



Easy Databases On Maemo

Part 1: Stop Writing Code

Part 2: Glom

Part 3: Handheld Glom

Part 1: Stop Writing Code

Developers are incredibly ineffective

Developers Are Difficult

- Argue about editors
- Argue about version control
- Argue about programming languages
- Argue about code style
- Argue about toolkits
- Argue about build tools
- Nice to have: Implement features

The Best Is Not Enough

- People say the best developers are 10 x more productive than other developers
- That's true
- That's still 1000 x not good enough

Please

Stop The Developers

Code

- Code crashes
- Code works but you don't know why
- Code does something but you don't know what
- Code stops working if you look at it.

100 Ways To Be Slightly Better

- Development methodologies
- Specifications
- IDEs
- New programming languages
- Regression Testing

After everything, code is still mostly awful.

Please

Stop Writing Code

Estimates Are Always Wrong

- Always 2 weeks until it's finished.
Translation: "We have no idea".
- First month: Version 0.5, 0.6, 0.7, 0.8, 0.9
- Last two years: 0.91, 0.92 ... 0.9991 ... 0.9999, 2.0
- Requirements Always Change

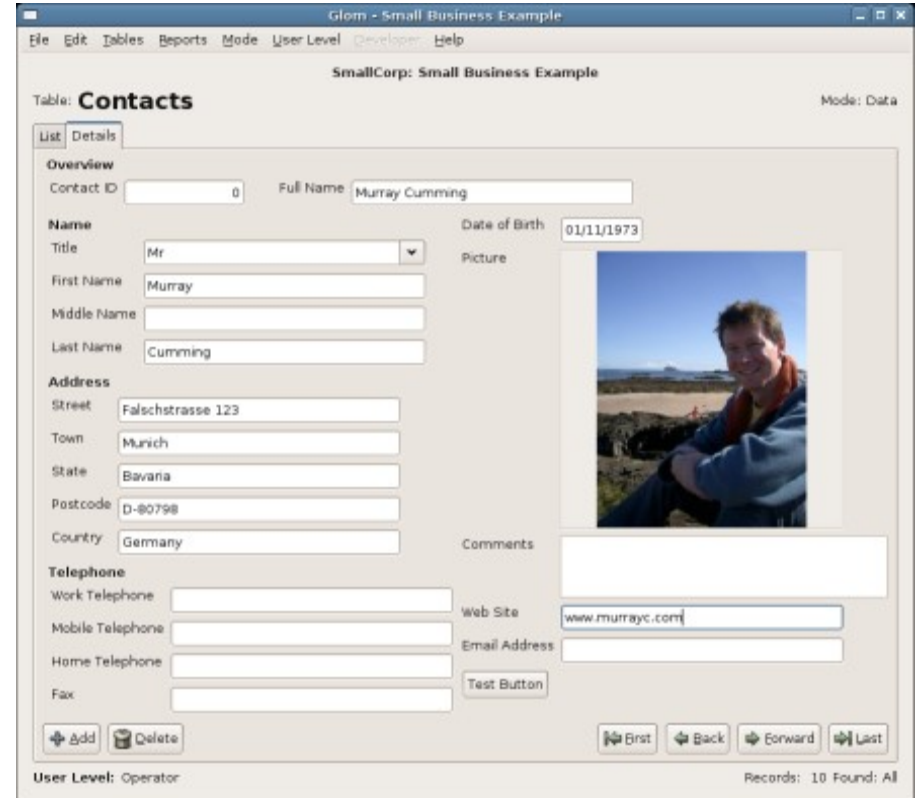
Please

Stop Planning

Show useful results early. Move on.

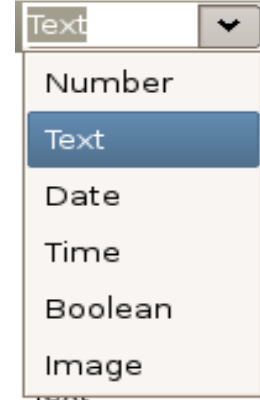
Part 2: Glom

- Design database systems
- UI and structure together
- Self-contained in one folder
- For normal users
- No code. No SQL.
(You can if you must)



Features (1)

- Simple field types
- Automatic layout
- Find
- Relationships:
 - Related records
 - Field lookups
 - Related fields
 - Drop-down choices



Desktop Uses

Anything that people would (ab)use Excel for.

