

Ferramentas CASE Para Modelagem de BD's

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Introdução

- Ferramenta CASE (Computer Aided Software Engineering)

"CASE é a automação do desenvolvimento de software"

A idéia básica é que CASE proveria um conjunto integrado de Ferramentas para economia de trabalho, ligando e automatizando todas as fases do ciclo de vida de software.

Ferramentas CASE para modelagem de BANCO DE DADOS

Cenário Atual:

- Projetos usando a tecnologia cliente/servidor
- Bancos de dados relacionais
- Interface gráficas

O uso de uma ferramenta CASE visa dar maior produtividade no desenvolvimento de sistemas, gerando esquemas nos bancos de dados bem como fazendo a engenharia reversa, e provendo uma documentação do modelo de dados do cliente/projeto.

TESTAR E AVALIAR

- Auxiliar na criação de modelo de dados
- Facilitar a geração de esquemas para os Sistemas Gerenciadores de Bancos de Dados Relacionais (SGBDR's).

- Os testes foram feitos com a finalidade de se conhecer melhor as ferramentas.

Foram verificados:

- A forma de representação utilizada
- A criação e verificação do Modelo ou entre modelos
- A geração de esquema
- Engenharia reversa
- As formas de navegação/utilização

É ideal Avaliar:

- O potencial da ferramenta;
- A aceitação do uso da mesma pelo analista;
- O impacto no processo de desenvolvimento;
- A facilidade de aprendizado e uso;
- Os pontos negativos e positivos da ferramenta.

É ideal Avaliar:

- Quais os diagramas a ferramenta gera e qual o nível de inteligência de cada um desses diagramas;
- Qual o nível de geração de scripts e quais os bancos de dados compatíveis;
- Recursos que a ferramenta disponibiliza ou deixa de disponibilizar;
- Quais os documentos gerados.

- Criação do modelo de dados;
- Engenharia reversa dos modelos já criados;
- Apoio às atividades de projeto lógico e físico;
- Geração de esquemas;
- Interoperabilidade com outros bancos;
- Simplicidade de instalação e uso;
- Facilidade de aprendizado em curto espaço de tempo;
- Não ter a necessidade de que seja feita uma customização da ferramenta para que possa ser usada, de acordo com os padrões da empresa, o que despenderia um certo tempo e um determinado custo para que isto aconteça.



- 2004: GerWin -> GNU/FERRET (Versão atual Ferret 0.6)
 - Computer Associates INC: Dono da marca o Erwim;
- Acronimo: FERRET ("Free Entity Relationship and Reverse Engineering Tool") idéia de Víctor Ruiz;
- Projetado e Desenvolvido por José E. Marchesi <jemarch@gnu.org>
- Mantido pela FSF
- Distribuido com Debian e Ubuntu. (# apt-get install ferret)



- Características:
 - Entidade/Relacionamento (Dr. Peter Chen.)
 - MER
 - Modelo conceitual
 - *Modelo lógico*
 - *Modelo físico*
 - Gera o Diagrama das Tabelas
 - Gera scripts: postgresql, mysql, sql92 e GerwinML
 - Controle de Versões - CVS

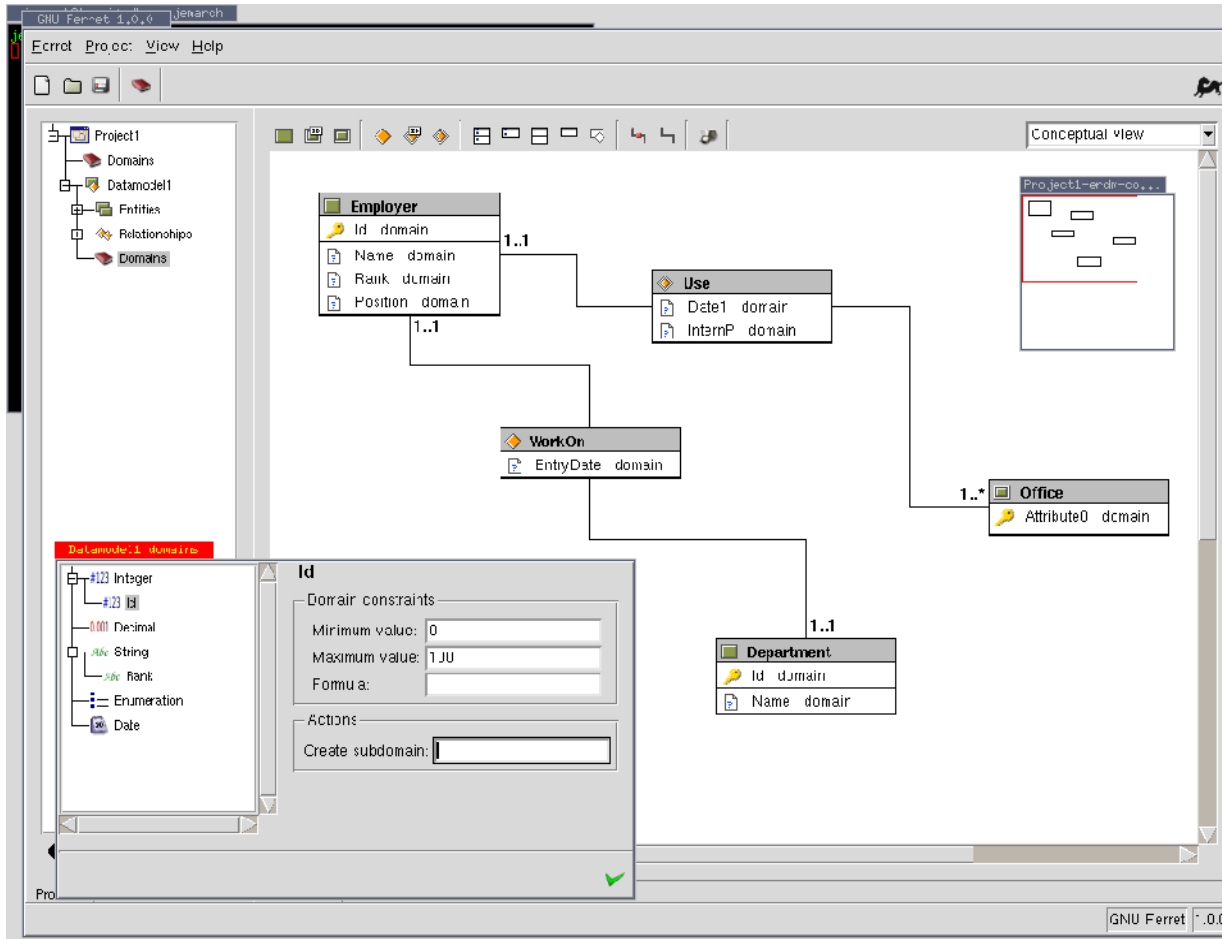
Ferret



The GNU Data Modeler

Novas Versões

modeling data with freedom...



Previsões GNU/Ferret:

