

Simplest possible Images in SQLite

Sources

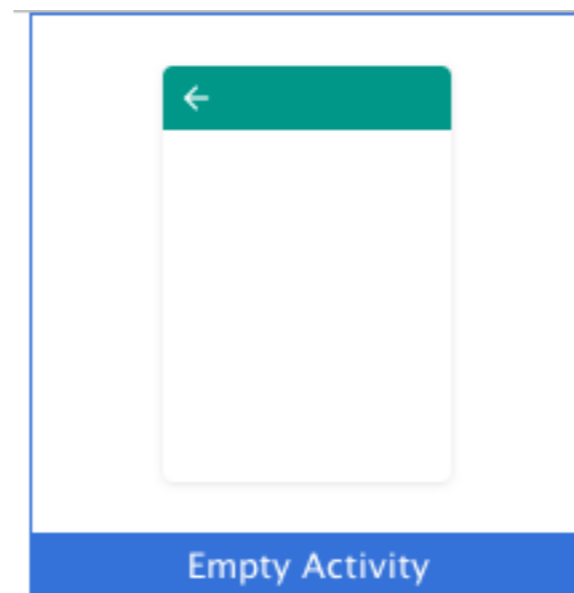
- Ein ganz simples Beispiel: <https://www.youtube.com/watch?v=vLEW0sutK3s>
- Zugriff auf Bilder in Ressourcen (ansonsten eher schwach): <https://www.youtube.com/watch?v=G8ZRXdztESU>
- Fehler beim Upgrade von DBs: <https://thebhwwgroup.com/blog/how-android-sqlite-onupgrade>
- <http://blog.cindypotvin.com/saving-to-a-sqlite-database-in-your-android-application/>
- <https://www.javacodegeeks.com/2015/05/saving-an-image-in-a-sqlite-database-in-your-android-application.html>
- <http://androidopentutorials.com/android-sqlite-example/>
- Die neuen Runtime-Permissions: <http://www.capttechconsulting.com/blogs/runtime-permissions-best-practices-and-how-to-gracefully-handle-permission-removal>

Projekt erstellen

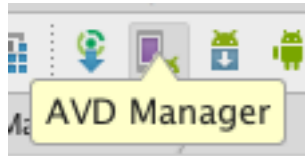
Application name: SimpleImageInSQLite
Company Domain: htl.at
Package name: at.htl.simpleimageinsqlite

Phone and Tablet
Minimum SDK ~~API 18: Android 4.3 (Jelly Bean)~~

API 23



Activity Name: MainActivity
 Generate Layout File
Layout Name: activity_main



Android Virtual Device (AVD)

Verify Configuration

Memory and Storage

RAM: MB

VM heap: MB

Internal Storage: MB

SD card: Studio-managed MB

External file ...

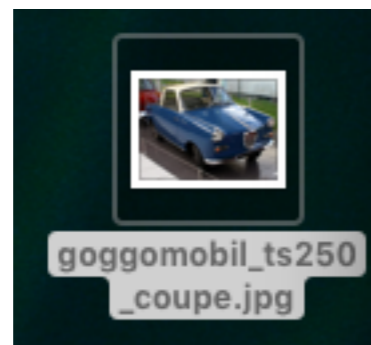


Bild hochladen

The screenshot shows the Android Studio interface. The top toolbar contains several icons, with a blue circle labeled '1' highlighting the 'Add' button (represented by a plus sign in a square). Below the toolbar, the 'File Explorer' tab is active, showing a file browser window. The window title is 'Desktop'. The left sidebar shows 'Favorites' including iCloud Drive, Applications, Desktop, Downloads, Documents, Dropbox, ELBA, Movies, Music, computerpraktikum, Pictures, htl, skripten, and stuetz. The main pane shows a list of files and folders. A blue circle labeled '2' highlights the file 'goggomobil_ts250_coupe.jpg' which is selected. At the bottom right of the file explorer, a blue circle labeled '3' highlights the 'Open' button.