- Order Taking and Invoicing
- Project Management
- Membership Databases
- Bookings, Reservations
- Film Production Management

Handheld Uses

Jobs without computers: People who work on their feet.

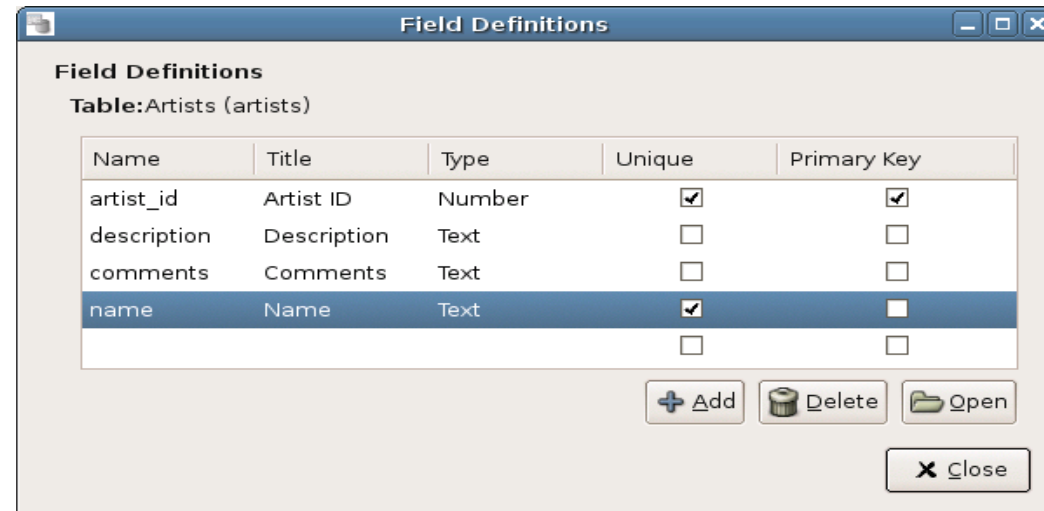
- Restaurant Orders
- Deliveries
- Stock Taking
- Warehouse Order Picking
- Garage Billing
- School Attendance