“GerWin 0.7” ou Ferret 1.0.0

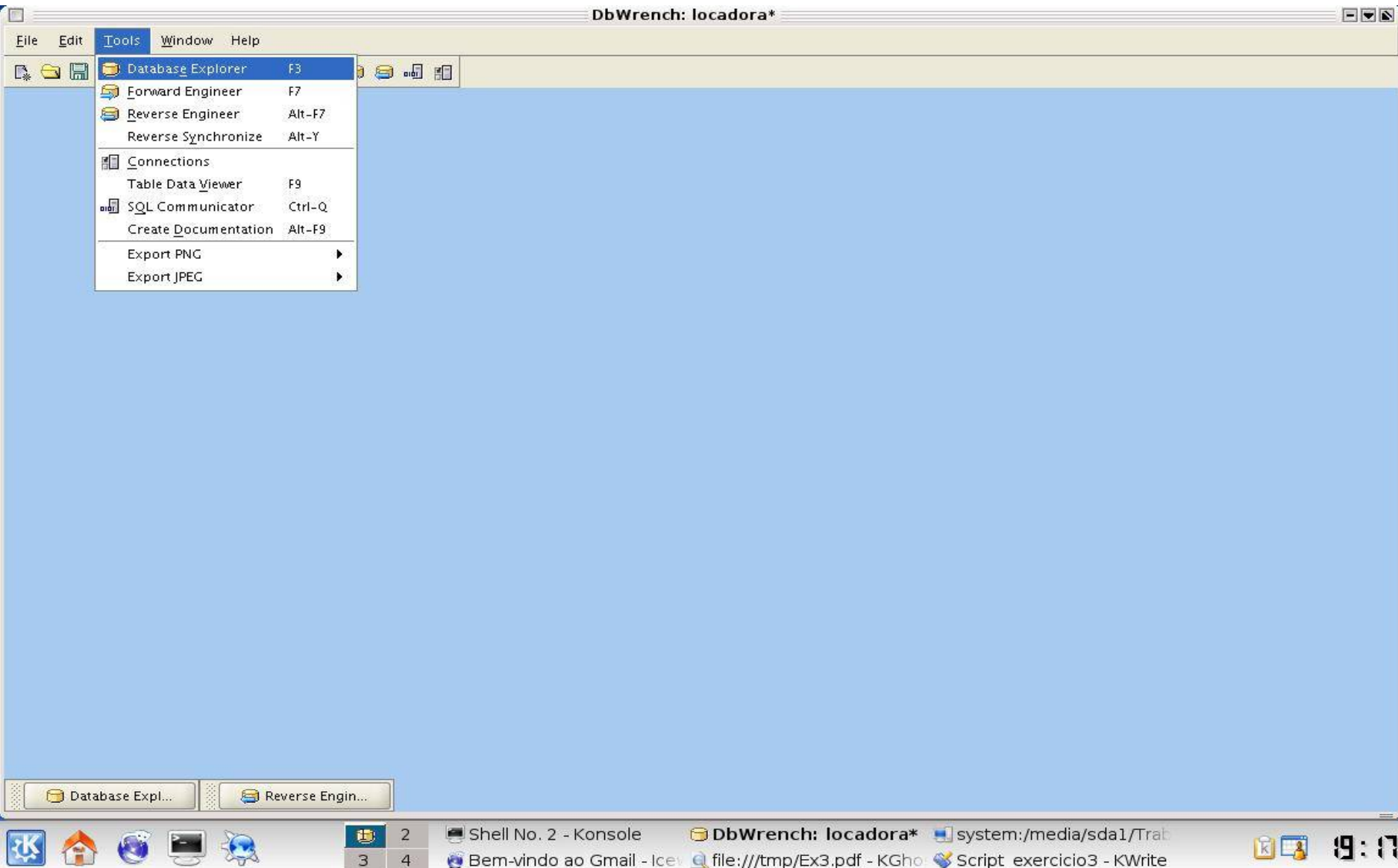


- Lançado: 14 de Junho de 2001
- Sistema Operacional: Windows, Linux e Mac.
- Banco de Dados: Microsoft SQL Server, MySQL e PostgreSQL

→ Ferramentas:

- DataBase Explorer
- Forward Engineer
- Reverse Engineer
- Table Data View
- Export PNG/JPEG

DbWrench – Tools



DbWrench – Connections

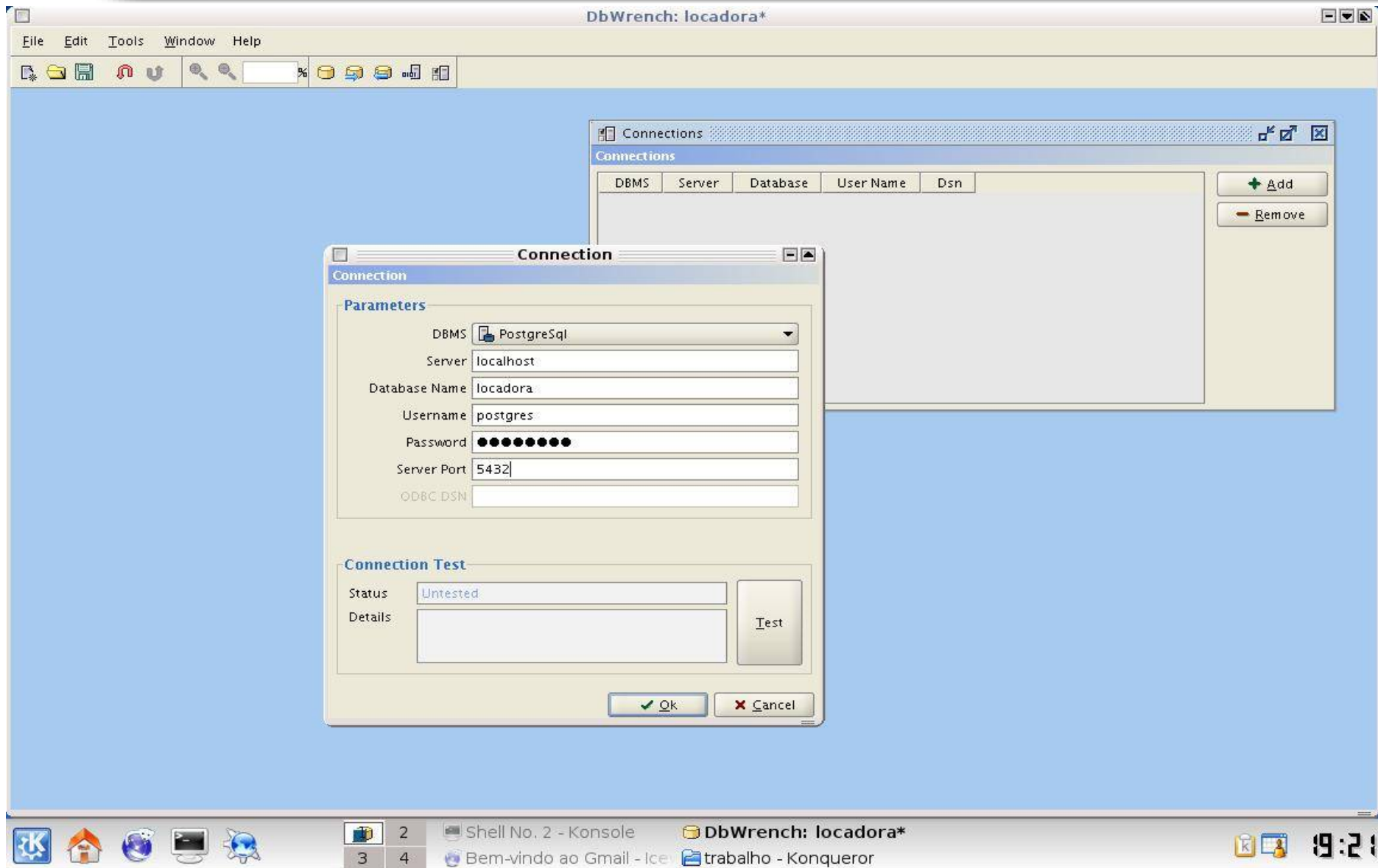
The screenshot displays the DbWrench application window titled "DbWrench: untitled". The main interface features a menu bar (File, Edit, Tools, Window, Help) and a toolbar. A "Connections" window is open, showing a table with columns: DBMS, Server, Database, User Name, and Dsn. The table is currently empty.

A "Connection" dialog box is overlaid on the main window. It contains the following fields and options:

