

Die erste Android-App

Hello Android 4

Hello Android 4

I
N
F
O
R
M
A
T
I
O
N

The image shows the Eclipse IDE interface. On the left, the 'File' menu is open, and the 'Project...' option is selected, indicated by a red arrow. On the right, the 'New Project' wizard is displayed. The 'Wizards' list shows 'Android Application Project' selected, also indicated by a red arrow. At the bottom of the wizard, the 'Next >' button is highlighted with a red arrow.

Hello Android 4

I
N
F
O
R
M
A
T
I
K

New Android Application
Creates a new Android Application

Application Name: Hello Android 4

Project Name: HelloAndroid4

Package Name: eh.beispiele.hallo

Minimum Required SDK: API 8: Android 2.2 (Froyo)

Target SDK: API 17: Android 4.2 (Jelly Bean)

Compile With: API 17: Android 4.2 (Jelly Bean)

Theme: Holo Light with Dark Action Bar

Annotations:

- Appnamen eingeben, Projektname wird daraus automatisch erzeugt.
- Für Packagenamen dauerhafte sinnvolle Struktur überlegen
- entsprechend der Version des eigenen Smartphones, sonst egal

Help Text:

The package name must be a unique identifier for your application. It is typically not shown to users, but it *must* stay the same for the lifetime of your application; it is how multiple versions of the same application are considered the "same app". This is typically the reverse domain name of your organization plus one or more application identifiers, and it

Buttons: < Back, Next >, Finish, Cancel

Hello Android 4

I
N
F
O
R
M
A
T
I
O
N

The screenshot shows the 'New Android Application' wizard in Android Studio, specifically the 'Create Activity' step. The wizard is titled 'New Android Application' and has a red arrow pointing to it from the left. The 'Create Activity' dialog is open, showing a list of activity types: 'Blank Activity' (selected), 'Fullscreen Activity', and 'Master/Detail Flow'. Below the list, there is a description for 'Blank Activity': 'Creates a new blank activity, with an action bar and optional navigational elements such as tabs or horizontal swipe.' The 'Next >' button is highlighted in blue, indicating the next step in the wizard. The background of the slide features a light blue grid pattern with binary code (0s and 1s) and a vertical stack of red squares on the left side, each containing a white letter.

Create Activity
Select whether to create an activity, and if so, what kind of activity.

Create Activity

- Blank Activity
- Fullscreen Activity
- Master/Detail Flow

Blank Activity
Creates a new blank activity, with an action bar and optional navigational elements such as tabs or horizontal swipe.

< Back Next > Finish Cancel

Hello Android 4

New Android Application


Blank Activity
Creates a new blank activity, with an action bar and optional navigational elements such as tabs or horizontal swipe.


Activity Name: MainActivity


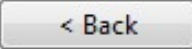

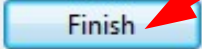
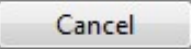
Layout Name: lay_main

Navigation Type: None

- None
- Fixed Tabs + Swipe
- Scrollable Tabs + Swipe
- Dropdown



 The type of navigation to use for the activity

Hello Android 4

I
N
F
O
R
M
A
T
I
K

The screenshot displays the Android Studio IDE with the following components:

- Palette:** Shows various Android widgets such as TextView, Button, CheckBox, RadioButton, CheckedTextView, Spinner, and Slider. A search filter 'Small' is applied.
- Design View:** A central window showing a mobile device mockup (Nexus One) with the text 'Hello Android 4' at the top and 'Hello world!' below it.
- Outline:** A tree view on the right showing the layout structure: RelativeLayout containing a TextView with the text 'Hello world!'.
- Properties:** A panel at the bottom right showing '<No properties>' for the selected widget.
- Toolbar:** Includes navigation and zooming tools.
- Bottom Bar:** Shows the current layout is 'lay_main.xml' in 'Graphical Layout' mode.