Tables and Fields

- Tables

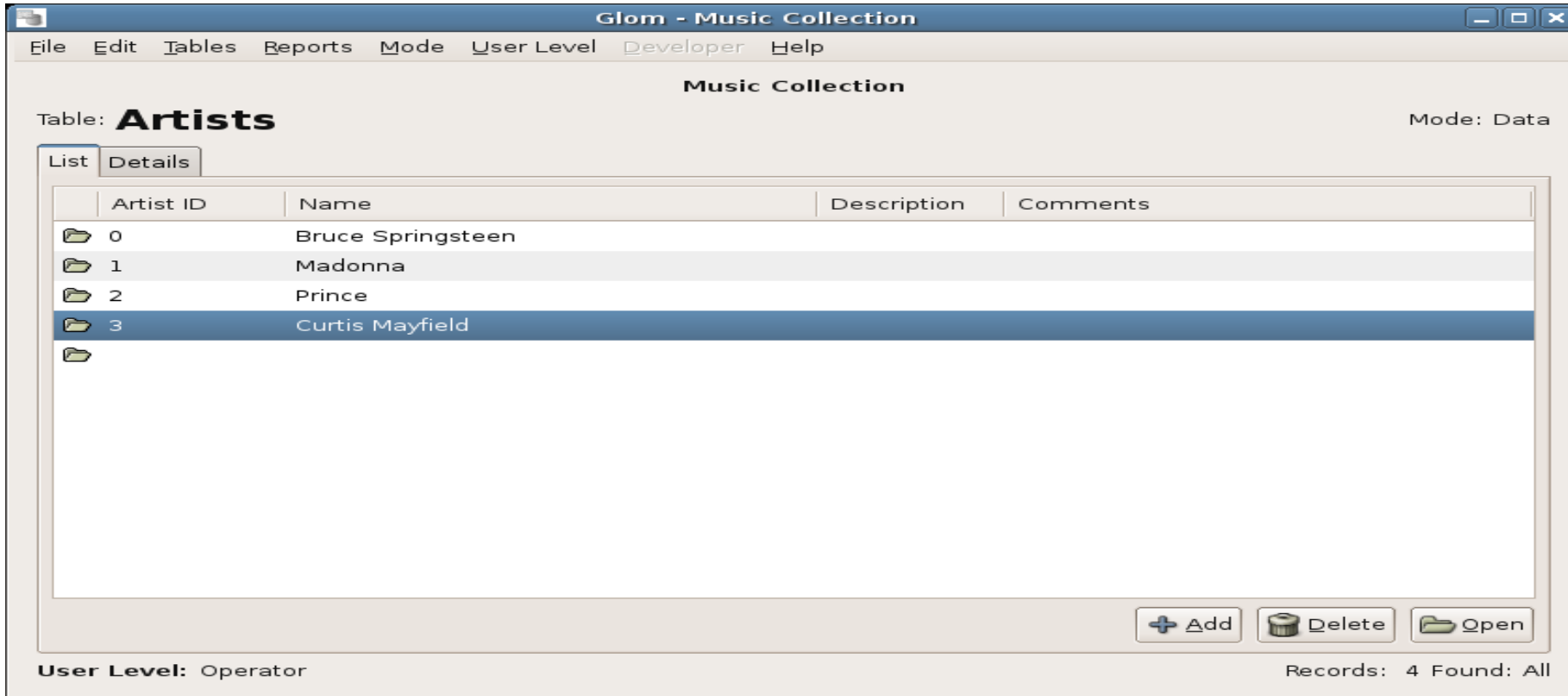


- Fields



Layout: List

- Shows many records:



The screenshot shows the Glom application window titled "Glom - Music Collection". The menu bar includes "File", "Edit", "Tables", "Reports", "Mode", "User Level", "Developer", and "Help". The main window displays "Music Collection" and "Table: Artists" in "Mode: Data". There are two tabs: "List" (selected) and "Details". The table has four columns: "Artist ID", "Name", "Description", and "Comments". The data rows are:

Artist ID	Name	Description	Comments
0	Bruce Springsteen		
1	Madonna		
2	Prince		
3	Curtis Mayfield		

At the bottom of the window, there are buttons for "+ Add", "Delete", and "Open". The status bar at the bottom left shows "User Level: Operator" and the bottom right shows "Records: 4 Found: All".

Layout: Details

- Show more details for one record.

The screenshot shows the Glom application window titled "Glom - Music Collection". The menu bar includes "File", "Edit", "Tables", "Reports", "Mode", "User Level", "Developer", and "Help". The main window displays the "Artists" table in "Data" mode. The "Details" tab is selected, showing the following fields:

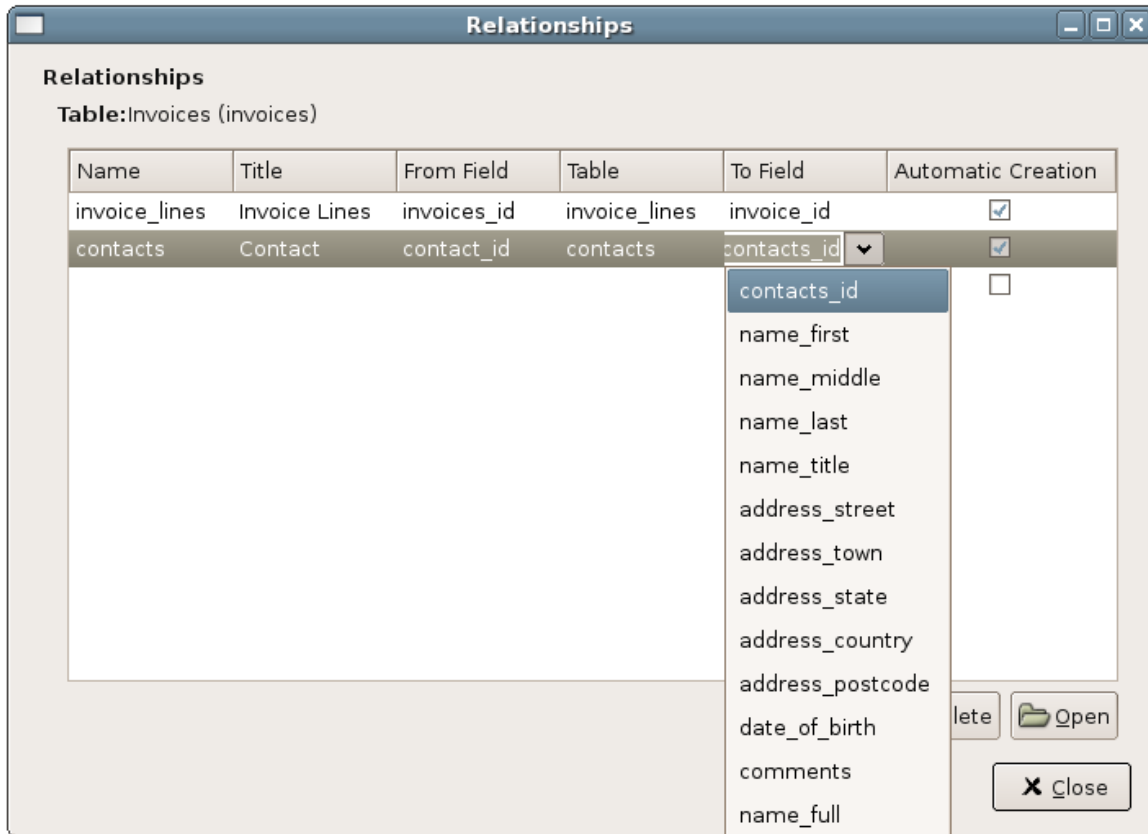
- Overview:** Artist ID (0), Name (Bruce Springsteen)
- Details:** Description (empty), Comments (empty)
- Albums:** A table listing albums for the selected artist.

Name	Year
Born To Run	1975
The Wild, the Innocent, & the E-Street	1973

At the bottom of the window, there are navigation buttons: "+ Add", "Delete", "Open", "First", "Back", "Forward", and "Last". The status bar at the bottom left shows "User Level: Operator" and the bottom right shows "Records: 4 Found: All".

Relationships

- Identify records based on a field value.



Using Relationships

- View related records
- View a related field
- Lookup a value from a related field
- Show list of possible values from a related record

Invoice Lines

Product Id	Product Name	Product Price	VAT Percentage	Number Of	Total Price	Total VAT
1	Sprocket	EUR 2.99	16	1	EUR 2.99	EUR 0.48
2	Brezl	EUR 0.99	16	2	EUR 1.98	EUR 0.32

0 Brezl
1 Sprocket
2 Widget

+ Add Delete

No need for SQL

- This is pain:

```
SELECT "invoices"."invoice_id", "invoices"."date",  
"invoices"."contact_id", "relationship_contacts"."name_full",  
"invoices"."price_total", "invoices"."vat_total",  
"invoices"."price_total_with_vat", "invoices"."comment",  
"invoices"."invoice_id" FROM "invoices" LEFT OUTER JOIN  
"contacts" AS "relationship_contacts" ON  
("invoices"."contact_id" = "relationship_contacts"."contact_id")  
WHERE "invoices"."invoice_id" = 0
```

- Glom does it for you.

Extend via Python

- Define **Field calculations** using Python.
To calculate a value based on other fields.
- Add a **button** that runs a Python script.
To do something based on the field values,
Use SQL if you like, via the provided pygda connection.

Extend via SQL

- Glom uses PostgreSQL or SQLite.
- So you can access the data directly, without even using Glom.
- Just don't use unusual features that Glom doesn't expect.