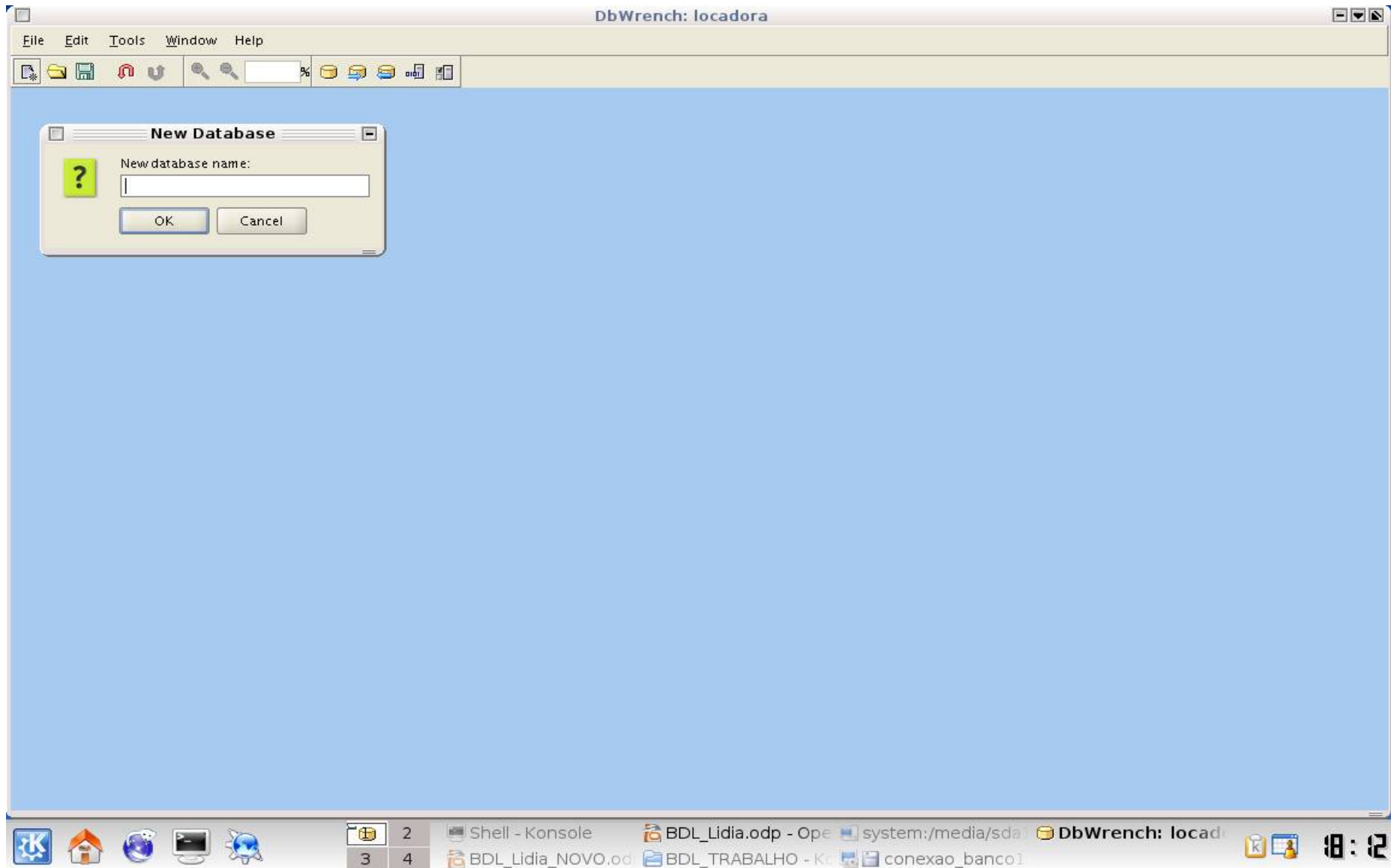
- Parameters:**
 - DBMS: PostgreSQL (selected in a dropdown menu)
 - Server: MS Access
 - Database Name: MySQL
 - Username: PostgreSQL
 - Password: (empty text field)
 - Server Port: (empty text field)
 - ODBC DSN: (empty text field)
- Connection Test:**
 - Status: Untested
 - Details: (empty text area)
 - Test: (button)
- Buttons: Ok, Cancel

The system tray at the bottom shows several open applications: Shell - Konsole, BDL_Lidia.odp - OpenOffice, system:/media/sda1/Trab, BDL_Lidia_NOVO.odp - Op, BDL_TRABALHO - Konque, and DbWrench: untitled. The system clock shows 19:14.

DbWrench – Connections



DbWrench – New Database



DbWrench – New Database

The screenshot displays the DbWrench Modelagem application window. The title bar reads "DbWrench: Modelagem". The menu bar includes "File", "Edit", "Tools", "Window", and "Help". Below the menu bar is a toolbar with icons for file operations and a zoom level set to 100%. The main interface is divided into several sections:

- Database Explorer:** Located on the left, it shows a tree view under "Modelagem" with folders for "Schemas", "Diagrams", and "schemaA". Under "schemaA", there are sub-folders for "Tables", "Views", and "Sequences".
- Empty Diagram:** The central workspace displays the text "Empty Diagram" in blue. Below it, instructions in blue text read: "To add table glyphs to this diagram, either: Drag and drop table nodes from the 'Tables' tree folder onto this panel Or Right click on this panel and select 'Add New Table'".
- Diagram Tab:** A tab labeled "diagramA" is visible at the bottom of the main workspace.
- Navigator:** A small, empty "Navigator" panel is located in the bottom right corner.

The Windows taskbar at the bottom shows several open applications: "Shell - Konsole", "BDL_Lidia.odp - Ope", "system:/media/sda1", "DbWrench: Mode", "BDL_Lidia_NOVO.odp", "BDL_TRABALHO - Kc", and "conexao_banco1". The system clock shows the time as 18:16.

DbWrench – Create Table

The screenshot shows the DbWrench: Modelagem* application window. The 'Database Explorer' on the left shows a tree view with 'Modelagem' > 'Schemas' > 'schemaA' > 'Tables'. A table named 'cliente' is selected, showing columns 'codcli' and 'INTEGE'. The 'Add Column' dialog box is open, allowing the user to add a new column named 'nome' of type 'VarBinary'. The dialog includes fields for 'Name', 'Data Type', 'Length', and 'Scale', along with checkboxes for 'Nullable' and 'Auto Number', and a 'Default' field. The 'Columns' tab in the background shows a table with columns 'PK', 'Name', and 'Inte'. The 'Columns' tab also has 'Unsigned' and 'FK' checkboxes. The 'Add' and 'Remove' buttons are visible in the bottom right of the dialog area. The Windows taskbar at the bottom shows the system tray with the time 22:17 and several open applications including 'Shell No. 3 - Konsole' and 'trabalho - Konqueror'.

PK	Name	
	codcli	Inte

PK	Name	
	codcli	Inte

DbWrench – Add Column

The screenshot shows the DbWrench application interface. The main window is titled "DbWrench: Modelagem*". The menu bar includes "File", "Edit", "Tools", "Window", and "Help". The toolbar shows various icons for file operations and zooming. The "Database Explorer" on the left shows a tree view with "Modelagem" expanded to "SchemaA", which contains "Tables", "Views", "Sequences", and "Diagrams". The main workspace displays a diagram labeled "cliente".

An "Add Column" dialog box is open, showing the following fields and options:

- Naming:** Name:
- Data Type:** Data Type: ; Length: ; Scale: ; Unsigned
- Details:** Nullable; Auto Number; Default: ; Comment:

The dialog has "General" and "Advanced" tabs, and "OK" and "Cancel" buttons at the bottom.

At the bottom of the main window, there is a "cliente: Columns" table with the following structure:

PK	Name	Type	Nulls
----	------	------	-------

Navigation buttons "Columns", "Properties", "Foreign Keys", "Indexes", and "Triggers" are visible at the bottom of the main workspace. The system tray at the bottom shows the taskbar with various open applications and the system clock displaying 18:21.

DbWrench – Add Foreign Key

cliente

- codcli INTEGER
- nome VARCHAR(40)
- telefone VARCHAR(12)
- cidade VARCHAR(20)

notafiscal

- codnota INTEGER
- codcli INTEGER
- data DATETIME

produto

- codprod INTEGER
- nomeprod VARCHAR(20)

Add Foreign Key Dialog

Name:

Child Table:

Column Pair:

Parent Table:

Columns:

- codnota
- codcli**
- data

Columns:

- codcli**
- nome
- telefone
- cidade

General / Details / Advanced

notafiscal: Foreign Keys

Name	Comment	Desc
------	---------	------

Columns / Properties / Foreign Keys / Indexes / Triggers

DbWrench – Foreign Key

The screenshot displays the DbWrench interface for a database model named 'Modelagem'. The main workspace shows three tables: 'cliente', 'notafiscal', and 'produto'. The 'cliente' table has columns: codcli (INTEGER), nome (VARCHAR(40)), telefone (VARCHAR(12)), and cidade (VARCHAR(20)). The 'notafiscal' table has columns: codnota (INTEGER), codcli (INTEGER), and data (DATETIME). The 'produto' table has columns: codprod (INTEGER) and nomeprod (VARCHAR(20)). A foreign key relationship is established between 'cliente.codcli' and 'notafiscal.codcli'. The 'Foreign Keys' tab is active, showing the relationship details in a table:

Name	Comment	Desc
fk_notafiscal_cliente		fk_notafiscal_cliente: Tables: cliente/notafiscal - Columns: codcli/codcli

The interface also includes a 'Database Explorer' on the left, a 'Navigator' on the right, and a bottom status bar with various system icons and a clock showing 18:30.

DbWrench – Forward Engineer

The screenshot displays the DbWrench: Modelagem application window. The main workspace shows a database model diagram with two tables: **notafiscal** and **produto**. The **notafiscal** table has columns: `codnota` (INTEGER), `codcli` (INTEGER), and `data` (DATETIME). The **produto** table has columns: `codprod` (INTEGER) and `nomeprod` (VARCHAR(20)). A relationship line connects the `codcli` column of **notafiscal** to the `codprod` column of **produto**. The **Tools** menu is open, highlighting the **Forward Engineer** option (F7). Other menu items include Database Explorer (F3), Reverse Engineer (Alt-F7), Reverse Synchronize (Alt-Y), Connections, Table Data Viewer (F9), SQL Communicator (Ctrl-Q), Create Documentation (Alt-F9), Export PNG, and Export JPEG. The bottom status bar shows the system tray with icons for Konqueror, Home, Network, and a clock displaying 18:45. The taskbar includes several open windows: Shell - Konsole, BDL_Lidia.odp - OpenOffice, system:/media/sda1/Trab, BDL_Lidia_NOVO.odp - Op, BDL_TRABALHO - Konque, and DbWrench: Modelagem.