Hello Android 4

I
N
F
O
R
M
A
T
I
K

The screenshot shows the 'Run Configuration' dialog box in Android Studio. The dialog is titled 'Run Conf' and has a subtitle 'Create, manage, and run configurations'. It is set to 'Android Application'. The 'Name' field is filled with 'Hello Android 4'. The 'Project' field is filled with 'HelloAndroid4', and a 'Browse...' button is next to it. The 'Launch Action' section has 'Launch Default Activity' selected. At the bottom, there are 'Apply', 'Revert', 'Run', and 'Close' buttons. Red boxes and arrows highlight specific elements: 'Neue run configuration' points to the '+' icon in the toolbar; 'Namen auswählen' points to the 'Name' field; 'Projekt suchen' points to the 'Browse...' button; and 'Run configuration anlegen' points to the 'Apply' button.

Java - HelloAndroid4/res/layout/lay_main.xml - ADT

File Edit Refactor Run Source Navigate Search Project Window Help

Run
Debug
Run Histor
Run As
Run Conf
Debug Hist
Debug As
Debug Cor
Toggle Bre
Toggle Lin
Toggle Me
Toggle Wa
Skip All Bre

Package

- BBDB-Master
- BigBrother-Ma
- BigBrother-Sla
- BigBrotherDB-
- canvasBitmap
- canvasDemo
- google-play-s
- Hello Android
- HelloAndroid4
 - src
 - gen [Gene
 - Android 4.

Run Conf

Create, manage, and run configurations

Android Application

Name: Hello Android 4

Project: HelloAndroid4 Browse...

Launch Action:
 Launch Default Activity
 Launch:
 Do Nothing

Apply Revert

Run Close

Neue run configuration

Namen auswählen

Projekt suchen

Run configuration anlegen

Filter matched 25 of 29 items

Hello Android 4

I
 N
 F
 O
 R
 M
 A
 T
 I
 K

Run Configurations

Create, manage, and run configurations

Android Application

Name: Hello Android 4

Deployment Target Selection Mode

Always prompt to pick device
 Launch on all compatible devices/AVD's
 Automatically pick compatible device

Active devices and AVD's

Select a preferred device or AVD

AVD Name	Target Name	Platform	API Level	CPU/ABI
<input type="checkbox"/> AVD-Nexus4	Android 4.2.2	4.2.2	17	ARM (armeabi-v...
<input type="checkbox"/> AVD_for_Nexus_7...	Android 4.2.2	4.2.2	17	ARM (armeabi-v...
<input type="checkbox"/> mygoogleAVD-N...	Google APIs (G...	4.2.2	17	ARM (armeabi-v...

Emulator launch parameters:

If no compatible and active devices or AVD's are found, then an AVD might be launched. Provide opt

Apply Revert

Run Close

in der Regel ok.