Extend via XML

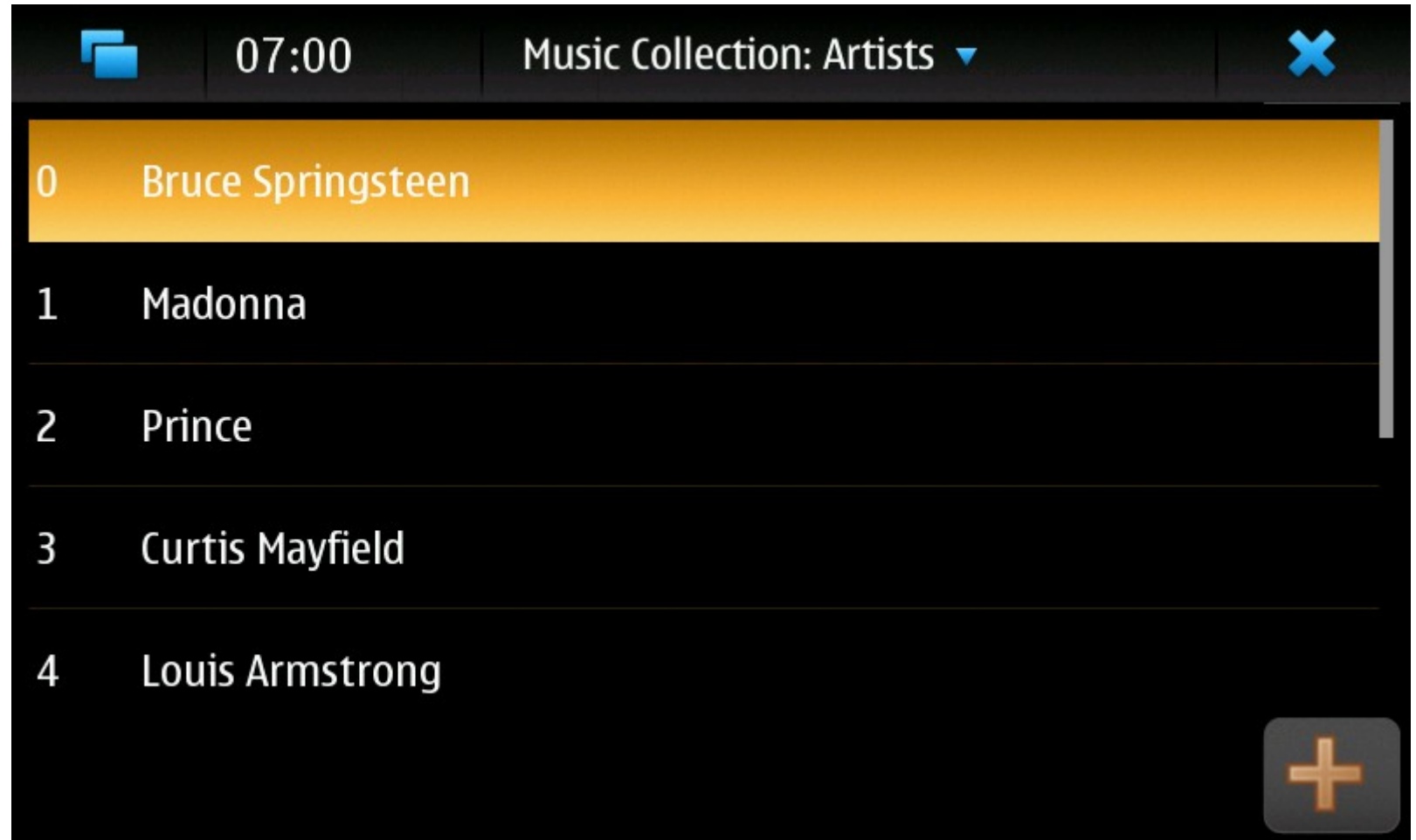
- .glom files are XML.
- The format is obvious and documented.
- Libglom helps you to read the XML.
Qlom (Qt) uses it. We have a Java JSP test too.

Part 3: Handheld Glom

- Client-only: Just viewing and Editing of data
- TouchSelector instead of TreeView
- PickerButton+TouchSelector instead of ComboBox
- Hide some labels
- Use single-columned layouts by default
- Use Hildon Buttons, Entries, Windows
- ifdefastic