DbWrench – Forward Engineer

The screenshot displays the DbWrench Forward Engineer interface. The main window is titled "DbWrench: Modelagem*" and features a menu bar (File, Edit, Tools, Window, Help) and a toolbar. The interface is divided into several panes:

- Database Explorer:** Shows a tree view of the database structure, including Schemas, Tables, Views, Sequences, and Diagrams.
- Forward Engineer:** A central pane showing the connection to "PostgreSQL: \\[Generic]" and a "Script Hierarchy" tree. The hierarchy includes "Update Database: Modelagem" and "Database Items", with sub-items for adding tables (cliente, compra, notafiscal, produto) and foreign keys (fk_notafiscal).
- Script Text:** A text editor displaying the generated SQL script for creating the "cliente" table and adding a primary key constraint. The script includes comments like "/* Build Table Structure */" and "/* Table Items: cliente */".
- Data Conversion:** A table with columns "Name" and "Conversion Value", and buttons for "Add" and "Remove".
- Navigator:** A small pane on the right side of the interface.

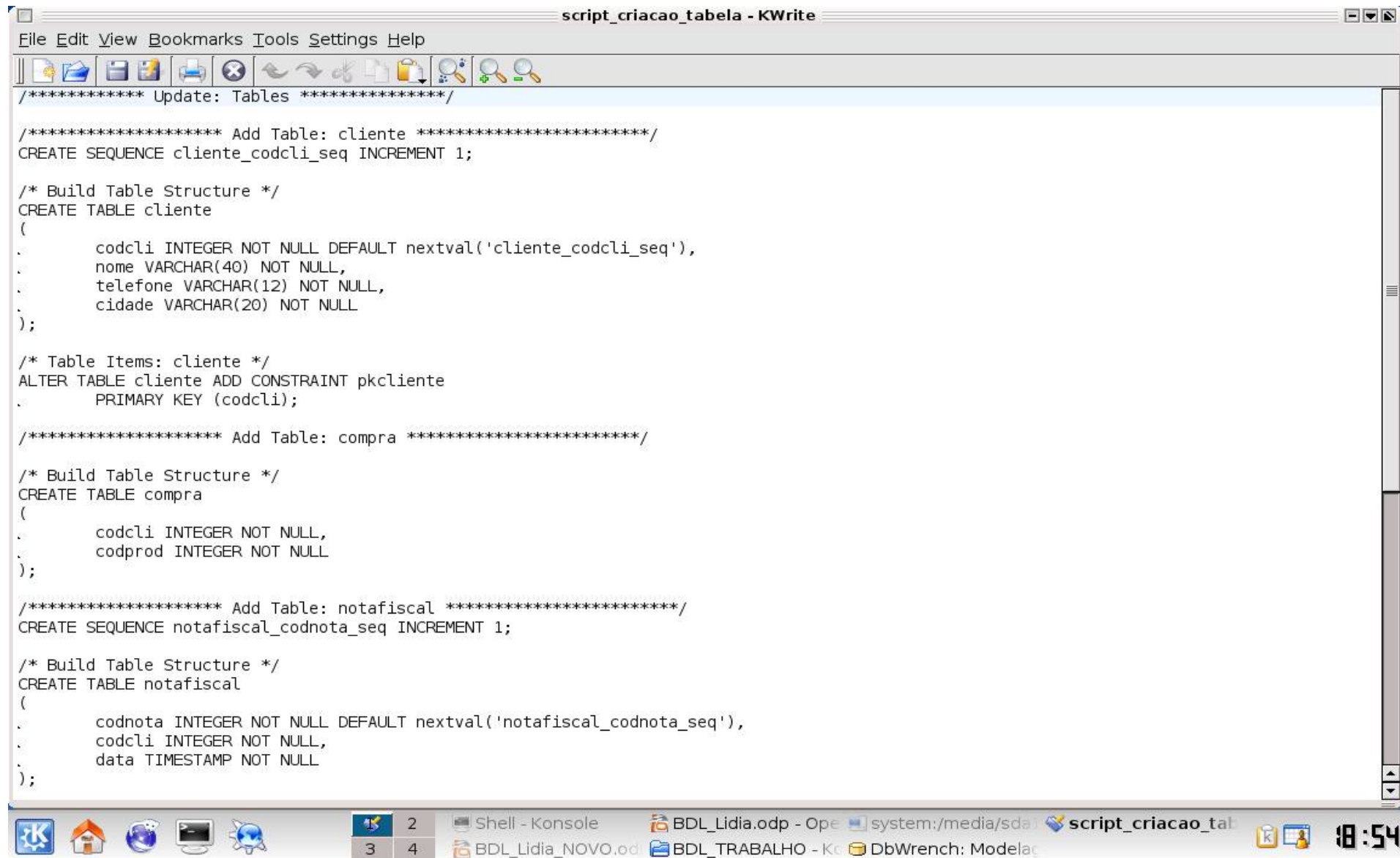
The "Script Text" pane contains the following SQL code:

```
/* Build Table Structure */
CREATE TABLE cliente
(
    codcli INTEGER NOT NULL DEFAULT
nextval('cliente_codcli_seq'),
    nome VARCHAR(40) NOT NULL,
    telefone VARCHAR(12) NOT NULL,
    cidade VARCHAR(20) NOT NULL
);

/* Table Items: cliente */
ALTER TABLE cliente ADD CONSTRAINT pkcliente
PRIMARY KEY (codcli);
```

Buttons for "Recalculate Script", "Start", and "Save To File" are visible below the script text. The bottom of the window shows a taskbar with various system icons and the time 18:53.

DbWrench – Script - Forward Engineer



The screenshot shows a DbWrench window titled "script_criacao_tabela - KWrite". The window contains a SQL script for creating three tables: 'cliente', 'compra', and 'notafiscal'. The script includes comments for each table and the necessary sequences and constraints.

```
File Edit View Bookmarks Tools Settings Help

/***** Update: Tables *****/

/***** Add Table: cliente *****/
CREATE SEQUENCE cliente_codcli_seq INCREMENT 1;

/* Build Table Structure */
CREATE TABLE cliente
(
    codcli INTEGER NOT NULL DEFAULT nextval('cliente_codcli_seq'),
    nome VARCHAR(40) NOT NULL,
    telefone VARCHAR(12) NOT NULL,
    cidade VARCHAR(20) NOT NULL
);

/* Table Items: cliente */
ALTER TABLE cliente ADD CONSTRAINT pkcliente
    PRIMARY KEY (codcli);

/***** Add Table: compra *****/

/* Build Table Structure */
CREATE TABLE compra
(
    codcli INTEGER NOT NULL,
    codprod INTEGER NOT NULL
);

/***** Add Table: notafiscal *****/
CREATE SEQUENCE notafiscal_codnota_seq INCREMENT 1;

/* Build Table Structure */
CREATE TABLE notafiscal
(
    codnota INTEGER NOT NULL DEFAULT nextval('notafiscal_codnota_seq'),
    codcli INTEGER NOT NULL,
    data TIMESTAMP NOT NULL
);
```

The taskbar at the bottom shows several open applications: a terminal window titled "Shell - Konsole", a file manager window titled "BDL_Lidia.odp - Ope", a system window titled "system:/media/sda", a DbWrench window titled "script_criacao_ta", and a taskbar icon for "DbWrench: Modelac". The system clock shows 18:54.