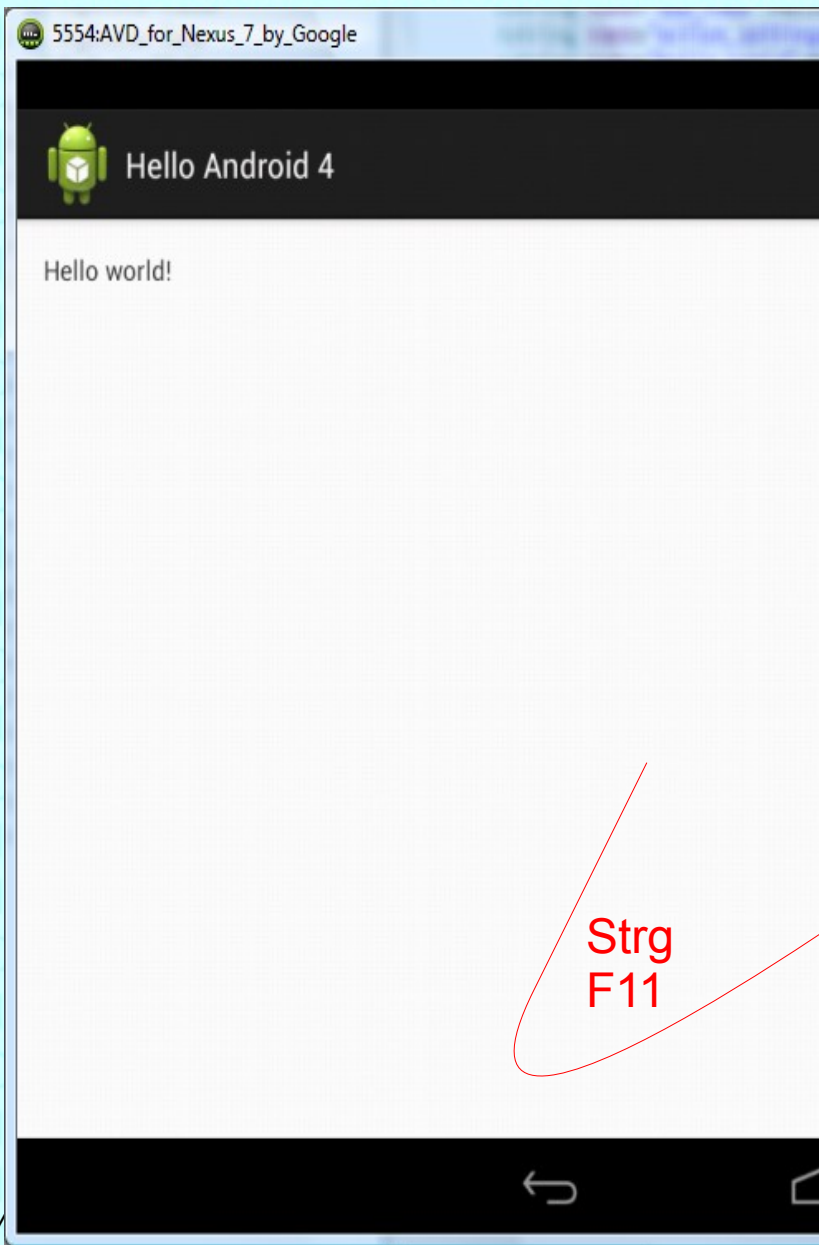
Verschiedene AVDs werden nur zum Testen von zu vertreibenden Apps benötigt.

