:layout width="wrap content"
              android:layout height="fill parent"
              android:textColor="#FFF"
</LinearLayout>
```

Notice that the ID of the LinearLayout element is "toast_layout". You must use this ID to inflate the layout from the XML, as shown here:

```
ImageView image = (ImageView) layout.findViewById(R.id.image);
image.setImageResource(R.drawable.android);
TextView text = (TextView) layout.findViewById(R.id.text);
text.setText("Hello! This is a custom toast!");

Toast toast = new Toast(getApplicationContext());
toast.setGravity(Gravity.CENTER_VERTICAL, 0, 0);
toast.setDuration(Toast.LENGTH_LONG);
toast.setView(layout);
toast.show();
```

First, retrieve the LayoutInflater with getLayoutInflater() (or getSystemService()), and then inflate the layout from XML using inflate (int, ViewGroup). The first parameter is the layout resource ID and the second is the root View. You can use this inflated layout to find more View objects in the layout, so now capture and define the content for the ImageView and TextView elements. Finally, create a new Toast with Toast (Context) and set some properties of the toast, such as the gravity and duration. Then call setView(View) and pass it the inflated layout. You can now display the toast with your custom layout by calling show().

Note: Do not use the public constructor for a Toast unless you are going to define the layout with setView(View). If you do not have a custom layout to use, you must use <a href="mailto:mai

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