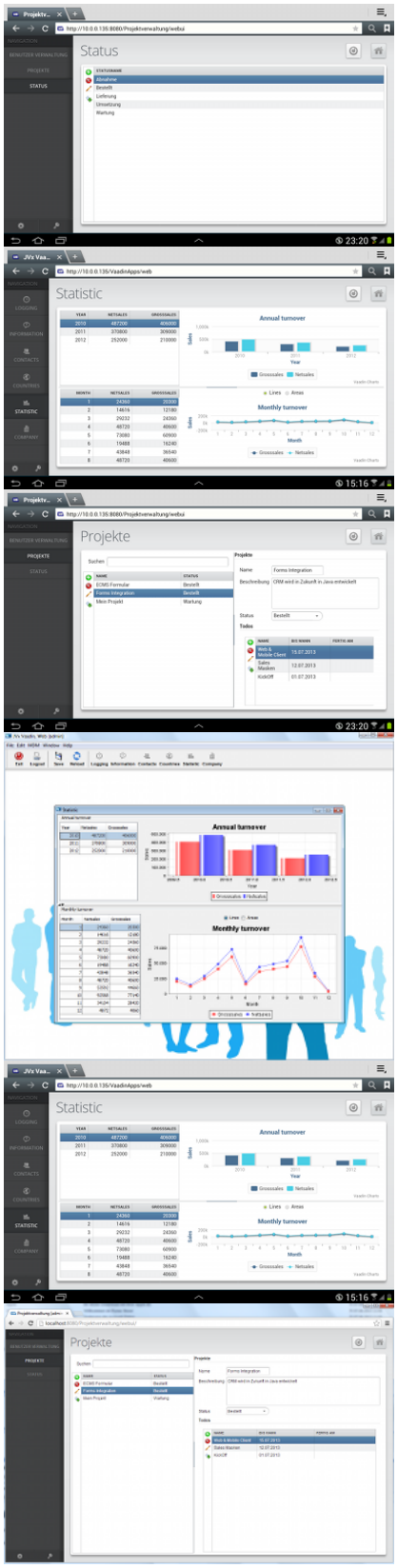
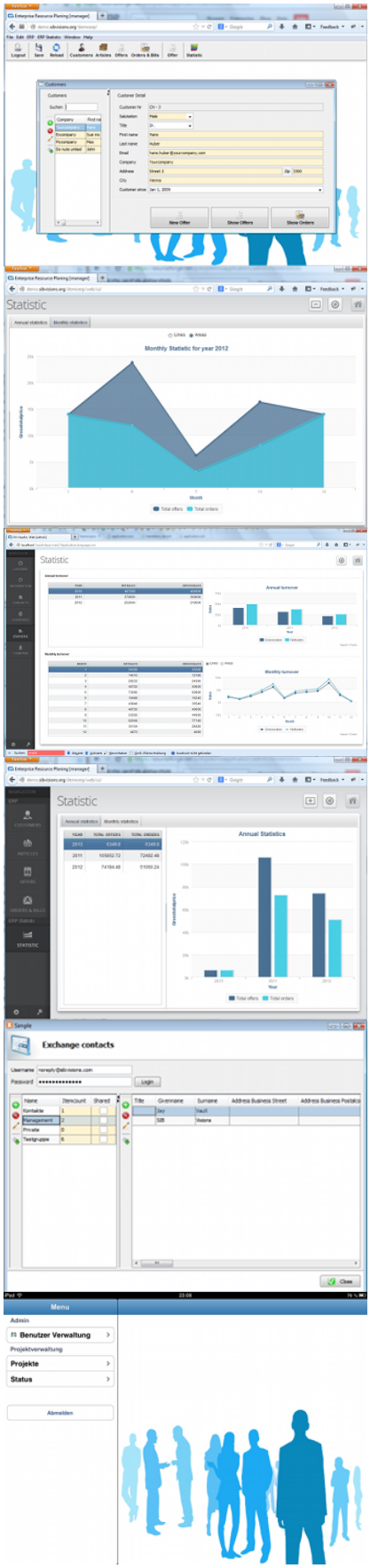
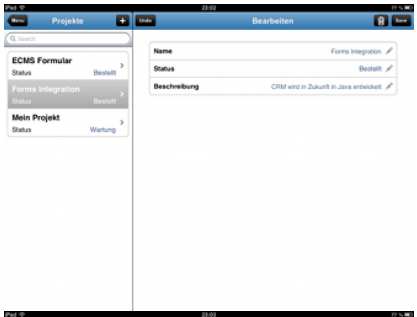
UI platform independent

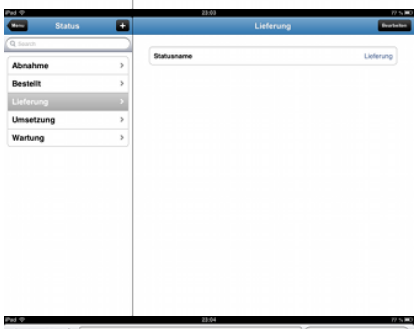
Write UI sourcce code for your screens once and start the application as Desktop, Web or Mobile solution.