App starten

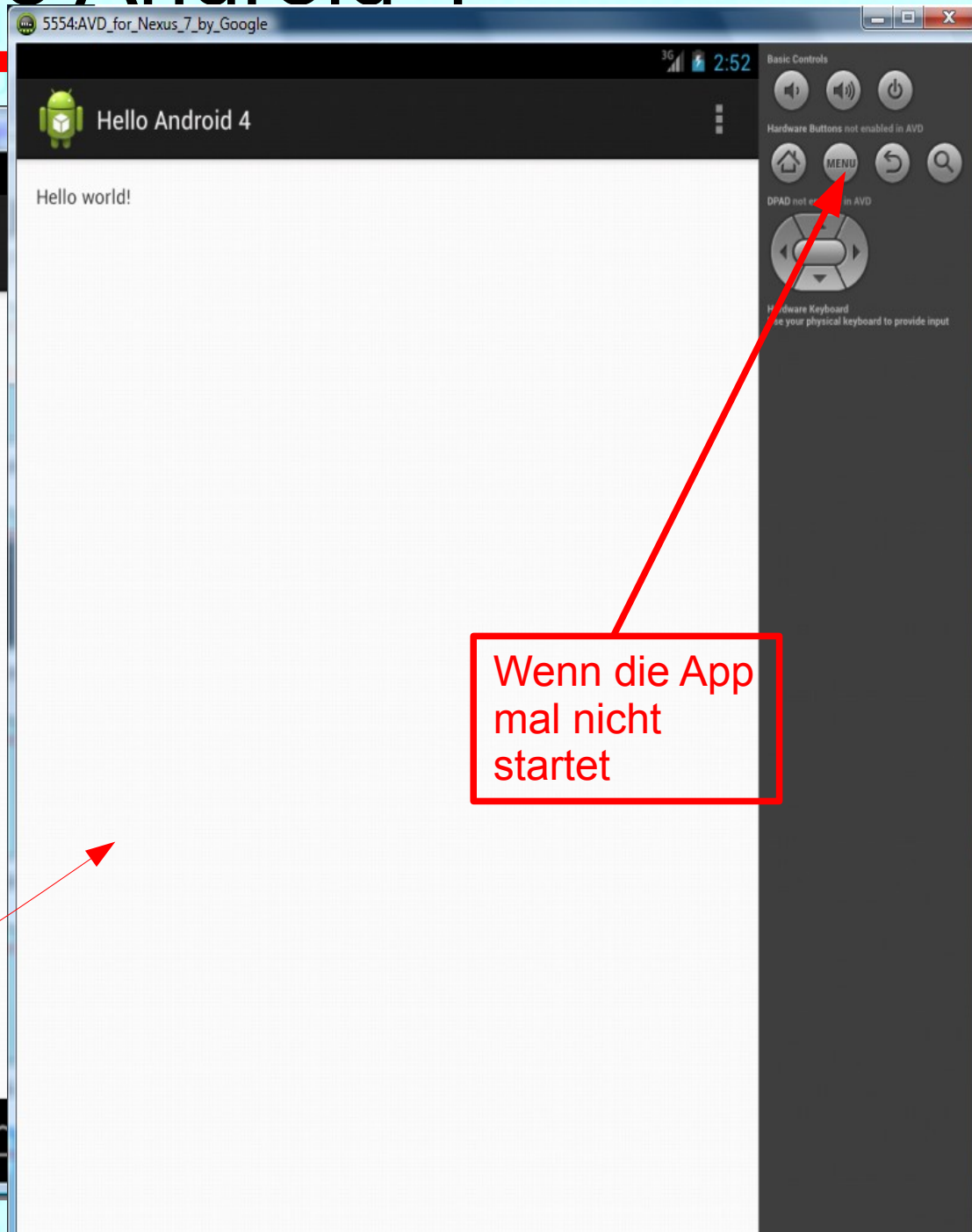
Filter matched 24 of 28 items

Hello Android 4

I
N
F
O
R
M
A
T
I
K



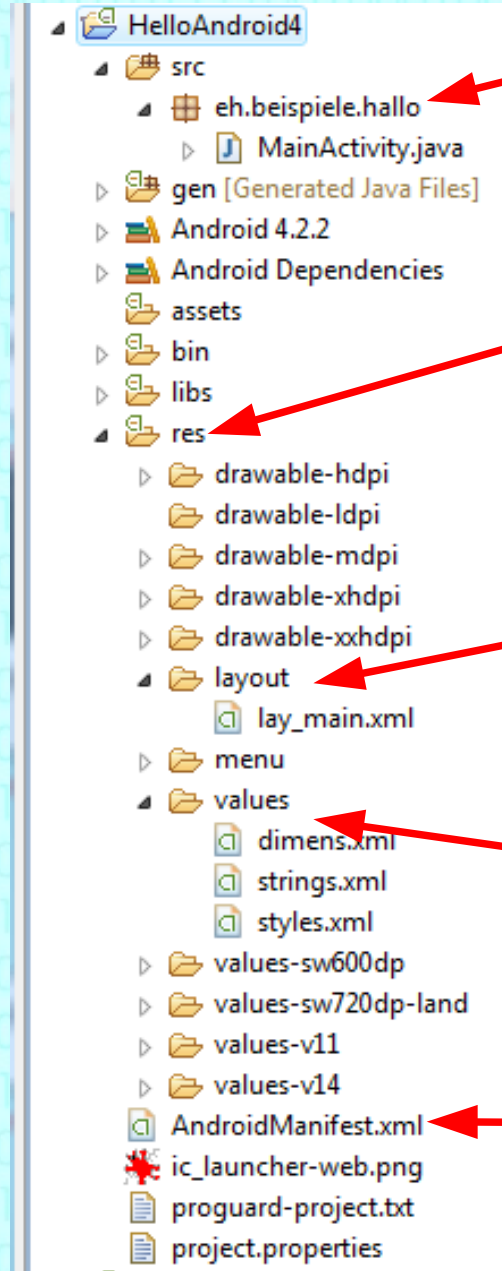
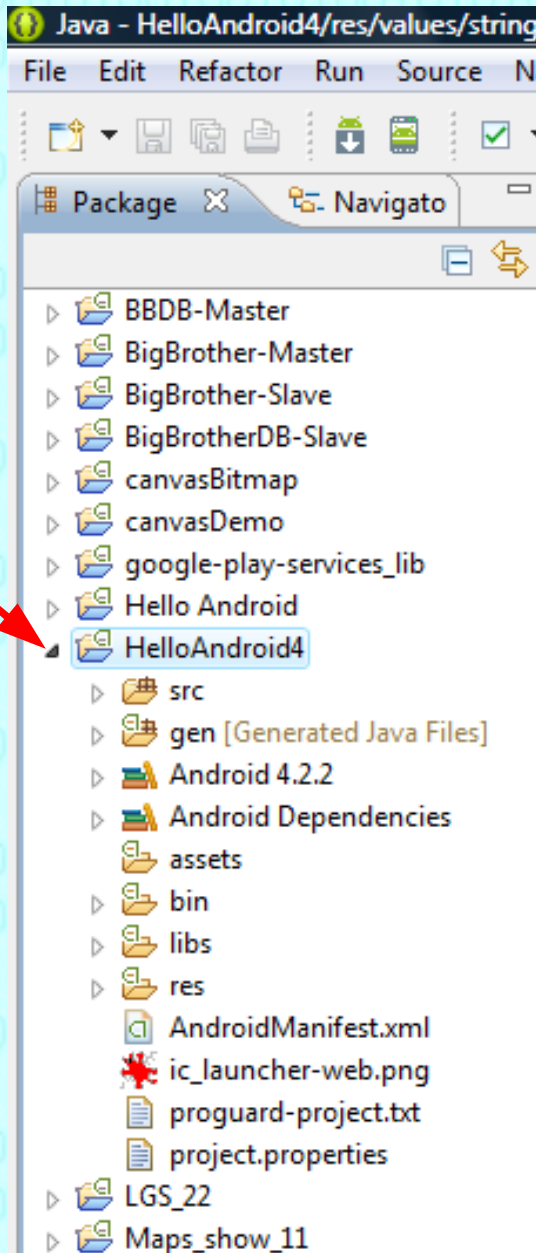
Strg
F11



Wenn die App
mal nicht
startet

Wo ist was?

I
 N
 F
 O
 R
 M
 A
 T
 I
 K
 ■



Package mit Activities (java-Quellcode)

Ressourcen

XML Dateien für das Layout der Activities

XML Dateien mit String- und Style-Daten

Das Manifest

Hello Android 4more

I
N
F
O
R
M
A
T
I
O
N

```
<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="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world" />

</RelativeLayout>
```

```
<?xml version="1.0" encoding="utf-8"?>
<resources>

    <string name="app_name">Hello Android 4more</string>
    <string name="action_settings">Settings</string>
    <string name="hello_world">Hallo Android 4</string>

</resources>
```

Hello Android 4more

```
*lay_main.xml x MainActivity.java
<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="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/txt_hallo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world" />

</RelativeLayout>
```

id
zum Wiederfinden
während der Laufzeit.