DbWrench – Alterando Banco

DbWrench: Modelagem*

File Edit Tools Window Help

Database Explorer

Modelagem

- SchemaA
 - Tables
 - cliente
 - compra
 - notafiscal
 - pedido
 - produto
 - Views
 - Sequences
- Diagrams

```
graph TD
    cliente --> notafiscal
    cliente --> pedido
    compra --- produto
```

cliente

- codcli INTEGER
- nome VARCHAR(40)
- telefone VARCHAR(12)
- cidade VARCHAR(20)

notafiscal

- codnota INTEGER
- codcli INTEGER
- data DATETIME

pedido

- codpedido INTEGER
- codcli INTEGER
- data DATETIME

compra

- codpedido INTEGER
- codprod INTEGER
- qtde INTEGER

produto

- codprod INTEGER
- nomeprod VARCHAR(20)
- preco INTEGER

diagramA

compra: Columns

PK	Name	Type	Nulls	Auto Num.	Comment	Default	Unsigned	FK
	codpedido	Integer	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
	codprod	Integer	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
	qtde	Integer	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Columns Properties Foreign Keys Indexes Triggers

Navigator

Windows: Shell - Konsole, BDL_Lidia.odp - Ope, system:/media/sda1, script_criacao_tabel, BDL_Lidia_NOVO.odp, BDL_TRABALHO - Kc, DbWrench: Model

19:00

DbWrench – Executando Script

```
Shell - Konsole
Session Edit View Bookmarks Settings Help

bin/          etc/          initrd.img.old mnt/          root/         tmp/          vmlinuz.old
boot/         home/        lib/          opt/          sbin/        usr/
cdrom/        initrd/      lost+found/   pos/         srv/         var/

modelagem=# \i /BDL_TRABALHO/
adicionando_chave_estrangeira.png  database_explorer.png          new_database_modelagem
adicionando_colunas.png            empty_diagram.png              nome_new_database.png
alteracao_banco.png                forward_engineer1.png          refazendo_script.png
antes_chave_estrangeira2.png        forward_engineer2.png          script_alteracao
apos_chave_estrangeira1.png         forward_engineer3.png          script_alteracao_banco.png
BDL_Lidia_NOVO.odp                 forward_engineer.png          script_alteracao.png
criando_chave_estrangeira.png       Modelagem.xml                 script_arquivo.png
database_explorer2.png              new_database                   script_criacao_tabela

modelagem=# \i /BDL_TRABALHO/script_criacao_tabela
CREATE SEQUENCE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:17: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkcliente" na tabela "cliente"
ALTER TABLE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:31: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkcompra" na tabela "compra"
ALTER TABLE
CREATE SEQUENCE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:46: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pknotafiscal" na tabela "notafiscal"
ALTER TABLE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:60: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkpedido" na tabela "pedido"
ALTER TABLE
CREATE SEQUENCE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:75: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkproduto" na tabela "produto"
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
modelagem=#
```

DbWrench – Tabelas criadas pelo Script

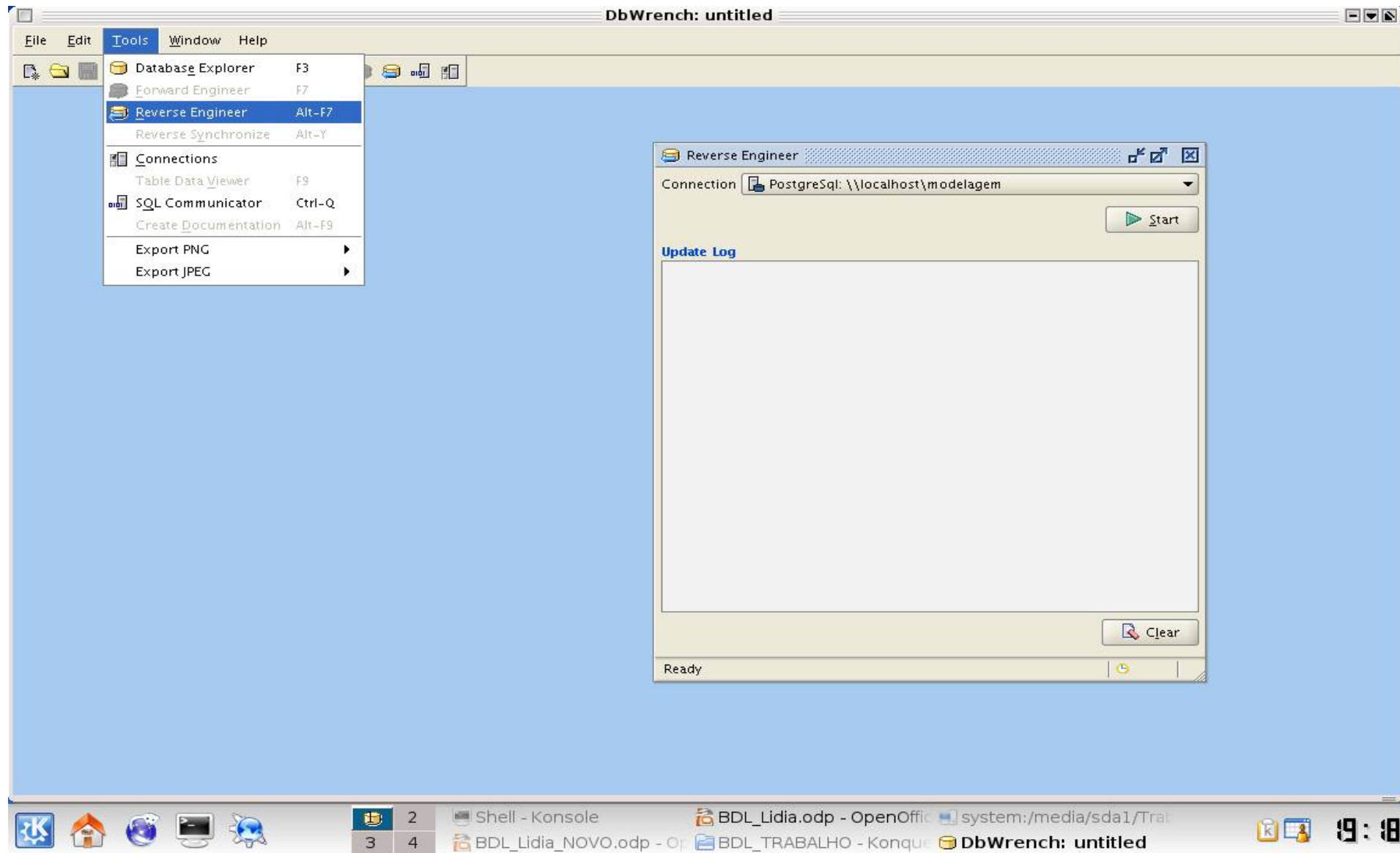
```
Shell - Konsole
Session Edit View Bookmarks Settings Help

CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:17: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkcliente" na tabela "cliente"
ALTER TABLE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:31: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkcompra" na tabela "compra"
ALTER TABLE
CREATE SEQUENCE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:46: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pknotafiscal" na tabela "notafiscal"
ALTER TABLE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:60: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkpedido" na tabela "pedido"
ALTER TABLE
CREATE SEQUENCE
CREATE TABLE
psql:/BDL_TRABALHO/script_criacao_tabela:75: NOTA: ALTER TABLE / ADD PRIMARY KEY criará índice implícito "pkproduto" na tabela "produto"
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
ALTER TABLE
modelagem=# \d

      Lista de relações
Esquema | Nome | Tipo | Dono
-----+-----+-----+-----
public  | cliente | tabela | postgres
public  | cliente_codcli_seq | sequência | postgres
public  | compra | tabela | postgres
public  | notafiscal | tabela | postgres
public  | notafiscal_codnota_seq | sequência | postgres
public  | pedido | tabela | postgres
public  | produto | tabela | postgres
public  | produto_codprod_seq | sequência | postgres
(8 registros)

modelagem=#
```

DbWrench – Reverse Engineer



DbWrench – Reverse Engineer

The screenshot displays the DbWrench application window titled "DbWrench: untitled". The main interface shows a "Reverse Engineer" panel with the following details:

- Connection: PostgreSQL: \\localhost\modelagem
- Start button
- Update Log:
 - Started Reverse Engineer: modelagem
 - Created database: modelagem
 - Added Schema: public
 - Added table: compra
 - Added table: produto
 - Added table: notafiscal
 - Added table: pedido
 - Added table: cliente
 - Added foreign key: fk_compra_pedido
 - Added foreign key: fk_compra_produto
 - Added foreign key: fk_notafiscal_cliente
 - Added foreign key: fk_pedido_cliente
 - Added Sequence: cliente_codcli_seq
 - Added Sequence: notafiscal_codnota_seq
 - Added Sequence: produto_codprod_seq
 - Completed database: modelagem
- Clear button
- Status bar: Reverse Engineering Completed | 0.200

A "Load Database" dialog box is overlaid on the main window, asking: "Should this reverse engineered database be loaded?". It features a question mark icon and two buttons: "Yes" and "No".

The system tray at the bottom shows several open applications: Shell - Konsole, BDL_Lidia.odp - OpenOffice, system:/media/sda1/Trab, BDL_Lidia_NOVO.odp - Op, BDL_TRABALHO - Konque, and DbWrench: untitled. The system clock shows 19:18.