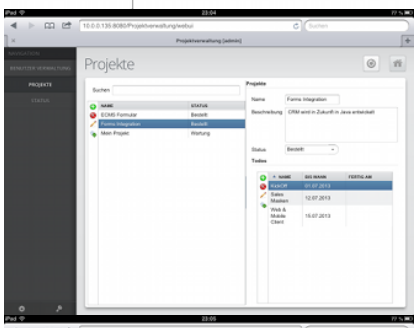
- **Swing**
  Applet, Webstart or Desktop
- **Vaadin**
  HTML5/Ajax
- **iOS and Android**
  Native App for Smartphone, Tablet

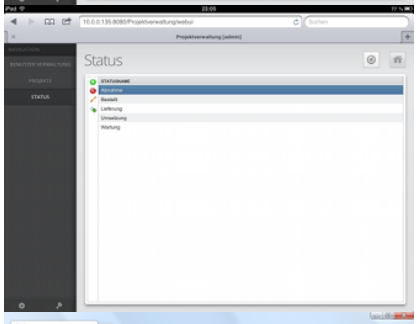



Statistic
Monthly Statistic for year 2012
Statistic
Statistic
Annual Statistics
Exchange contacts
Menu
Admin
Benutzer Verwaltung
Projektverwaltung
Projekte
Status
Abmelden


Projekte
Bearbeiten
ECMS Formular
Status Bestellt
Forms Integration
Status Bestellt
Mein Projekt
Status Wartung
Name Forms Integration
Status Bestellt
Beschreibung CRM wird in Zukunft in Java entwickelt


Status
Lieferung
Abnahme
Bestellt
Lieferung
Umsetzung
Wartung
Statusname Lieferung


Projekte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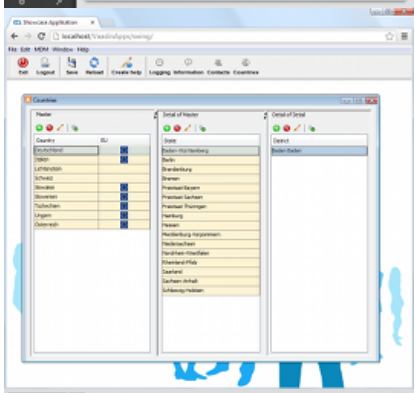
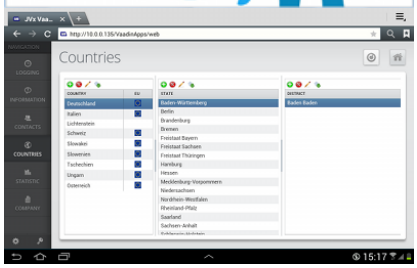
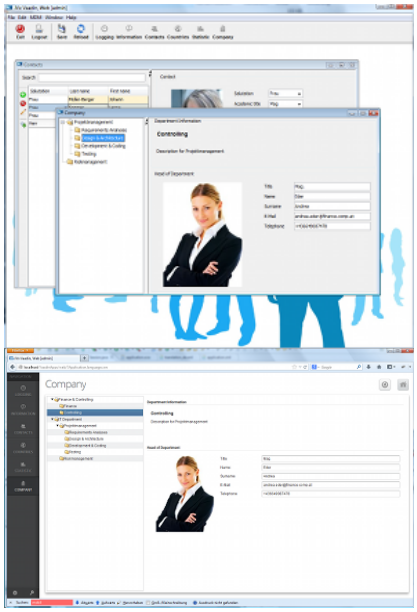



Countries



Quick & Easy development

Client Code:

```
private void initializeUI() throws Exception  {
  UITable table = new UITable();
  table.setDataBook(rdbContacts);//bind to UI model
  add(table, UIBorderLayout.CENTER);
  setTitle("Contacts");
  setSize(new UIDimension(600, 500));
}
private void initializeModel() throws Throwable {
  RemoteDataBook rdbContacts = new RemoteDataBook();
  rdbContacts.setDataSource(getDatasource()); // bind to DAO „contacts“
  rdbContacts.setName("contacts");
  rdbContacts.open();
}
```

Server Code:

```
public IStorage getContacts() throws Exception {
  DBStorage dbsContacts = (DBStorage)get("contacts");
  if (dbsContacts == null) {
    dbsContacts = new DBStorage(); // Automatic DAO
    dbsContacts.setDBAccess(getDBAccess());
    dbsContacts.setWritebackTable("CONTACTS");
    dbsContacts.open();
    put("contacts", dbsContacts);
  }
```