Hello Android 4more

I
N
F
O
R
M
A
T
I
K

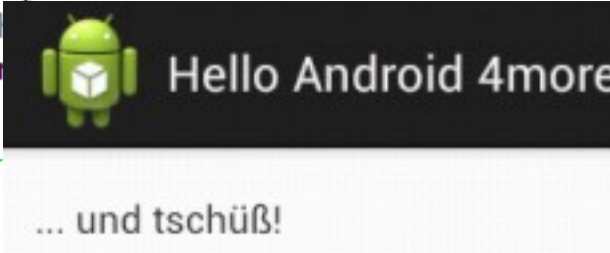
```
lay_main.xml MainActivity.java X
package eh.beispiele.hallo;
import android.app.Activity;

public class MainActivity extends Activity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.lay_main);

        final TextView txt_hallo = (TextView) findViewById(R.id.txt_hallo);
        txt_hallo.setText("... und tschüß!");
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the menu.
        getMenuInflater().inflate(R.menu.main, menu);
        return true;
    }
}
```

TextView wiederfinden,
casten und Text ändern



Hello Android 4more

I
N
F
O
R
M
A
T
I
K

lay_main.xml x MainActivity.java

Palette

Form Widgets

TextView Large Medium Small Button

Small OFF CheckBox

RadioButton CheckedTextView

Spinner Sub Item

alignTop: txt_hallo
alignParentRight: true

Hallo Android 4

Ändern

Nexus One

AppTheme MainActivity

Android 17

Text Fields

Layouts

Hello Android 4more

I

N

F

O

R

M

A

T

I

K

Ereignissteuerung

```
lay_main.xml x MainActivity.java
<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="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity" >

    <TextView
        android:id="@+id/txt_hallo"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/hello_world" />

    <Button
        android:id="@+id/btn_aendern"
        android:onClick="onClickAendern"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_alignTop="@+id/txt_hallo"
        android:layout_marginRight="62dp"
        android:text="@string/btn_aendern" />

</RelativeLayout>
```

```
lay_main.xml strings.xml x
<?xml version="1.0" encoding="utf-8"?>
<resources>

    <string name="app_name">Hello Android 4more</string>
    <string name="action_settings">Settings</string>
    <string name="hello_world">Hallo Android 4more</string>
    <string name="btn_aendern">Ändern</string>

</resources>
```

Hello Android 4more

I
N
F
O
R
M
A
T
I
K

```
lay_main.xml MainActivity.java X
package eh.beispiele.hallo;

import android.app.Activity;

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.lay_main);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.main, menu);
        return true;
    }

    public void onClickAendern(final View sfNormal) {
        final TextView txt_hallo = (TextView) findViewById(R.id.txt_hallo);
        txt_hallo.setText("... und tschüß!");
    }
}
```

Ereignissteuerung

Jetzt wird der Text erst auf Knopfdruck geändert.

Hello Android 4more

I
 N
 F
 O
 R
 M
 A
 T
 I
 K

The screenshot displays the Android Studio IDE with the following components:

- Palette:** Shows 'Form Widgets' and 'Text Fields'. A green arrow points from the 'Form Widgets' section to the text input field in the design view.
- Design View:** Shows a preview of the app with the title 'Hello Android 4more' and a button labeled 'Ändern'. A text input field is visible below the button. A tooltip above the button reads 'below: btn_aendern alignParentRight: true'. A red arrow points from the 'Input Type' property in the Properties panel to the text input field.
- Properties Panel:** Shows the 'Input Type' property for the selected text input field.
- Outline:** Shows the structure of the app, including 'RelativeLayout', 'txt_hallo (TextView)', 'btn_aendern (Button)', and 'edtText (EditText)'.

Hello Android 4more

```
MainActivity.java X lay_main.xml strings.xml
package eh.beispiele.hallo;

import android.app.Activity;

public class MainActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.lay_main);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.main, menu);
        return true;
    }

    public void onClickAendern(final View sfNormal) {

        final TextView edt_aendern = (TextView) findViewById(R.id.edtText);
        final TextView txt_hallo = (TextView) findViewById(R.id.txt_hallo);
        txt_hallo.setText(edt_aendern.getText().toString());
    }
}
```

Jetzt wird auf Knopfdruck ein beliebiger Text übertragen.