

Demo Layouts

layout/default_text_field.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_height="wrap_content" android:orientation="horizontal"
    android:layout_width="fill_parent">
<EditText
    android:id="@+id/EditText01"
    android:layout_height="wrap_content"
    android:layout_width="wrap_content"
    android:text="@string/default_text"></EditText>
<Button
    android:id="@+id/Button01"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Default"></Button>
</LinearLayout>
```

widgets/TextFieldWithDefault.java

```
public class TextFieldWithDefault extends LinearLayout implements
OnClickListener {

    private EditText text;
    private Button button;

    public TextFieldWithDefault(Context context) {
        this(context, null);
    }

    public TextFieldWithDefault(Context context, AttributeSet attrs) {
        super(context, attrs);

        LayoutInflater inf = (LayoutInflater)
getContext().getSystemService(Context.LAYOUT_INFLATER_SERVICE);
        inf.inflate(R.layout.default_text_field, this, true);

        text = (EditText) findViewById(R.id.EditText01);
        button = (Button) findViewById(R.id.Button01);

        button.setOnClickListener(this);
    }

    public void onClick(View view) {
        if(view.getId() == R.id.Button01) {
            text.setText(getContext().getText(R.string.default_text));
        }
    }
}
```

layout/info.xml:

```
<net.davidtanzer.campus2010.hello.widgets.TextFieldWithDefault
    android:id="@+id/DefaultTextView01"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
/>
```

Demo: Eigene Views

widgets/CustomView.java

```
public class CustomView extends View {
    public CustomView(Context context) {
        this(context, null);
    }

    public CustomView(Context context, AttributeSet attrs) {
        super(context, attrs);

        paint = new Paint(Paint.ANTI_ALIAS_FLAG);
        paint.setStrokeWidth(1.0f);
        paint.setColor(getResources().getColor(R.color.white));

        paint.setTextSize(getResources().getDimension(R.dimen.custom_font_size));
    }

    @Override
    protected void onDraw(Canvas canvas) {
        canvas.drawText("Test", 50, 50, paint);
    }
}
```

res/values/colors.xml

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
    <color name="my_background">#F555</color>
    <color name="white">#FFFF</color>
</resources>
```

res/values/dimens.xml

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
<dimen name="custom_font_size">25sp</dimen>
<dimen name="custom_text_offset">25dp</dimen>
</resources>
```

res/layout/info.xml

- Alles Auskommentieren
- ```
<net.davidtanzer.campus2010.hello.widgets.CustomView
 android:id="@+id/CustomView01"
 android:layout_width="fill_parent"
```

```
 android:layout_height="fill_parent"
/>
```

## Demo: 2D Graphik

### *widgets/CustomView.java*

```
public class CustomView extends View {
 public CustomView(Context context) {
 this(context, null);
 }

 public CustomView(Context context, AttributeSet attrs) {
 super(context, attrs);

 paint = new Paint(Paint.ANTI_ALIAS_FLAG);
 paint.setStrokeWidth(1.0f);
 paint.setColor(getResources().getColor(R.color.white));

 paint.setTextSize(getResources().getDimension(R.dimen.custom_font_size));

 linePaint = new Paint(Paint.ANTI_ALIAS_FLAG);
 linePaint.setStyle(Paint.Style.STROKE);
 linePaint.setColor(getResources().getColor(R.color.white));

 bgPaint = new Paint(Paint.ANTI_ALIAS_FLAG);
 bgPaint.setStyle(Paint.Style.FILL);
 bgPaint.setColor(getResources().getColor(R.color.my_background));

 textOffset =
getResources().getDimension(R.dimen.custom_text_offset);
 }

 @Override
 protected void onDraw(Canvas canvas) {
 canvas.drawRect(0, 0, outerDiameter, outerDiameter, bgPaint);
 canvas.drawRect(1, 1, outerDiameter-2, outerDiameter-2, linePaint);

 float x = (outerDiameter - paint.measureText("Test")) / 2;
 float y = (outerDiameter - paint.getTextSize()) / 2;
 canvas.drawText("Test", x, y, paint);

 canvas.drawPath(circle, linePaint);
 canvas.drawTextOnPath("Mobile Developer Day 2010 - Erlangen",
circle, textOffset, textOffset, paint);
 }

 @Override
 protected void onMeasure(int widthMeasureSpec, int heightMeasureSpec) {
 int measuredWidth = measure(widthMeasureSpec);
 int measuredHeight = measure(heightMeasureSpec);

 outerDiameter = Math.min(measuredWidth, measuredHeight);
 }
}
```

```

 circle = new Path();
 circle.addCircle(outerDiameter/2, outerDiameter/2, outerDiameter/2-
5, Direction.CW);

 Log.d("CustomView", "w: "+measuredWidth+", h: "+measuredHeight+", d:
"+outerDiameter);
 setMeasuredDimension(outerDiameter, outerDiameter);
 }

 private int measure(int spec) {
 int specMode = MeasureSpec.getMode(spec);
 int specSize = MeasureSpec.getSize(spec);

 if(specMode == MeasureSpec.UNSPECIFIED) {
 return 200;
 } else {
 return specSize;
 }
 }
}

```

## Demo: Intents (1)

*layout/main.xml:*

- “Dial” Button hinzufügen

*HelloAndroid.java:*

```

public void onCreate(Bundle savedInstanceState) {
 ...
 dialButton = (Button) findViewById(R.id.main_dial_button);
 dialButton.setOnClickListener(this);
 public void onClick(View view) {
 ...
 case R.id.main_dial_button:
 i = new Intent(Intent.ACTION_DIAL, Uri.parse("tel:+43-
664-1234567"));
 startActivity(i);
 break;
 }
}

```

*layout/main.xml:*

- “Launch” - Button hinzufügen

*HelloAndroid.java:*