Name	Size	Date	Time	Permissions	Info
mnt		2016-05-17	10:08	drwxr-xr-x	
current.articles			Yesterday 16:16		
daten.archiv			Today 10:11		
diverses014			Today 10:11		
eBooks			28 Feb 2016 12:50		
Einstellungenn.thunderbird.HTL-Leonding			03 May 2016 08:56		
findip.jar			13 Mar 2016 15:33		
Fortbildungsprogram...HS-BS-2016-17.pdf			15 May 2016 09:42		
Getting Ready for Angular 2.0.mp4			24 Apr 2016 12:40		
git-cheat-sheet-large.png			26 Mar 2016 12:11		
goggomobil_t250.jpg			26 Mar 2014 08:11		
goggomobil_tl.jpg			20 Mar 2014 11:48		
goggomobil_ts250_coupe.jpg			20 Mar 2014 11:48		
littlesister			02 May 2016 09:18		
matura			25 Apr 2016 22:36		
matura.muendlich			22 Feb 2016 11:26		
Screen Shot 2016-05-17 at 08.29.53			Today 08:30		
SYP			21 Apr 2016 13:10		
Testumgebung			28 Apr 2016 13:11		
WebStorm Angular 2 Tips and Tricks.mp4			Yesterd		

Datei auf sdcard

The screenshot shows the Android Device Monitor interface. On the left, the 'Devices' tab lists the emulator 'emulator-5554' and its running processes. The main area displays the 'File Explorer' for the emulator, showing a directory tree. The 'storage' folder is expanded, and the 'emulated' sub-folder is highlighted with a red box. Inside 'emulated', there is a folder named '0', which is also highlighted. Below '0', a file named 'goggomobil_ts250_coupe.jpg' is selected and highlighted in blue. The file's details are shown in the table below.

Name	Size	Date	Time	Permissions	Info
proc		2016-05-17	10:08	dr-xr-xr-x	
property_contexts	3420	1970-01-01	01:00	-rw-r--r--	
root		2016-02-26	23:39	drwx-----	
sbin		1970-01-01	01:00	drwxr-x---	
sdcard		2016-05-17	10:08	lrwxrwxrwx	-> /storage/self/primary
seapp_contexts	596	1970-01-01	01:00	-rw-r--r--	
selinux_version	72	1970-01-01	01:00	-rw-r--r--	
sepolicy	1429...	1970-01-01	01:00	-rw-r--r--	
service_contexts	9769	1970-01-01	01:00	-rw-r--r--	
storage		2016-05-17	10:08	drwxr-xr-x	
1112-3915		2016-05-17	11:11	drwxrwx--x	
emulated		2016-05-11	00:52	drwx--x--x	
0		2016-05-17	11:17	drwxrwx--x	
Alarms		2016-05-11	00:52	drwxrwx--x	
Android		2016-05-14	01:34	drwxrwx--x	
DCIM		2016-05-11	00:52	drwxrwx--x	
Download		2016-05-17	11:23	drwxrwx--x	
Movies		2016-05-11	00:52	drwxrwx--x	
Music		2016-05-11	00:52	drwxrwx--x	
Notifications		2016-05-11	00:52	drwxrwx--x	
Pictures		2016-05-11	00:52	drwxrwx--x	
Podcasts		2016-05-11	00:52	drwxrwx--x	
Ringtones		2016-05-11	00:52	drwxrwx--x	
goggomobil_ts250_coupe.jpg	1532...	2014-03-20	11:48	-rw-rw----	
obb		2016-05-11	00:52	drwxrwx--x	
self		2016-05-17	10:08	drwxr-xr-x	
sys		2016-05-17	10:08	dr-xr-xr-x	
system		1970-01-01	01:00	drwxr-xr-x	
ueventd.goldfish.rc	323	1970-01-01	01:00	-rw-r--r--	
ueventd.ranchu.rc	272	1970-01-01	01:00	-rw-r--r--	
ueventd.rc	4587	1970-01-01	01:00	-rw-r--r--	
vendor		2016-05-17	10:08	lrwxrwxrwx	-> /system/vendor