DbWrench – Diagrama - Reverse Engineer

DbWrench: modelagem*

File Edit Tools Window Help

Database Explorer

modelagem

- Schemas
 - public
 - Tables
 - cliente
 - Columns
 - codcli
 - nome
 - telefone
 - cidade
 - Foreign Keys
 - fk_notafiscal_cliente
 - fk_pedido_cliente
 - Parent Relations
 - Indexes
 - Triggers
 - compra
 - Columns
 - codpedido
 - codprod
 - qtde
 - Foreign Keys
 - Parent Relations
 - Indexes
 - Triggers
 - notafiscal
 - Columns
 - codnota
 - codcli
 - data
 - Foreign Keys
 - Parent Relations
 - Indexes
 - Triggers
 - pedido
 - Columns
 - codpedido
 - codcli
 - data
 - Foreign Keys
 - Parent Relations
 - Indexes
 - Triggers

Diagram showing relationships between tables: cliente, pedido, compra, produto, and notafiscal.

cliente: Columns

PK	Name	Type	Nulls	Auto Num.	Comment	Default
PK	codcli	Integer	<input type="checkbox"/>	<input checked="" type="checkbox"/>		nextval('cliente_codcli_seq'::regcla
	nome	VarChar(40)	<input type="checkbox"/>	<input type="checkbox"/>		
	telefone	VarChar(12)	<input type="checkbox"/>	<input type="checkbox"/>		
	cidade	VarChar(20)	<input type="checkbox"/>	<input type="checkbox"/>		

Diagram details:

- cliente (PK: codcli) is connected to pedido (FK: codcli) with a 1:1 relationship.
- pedido (FK: codpedido) is connected to compra (FK: codpedido) with a 1:1 relationship.
- compra (FK: codprod) is connected to produto (FK: codprod) with a 1:1 relationship.
- cliente (FK: codcli) is connected to notafiscal (FK: codcli) with a 1:1 relationship.

diagramA

cliente: Columns

Columns Properties Foreign Keys Indexes Triggers

Navigator



DbWrench – Table Data View

DbWrench: modelagem*

File Edit **Tools** Window Help

- Database Explorer F3
- Forward Engineer F7
- Reverse Engineer Alt-F7
- Reverse Synchronize Alt-Y
- Connections
- Table Data Viewer F9**
- SQL Communicator Ctrl-Q
- Create Documentation Alt-F9
- Export PNG ▶
- Export JPEG ▶

Table Data Viewer

Connection PostgreSQL: \\localhost\modelagem Add Data View

codcli	nome	telefone	cidade
--------	------	----------	--------

Refresh
Insert
Update
Delete
Close

Ready | Rows: 0 | 0.072

cliente | localhost | modelagem

3 2 Shell - Konsole BDL_Lidia.odp - Ope system:/media/sda reverse_engineer4.
3 4 BDL_Lidia_NOVO.od BDL_TRABALHO - K DbWrench: mode 19:26

DbWrench – Table Data View

The screenshot shows the DbWrench application window titled "DbWrench: modelagem*". The main window has a menu bar (File, Edit, Tools, Window, Help) and a toolbar. A "Table Data Viewer" dialog box is open, showing a connection to "PostgreSQL: \\localhost\modelagem". The dialog displays a table with columns: codcli, nome, telefone, cidade. An "Add Data View" sub-dialog is open, showing "View Data From: cliente". The main dialog has buttons for Refresh, Insert, Update, Delete, and Close. The status bar shows "Ready", "Rows: 0", and "0.072".

codcli	nome	telefone	cidade
--------	------	----------	--------

Ready | Rows: 0 | 0.072

cliente | localhost | modelagem

DbWrench – Table Data View - INSERT

The screenshot displays the DbWrench application interface. The main window, titled "DbWrench: modelagem*", features a menu bar (File, Edit, Tools, Window, Help) and a toolbar with various icons. A "Table Data Viewer" window is open, showing a connection to "PostgreSQL: \\localhost\modelagem". It displays a table with columns: codcli, nome, telefone, and cidade. The table is currently empty. Below the table are "Refresh" and "Insert" buttons. An "Insert A Record" dialog box is overlaid on top, titled "Table: cliente". It contains input fields for the same four columns, with the following values entered: nome: Lidia Akemi, telefone: 8402-2442, and cidade: Brasilia. The dialog also has "Insert", "Reset", and "Close" buttons. At the bottom of the dialog, there are tabs for "Edit Record", "SQL Text", and "Session Log". The Windows taskbar at the bottom shows several open applications, including "Shell - Konsole", "BDL_Lidia.odp", "system:/media/sda1", "reverse_engineer4.p", "BDL_Lidia_NOVO.od", "BDL_TRABALHO - K", "DbWrench: mode", and "data_view3.png - KS". The system clock shows 19:29.

codcli	nome	telefone	cidade
--------	------	----------	--------

Table: cliente

codcli	<input type="text"/>
nome	Lidia Akemi
telefone	8402-2442
cidade	Brasilia

DbWrench – Table Data View - UPDATE

The screenshot shows the DbWrench application window titled "DbWrench: modelagem*". The main window contains a "Table Data Viewer" for a PostgreSQL database at "localhost\modelagem". The table displays the following data:

codcli	nome	telefone	cidade
1	Lidia Akemi	8402-2442	Brasilia
2	Flaviane	3310-9933	Brasilia

An "Update a Record" dialog box is open, showing the details for the record with "codcli" 2. The fields are: "nome" (Flaviane Mota), "telefone" (3310-9933), and "cidade" (Brasilia). The dialog also includes tabs for "Edit Record", "SQL Text", and "Session Log", and buttons for "Update", "Delete", and "Close".

The taskbar at the bottom shows several open applications: Shell - Konsole, BDL_Lidia.odp - OpenOffice, system:/media/sda1/Trab..., BDL_Lidia_NOVO.odp - Op..., BDL_TRABALHO - Konque..., and DbWrench: modelagem. The system clock shows 19:32.

DbWrench – Table Data View - DELETE

The screenshot shows the DbWrench application window titled "DbWrench: modelagem*". The main window contains a "Table Data Viewer" for a PostgreSQL database at "localhost\modelagem". The table has four columns: "codcli", "nome", "telefone", and "cidade". Three rows are visible, with the third row (ID 3, name Fulano) selected. A "Confirm Remove" dialog box is overlaid on the table, asking "Are you sure you want to delete these records from the database?" with "Yes" and "No" buttons.

codcli	nome	telefone	cidade
1	Lidia Akemi	8402-2442	Brasilia
2	Flaviane Mota	3310-9933	Brasilia
3	Fulano	3333-2222	Santa Maria

Confirm Remove
Are you sure you want to delete these records from the database?
Yes No

Ready | Rows: 3 | 0.018
cliente | localhost | modelagem

Taskbar: Shell - Konsole, BDL_Lidia.odp - OpenOffice, system:/media/sda1/Trab, BDL_Lidia_NOVO.odp - O, BDL_TRABALHO - Konque, DbWrench: modelagem, 19:33

DbWrench – Table Data View

Shell - Konsole

Session Edit View Bookmarks Settings Help

```
public | notafiscal_codnota_seq | sequência | postgres
public | pedido | tabela | postgres
public | produto | tabela | postgres
public | produto_codprod_seq | sequência | postgres
(8 registros)

modelagem=# \d
                Lista de relações
Esquema |      Nome      | Tipo | Dono
-----+-----+-----+-----
public | cliente        | tabela | postgres
public | cliente_codcli_seq | sequência | postgres
public | compra         | tabela | postgres
public | notafiscal     | tabela | postgres
public | notafiscal_codnota_seq | sequência | postgres
public | pedido        | tabela | postgres
public | produto       | tabela | postgres
public | produto_codprod_seq | sequência | postgres
(8 registros)

modelagem=# select * from cliente;
codcli | nome | telefone | cidade
-----+-----+-----+-----
1 | Lidia Akemi | 8402-2442 | Brasilia
2 | Flaviane Mota | 3310-9933 | Brasilia
(2 registros)

modelagem=# select * from cliente;
codcli | nome | telefone | cidade
-----+-----+-----+-----
1 | Lidia Akemi | 8402-2442 | Brasilia
2 | Flaviane Mota | 3310-9933 | Brasilia
4 | Marcos | 3322-2233 | Brasilia
5 | Thiago | 4433-2255 | Unai
(4 registros)

modelagem=#
```

Shell

2 Shell - Konsole BDL_Lidia.odp - OpenOffice system:/media/sda1/Tral
3 4 BDL_Lidia_NOVO.odp - Op BDL_TRABALHO - Konque DbWrench: modelagem

19:49

DbWrench – Documentation

The screenshot shows the DbWrench application window titled "DbWrench: modelagem". The main workspace displays a database model with three entities: "cliente", "notafiscal", and "produto".