```

public void onCreate(Bundle savedInstanceState) {
 ...
 launchButton = (Button) findViewById(R.id.main_launch_button);
 launchButton.setOnClickListener(this);
}

```

```

public void onClick(View view) {
 ...
 case R.id.main_launch_button:
 Log.d("HelloAndroid", "Action: Pick");
 //Könnte auch ein Cursor eines Data Providers sein
 i = new Intent(Intent.ACTION_PICK, People.CONTENT_URI);
 startActivity(i);
 break;
}

```

### AndroidManifest.xml:

```

<uses-permission android:name="android.permission.READ_CONTACTS"/>
</manifest>

```

### Demo: Intents (2)

#### layout/filter\_activity.xml:

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
 xmlns:android="http://schemas.android.com/apk/res/android"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content" android:orientation="vertical">
<TextView
 android:id="@+id/TextView01"
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:text="Filter Activity"></TextView>
<Button
 android:layout_width="wrap_content"
 android:layout_height="wrap_content"
 android:id="@+id/filter_return"
 android:text="Return"></Button>
</LinearLayout>

```

#### FilterActivity.java:

```

public class FilterActivity extends Activity implements OnClickListener {
 @Override
 protected void onCreate(Bundle savedInstanceState) {
 super.onCreate(savedInstanceState);

 setContentView(R.layout.filter_activity);

 Log.d("FilterActivity", getIntent().getData().toString());

 Button returnButton = (Button)
 findViewById(R.id.filter_return);
 returnButton.setOnClickListener(this);
 }
}

```

```

public void onClick(View view) {
 switch(view.getId()) {
 case R.id.filter_return:
 Intent resultData = new Intent();
 resultData.setData(Uri.parse("myapp://results/all/5"));
 resultData.putExtra("foo", "bar");
 setResult(Activity.RESULT_OK, resultData);
 finish();
 break;
 }
}
}

```

**AndroidManifest.xml (Achtung: scheme eindeutig / mehrdeutig zeigen!):**

```

<activity android:name=".FilterActivity"
android:label="@string/filter_activity_name">
 <intent-filter>
 <action android:name="android.intent.action.PICK" />
 <category android:name="android.intent.category.DEFAULT"
/>
 <data android:path="results/all" android:scheme="myapp"
/>
 </intent-filter>
</activity>

```

**HelloAndroid.java**

```

public void onClick(View view) {
 ...
 case R.id.main_launch_button:
 Log.d("HelloAndroid", "Action: Pick");
 i = new Intent(Intent.ACTION_PICK,
Uri.parse("myapp://results/all"));
 startActivityForResult(i, PICK_FILTER_ACTIVITY);
 break;
@Override
protected void onActivityResult(int requestCode, int resultCode,
Intent data) {
 super.onActivityResult(requestCode, resultCode, data);

 switch(requestCode) {
 case PICK_FILTER_ACTIVITY:
 Log.d("Result data", data.getDataString());
 Log.d("Result extra",
"foo="+data.getExtras().getString("foo"));
 break;
 }
}
}

```

## Demo: AlertDialogBuilder

*layout/main.xml:*

- "Open Dialog" - Button hinzufügen

HelloAndroid.java:

```
public void onCreate(Bundle savedInstanceState) {
 ...
 openDialogButton = (Button) findViewById(R.id.main_open_dialog);
 openDialogButton.setOnClickListener(this);
 public void onClick(View view) {
 ...
 case R.id.main_open_dialog:
 AlertDialog.Builder ad = new AlertDialog.Builder(this);
 ad.setTitle("It is pitch black");
 ad.setMessage("You are likely to be eaten by a grue.");
 ad.setPositiveButton("Go Back", listener);
 ad.setNegativeButton("Go Forward", listener);

 ad.setCancelable(true);
 ad.show();
 break;
 }
}
```

## Demo: Preferences

*layout/main.xml:*

- "Preferences" - Button hinzufügen

*layout/settings.xml:*

```
<?xml version="1.0" encoding="utf-8"?>
<PreferenceScreen
 xmlns:android="http://schemas.android.com/apk/res/android">
 <CheckBoxPreference
 android:key="booleanValue"
 android:title="Boolean Value"
 android:summary="Some boolean value preference"
 android:defaultValue="true"/>
 <EditTextPreference
 android:key="stringValue"
 android:title="String Value"
 android:summary="Some String value preference"
 android:defaultValue="Foobar"/>
</PreferenceScreen>
```

*Preferences.java:*

```
public class Preferences extends PreferenceActivity {
```

```

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

public static boolean getBooleanPref(Context context) {
 return
PreferenceManager.getDefaultSharedPreferences(context).getBoolean("booleanValue", true);
}

public static String getStringPref(Context context) {
 return
PreferenceManager.getDefaultSharedPreferences(context).getString("stringValue", "Foobar");
}
}

```

**AndroidManifest.xml:**

```
<activity android:name=".Preferences" android:label="Preferences"/>
```

**HelloAndroid.java:**

```

public void onCreate(Bundle savedInstanceState) {
 ...
 prefsButton = (Button) findViewById(R.id.prefs_button);
 prefsButton.setOnClickListener(this);
 public void onClick(View view) {
 ...
 case R.id.prefs_button:
 Log.d("boolean pref",
""+Preferences.getBooleanPref(this));
 Log.d("string pref", Preferences.getStringPref(this));
 startActivity(new Intent(this, Preferences.class));
 break;

```