Component Tree

- Device Screen
 - LinearLayout (vertical)
 - saveImageButton (Button) - @string/...
 - getImageButton (Button) - @string/b...
 - imageView - @drawable/No_image_a**



Properties

foregroundGravity	U
foregroundTint	
foregroundTintMode	
id	imageView
importantForAccessibility	
labelFor	
longClickable	<input type="checkbox"/>
maxHeight	
maxWidth	
minHeight	
minWidth	
nestedScrollingEnabled	<input type="checkbox"/>
onClick	
outlineProvider	
padding	[]
paddingEnd	
paddingStart	
pointerShape	
scaleType	
scrollIndicators	[]
src	@drawable/No_image_av

```

public class MainActivity extends AppCompatActivity {

    private final static String TAG = MainActivity.class.getSimpleName();

    private Button saveImageButton;
    private Button getImageButton;
    private ImageView imageView;
    private SQLiteDatabase db;

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

        imageView = (ImageView) findViewById(R.id.imageView);

        db = this.openOrCreateDatabase("test.db", Context.MODE_PRIVATE, null);
        db.execSQL("create table if not exists img_table (image_col blob)");

        saveImageButton = (Button) findViewById(R.id.saveImageButton);
        getImageButton = (Button) findViewById(R.id.getImageButton);

        String[] perms = {"android.permission.READ_EXTERNAL_STORAGE"};
        int permsRequestCode = 200;
        requestPermissions(perms, permsRequestCode);

        saveImageButton.setOnClickListener(new View.OnClickListener() {
            ...
        });

        getImageButton.setOnClickListener(new View.OnClickListener() {
            ...
        });
    }
}

```

Das neue
Berechtigungs-
system

saveImageButton. setOnClickListener

```
saveImageButton.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        Log.w(TAG, "onClick: getExternalStorageDirectory " +  
            Environment.getExternalStorageDirectory());  
        Log.w(TAG, "onClick: getExternalStorageState " +  
            Environment.getExternalStoragePublicDirectory(Environment.DIRECTORY_DOWNLOADS));  
  
        try (FileInputStream fis = new FileInputStream(  
            "/storage/emulated/0/goggomobil_ts250_coupe.jpg")) {  
            byte[] image = new byte[fis.available()];  
            fis.read(image);  
  
            ContentValues values = new ContentValues();  
            values.put("image_col", image);  
            db.insert("img_table", null, values);  
  
            Toast.makeText(MainActivity.this, "insert successful", Toast.LENGTH_SHORT).show();  
        }  
    } catch (IOException e) {  
        Log.e(TAG, "onClick: saveImageButton -> " + e.getMessage());  
    }  
});
```

getImageButton.setOnClickListener Listener

```
getImageButton.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        Cursor c = db.rawQuery("select * from img_table", null);  
        if (c.moveToNext()) {  
            byte[] image = c.getBlob(0);  
            Bitmap bmp = BitmapFactory.decodeByteArray(image, 0, image.length);  
            imageView.setImageBitmap(bmp);  
  
            Toast.makeText(MainActivity.this,  
                "select successful",  
                Toast.LENGTH_SHORT).show();  
        }  
        c.close();  
    }  
});
```

Permissions - Teil 2

```
@Override
public void onRequestPermissionsResult(int permsRequestCode,
                                     String[] permissions,
                                     int[] grantResults) {
    switch (permsRequestCode) {
        case 200:
            boolean extStorageAccepted = grantResults[0] == PackageManager.PERMISSION_GRANTED;
            break;
    }
}
```

Testlauf

save from file in db

show from db





Noch
Fragen?