- cliente**:
 - codcli INTEGER
 - nome VARCHAR(40)
 - telefone VARCHAR(12)
 - cidade VARCHAR(20)
- notafiscal**:
 - codnota INTEGER
 - codcli INTEGER
 - data TIMESTAMP
- produto**:
 - codprod INTEGER
 - nomeprod VARCHAR(20)
 - preco DECIMAL(10, 2)

Relationships are shown between "cliente" and "notafiscal".

The "Tools" menu is open, showing options like "Database Explorer", "Forward Engineer", "Reverse Engineer", "Reverse Synchronize", "Connections", "Table Data Viewer", "SQL Communicator", "Create Documentation", "Export PNG", and "Export JPEG".

The "Documentation" dialog box is open, showing the following settings:

- Destination Files and Folder**: Folder: /BDL_TRABALHO/Documentacao, Overwrite CSS File:
- Entities To Document**:
 - Tables:
 - Foreign Keys:
 - Indexes:
 - Diagrams:
 - Sequences:
 - Schemas:
 - Procedures:
 - Triggers:
 - Views:
- Log**: (Empty text area)

Buttons: "Create Documentation", "Close", "Clear", "Add", "Remove".

At the bottom, a "pedido: Columns" table is visible:

PK	Name	Type
<input checked="" type="checkbox"/>	codpedido	Integer
<input type="checkbox"/>	codcli	Integer
<input type="checkbox"/>	data	TimeStamp

DbWrench – Documentation

DbWrench: modelagem

File Edit Tools Window Help

Database Explorer

modelagem

- Schemas
 - public
 - Tables
 - Views
 - Sequences
 - Diagrams

client

codcli
nome
telefone
cidade

pedido

codpedi
codcli
data

produto

codprod INTEGER
nomeprod VARCHAR(20)
preco DECIMAL(10, 2)

Documentation

Destination Files and Folder

Folder: /BDL_TRABALHO/Documentacao

Overwrite CSS File

Entities To Document

- Tables
- Foreign Keys
- Indexes
- Diagrams
- Sequences
- Schemas
- Procedures
- Triggers
- Views

Log

Writing foreign key HTML files...
Writing: /BDL_TRABALHO/Documentacao/procedures/index.htm
Writing view HTML files...
Writing: /BDL_TRABALHO/Documentacao/views/index.html
Writing sequence HTML files...
Writing: /BDL_TRABALHO/Documentacao/sequences/index.htm
Database Documentation Complete

Clear

Create Documentation Close

Ready

Unsigned	FK
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

+ Add

- Remove

Navigator

Columns Properties Foreign Keys Indexes Triggers



DbWrench – Documentation

The screenshot displays a Linux desktop environment with three overlapping windows:

- Top Window (File Manager):** Titled "Conteúdo do diretório file:///BDL_TRABALHO - Iceweasel". It shows a directory listing for "file:///BDL_TRABALHO" with various files and folders.
- Middle Window (Documentation Browser):** Titled "modelagem Documentation - Iceweasel". It shows a navigation menu with "Home", "Tables", "Schemas", and "Diagrams". The "Tables" section is expanded, listing database objects like "Tables", "Diagrams", "Schemas", "Indexes", "Foreign Keys", "Triggers", "Procedures", "Views", and "Sequences".
- Bottom Window (DbWrench Application):** Titled "modelagem Tables - Iceweasel". It displays "DbWrench Documentation:" with a navigation menu including "Home", "Tables", "Schemas", "Diagrams", "Foreign Keys", and "Indexes". Below the menu is a table listing database tables.

Table: Tables

Table Name	Comment	Schem
cliente		public
compra		public
notafiscal		public
pedido		public
produto		public

The desktop taskbar at the bottom shows several open applications: Shell - Konsole, documentacao2.png - KS, Konqueror [2], DbWrench: modelagem, OpenOffice.org 2.0 [2], and Firefox-bin [3]. The system clock in the bottom right corner shows 20:02.

DbWrench – Documentation - Arquivos

Documentacao - Konqueror

Location Edit View Go Bookmarks Tools Settings Window Help

Location: /BDL_TRABALHO/Documentacao

Name	Size	File Type	Modified	Permissions	Owner	Group
columns	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
css	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
diagrams	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
diagramA.html	1,4 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
diagramA.png	7,4 KB	PNG Image	27-06-2007 19:58	-rw-r--r--	root	root
index.html	1,1 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
images	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
schemas	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
tables	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
index.html	1,4 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_cliente.html	4,0 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_compra.html	4,0 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_notafiscal.html	3,8 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_pedido.html	3,9 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_produto.html	3,6 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
foreignKeys	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
indexes	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
index.html	1,1 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
procedures	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
index.html	1,0 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
sequences	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
index.html	1,3 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_cliente_codcli_seq.html	1,1 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_notafiscal_codnota_seq.html	1,2 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
public_produto_codprod_seq.html	1,1 KB	HTML Document	27-06-2007 19:58	-rw-r--r--	root	root
triggers	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root
views	4,0 KB	Folder	27-06-2007 19:58	drwxr-xr-x	root	root

28 Items - 16 Files (39,3 KB Total) - 12 Folders

2 Shell - Konsole system:/media/sda1/Tral Conteúdo do diretório file
3 4 Documentacao - Konq DbWrench: modelagem BDL_Lidia.odp - OpenOffice

20:09

DBDesigner

- fabFORCE - Fabulous Force DataBase tools
- Michael G. Zinner

DBDesigner

- GNU/GPL
- DBDesigner 4 é um sistema visual de projeto de base de dados que integra projeto de base de dados, modela, criação e manutenção num ambiente único.
- Combina características profissionais e um interface clara e simples de operador.
- Oferecer o meio bem eficiente manipular suas bases de dados.
- DBDesigner 4 é desenvolvido e é otimizado para a MySQL-Base de dados open source para apoiar operadores de MySQL com um poderoso e ferramenta disponível livre de projeto.
- Versão - DBDesigner 4.0.5 para Windows e Linux
- * DBDesigner2PG * - programa desenvolvido em shellscrip que gera scripts SQL de criação de tabelas e constraints, para o banco de dados PostgreSQL usando o arquivo salvo pelo DBDesigner4 - AUTO_INCREMENT do MySQL é substituído pelo tipo SERIAL do PostgreSQL

DBDesigner

The screenshot displays the DBDesigner 4 interface. The main workspace shows a database model with several tables and their relationships. The **Table Editor** dialog box is open, showing the structure of the **onlinecustomer** table. The table has the following columns:

Column Name	Data Type	NN	AI	Flags	Default Value	Comments
idonlinecustomer	INTEGER	✓	✓	UNSIGNED, ZEROFILL		
idcreditcard	INTEGER	✓		UNSIGNED, ZEROFILL		
name	VARCHAR(30)			BINARY		
address1	VARCHAR(80)			BINARY		
address2	VARCHAR(80)			BINARY		
region	VARCHAR(4E)			BINARY		
city	VARCHAR(4E)			BINARY		
zip	VARCHAR(6)			BINARY		
phone	VARCHAR(20)			BINARY		
creditcardnr	VARCHAR(20)			BINARY		
creditcarddate	DATE			BINARY		

The **Indice** section shows a **PRIMARY** index on the **idonlinecustomer** column. The **Table Options** section includes **Advanced**, **Standard Inserts**, and **Comments**. The background shows a diagram with tables like **onlinecustomer**, **creditcard**, **productgroup**, **news**, and **employee** connected by relationship lines. The **Navigator & Info** panel on the right shows the **All Tables** list, including **carthasproduct**, **creditcard**, **Employee**, **forumpost**, **forumtopic**, **news**, **onlinecustomer**, **onlineorder**, **onlineorderasproduct**, **product**, **productgroup**, **weblog**, **webpageclick**, and **webserver**.

DBDesigner

The screenshot displays the DB Designer interface with a database model and two dialog boxes. The database model shows tables like 'lager_artikel_einheit', 'lager_position', 'lager_hat_artikel', and 'adresse' with their attributes and relationships (Rel_02 to Rel_21). The 'Select Database Connection' dialog shows a list of database connections, including 'weboffice' selected. The 'Database Connection Editor' dialog shows the configuration for the 'weboffice' connection, including host, database name, and user details.