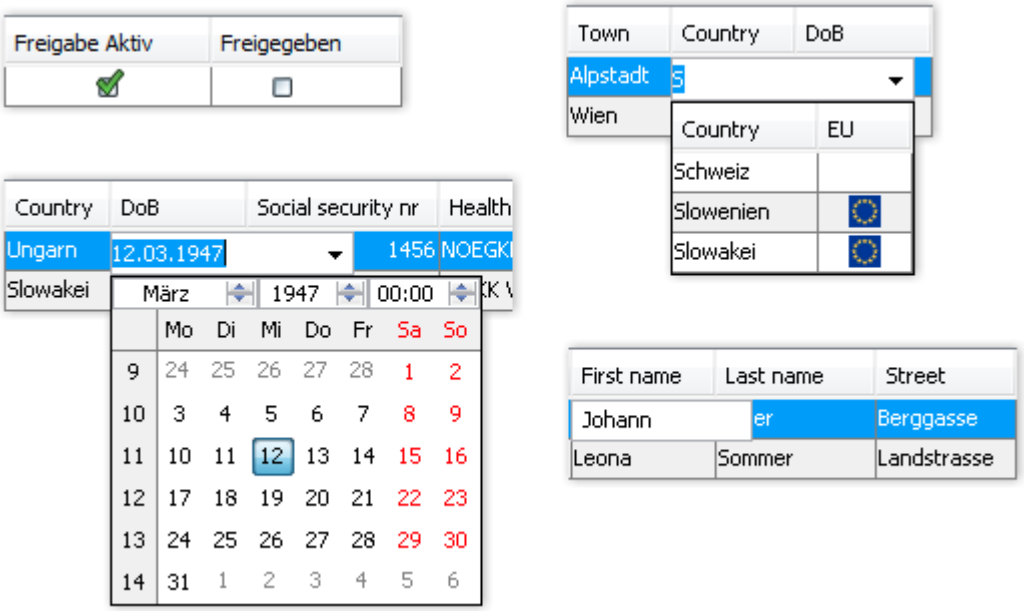
```
  return dbsContacts;
}
```

You don't need more code!

You write just a few lines of code for an application that manages your contacts.

- **initializeUI()**
  Initialize an UITable, bind it to the model and add it to the screen.
- **initializeModel()**
  Instantiate model for contacts, bind it to the server and the DAO “contacts”.
- **getContacts()**
  Instantiate DAO “contacts”, initialize it with database and table “CONTACTS”.

How does it work?



JVx' DAO class DBStorage analyzes the data model of table “CONTACTS”. This detects all data types for all

columns and all foreign keys to master data tables. This metadata information are sent to the client model.

The dynamic client model, for all Daten data-bound GUI controls, uses this metadata. Because of this mechanism, all input fields get a specific data type, and size directly from the database. Dropdown lists are created because of foreign key references to master data tables, etc.

As a result, no further source code is necessary.
Covention over Configuration
Any deviation from the standard behavior can be coded accordingly.

All Features

General

- **OpenSource Framework**
  Apache 2.0 license
- **Full Stack Framework**
  - Full application stack, starts with GUI and ends with Persistence
  - Simple APIs, short training period
  - Well documented
  - Easy to extend
- **Database independent**
  - Oracle, DB2, MS SQL, MySql/MariaDB, PostgreSql, HSQLDB, Hana, Tibero, etc.
- **Applicationserver independent**
  - Any servlet container, e.g. Tomcat, Wildfly, etc.
- **Multi-tier architecture**

GUI Features

- **GUI technology independent**
  - Web (vaadin)
  - Mobile (native iOS, Android)
  - Desktop (Swing, JavaFX)
  - Headless (Testing)

- **Standardized dynamic model for all data-bound GUI controls**
  - Uses persistence metadata as base datatype, data size, datatype dependent editors (e.g. “Date” → Date editor, “Master data” → Dropdown list (= Combobox)
  - Editor (Number, Date, Dropdown), Table, Tree, Chart

GUI/Server Features

- **Flexible authentication management with different Security managers**
  Database table, NTLM, LDAP, XML
- **CRUD Triggers on Client & Application Server**
  Before/After Insert, Update, Delete, Select, …
- **Event & Listener concept**
- **Multi language support**
- **Lazy Loading**
  - Only visible GUI information are loaded
  - No paging, lazy loading is integrated in GUI controls → scrollbar
  - Process millions of records
- **Flexible application frame**
  - Integrated in the framework
  - Contains Toolbar, Menu, Login/out, Change password, Help, About, Save, Reload, …
  - Can be easily extended and adapted to the requirements of the application
  - CSS styling, Web appliaction frame
  - Fully configurable application frame through interfaces

More Features

- **Online help system for Web & Desktop applications**
  Table of contents, Search, HTML
- **User and roles management**
  Database tables, if (Rolle=Admin) then show data