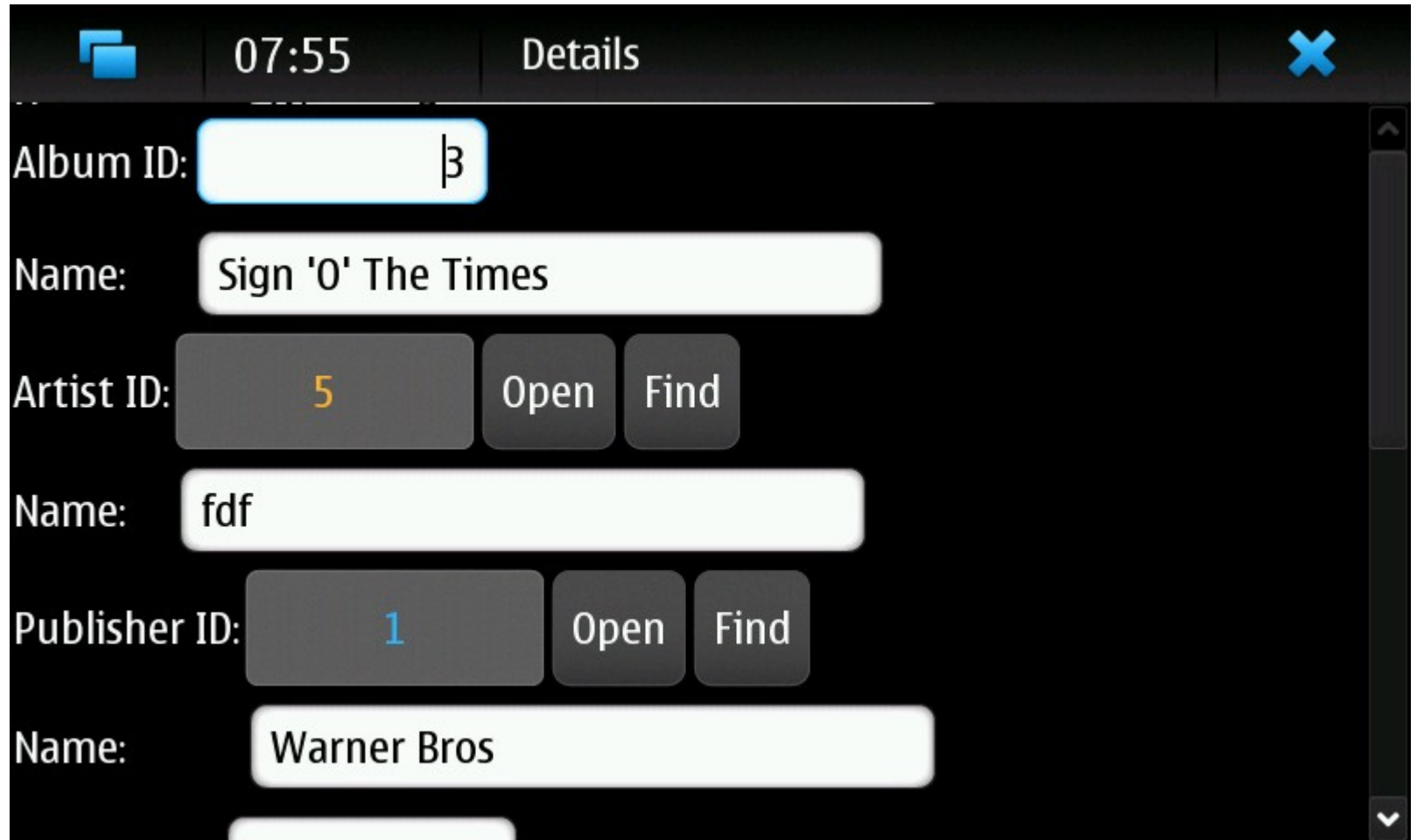
Simpler UI

List:



Simpler UI

Details:



The screenshot shows a 'Details' window with a dark background and a light blue header bar. The header bar contains a folder icon, the time '07:55', the title 'Details', and a close button (X). The main content area is divided into sections for Album ID, Name, Artist ID, Name, Publisher ID, and Name. Each section has a text input field and, for the ID fields, a numeric input field and 'Open' and 'Find' buttons.

Field	Value	Buttons
Album ID:	<input type="text" value="β"/>	
Name:	<input type="text" value="Sign 'O' The Times"/>	
Artist ID:	<input type="text" value="5"/>	Open Find
Name:	<input type="text" value="fdf"/>	
Publisher ID:	<input type="text" value="1"/>	Open Find
Name:	<input type="text" value="Warner Bros"/>	

**We Create Quality
We Fight Entropy**



Glom

openismus