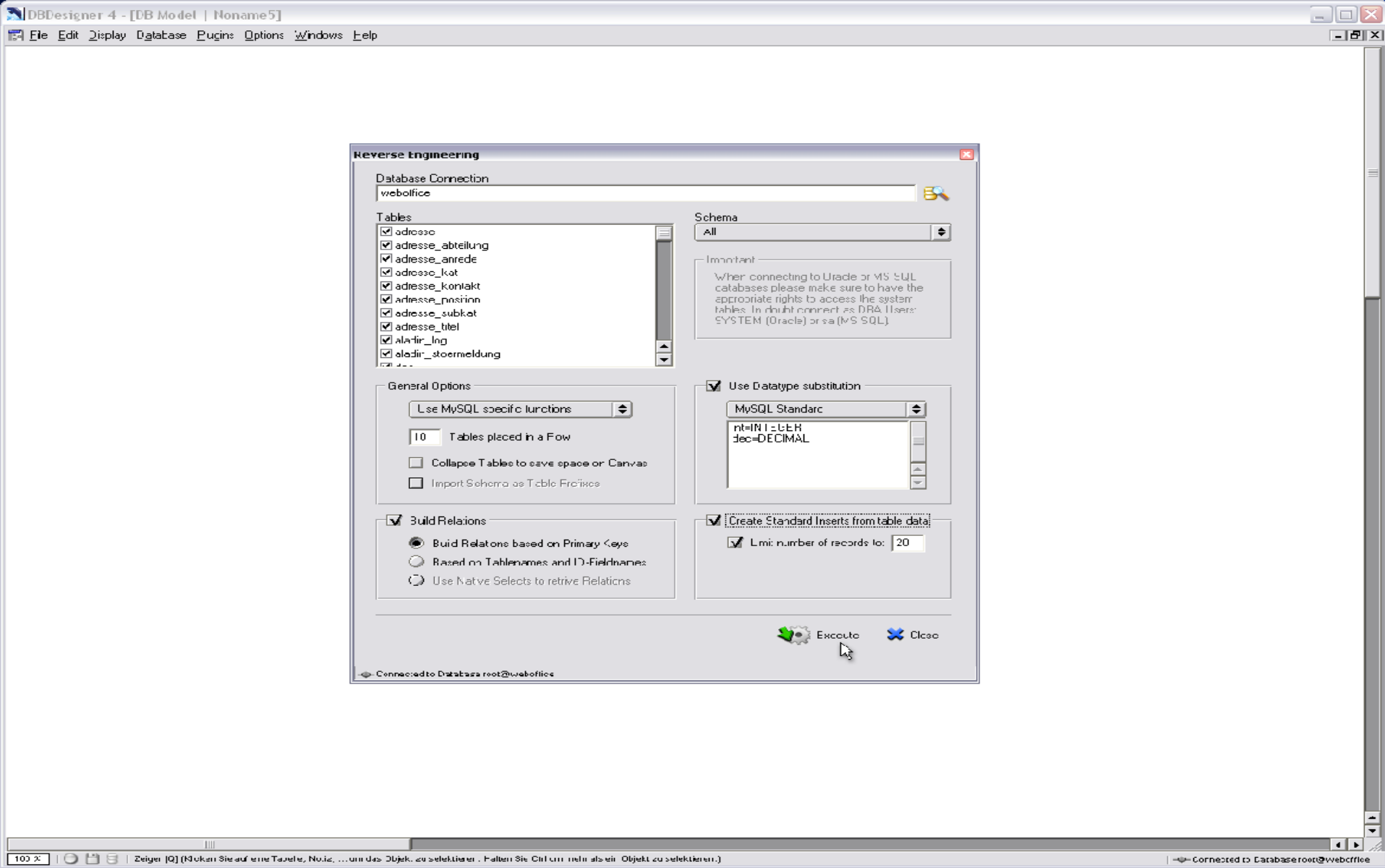
Select Database Connection Dialog:

Connection	Type	Host	Database	Description
paketerung	MySQL	127.0.0.1	paketerung	
fabFORCEweb	MySQL	mysql.fabforce.net	fa015vfl_web	
weboffice	MySQL	www.fabdruck.at	weboffice	
reda	MySQL	127.0.0.1	reda	
revtest	MySQL	127.0.0.1	revtest	
fabFORCEswf	MySQL	mysql.fabforce.net	fa015vfl_swf	Test for SimpleWebF...
SchoberAdresse...	cpenodbc		SchoberAdresse...	

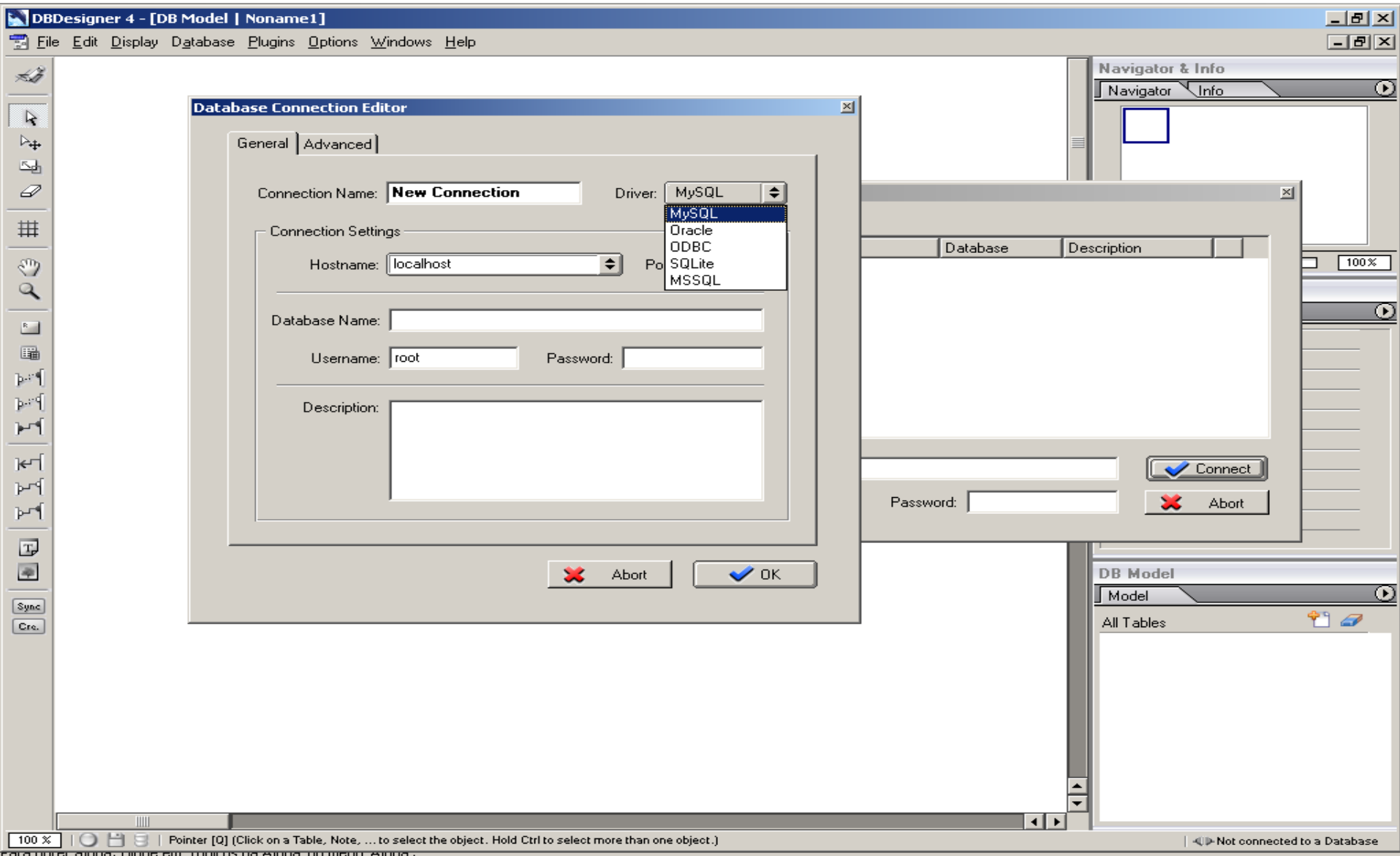
Database Connection Editor Dialog (General tab):

Connection Name: weboffice
Host Caption: www.weboffice.at | Host IP: 192.168.3.54
Database Name: weboffice | Driver: MySQL
Username: root
Password: *****
Description: Connection to WebOffice Server.

DBDesigner



DBDesigner



DBDesigner

DB Designer 4 - [DB Model | wehoffice.xml]

File Edit Display Database Plugins Options Windows Help

Lager

- lager_artikel_einheit
 - id_lager_artikel_einheit: INTEGER
 - einheit: INTEGER
 - bez: INTEGER
 - stk: INTEGER
- lager_artikel_medium
 - id_lager_artikel_medium: INTEGER
 - medium: Varchar(15)
 - medium_bez: VARCHAR
- lager_artikel_baugruppe
 - id_lager_artikel_baugruppe: INTEGER
 - baugruppe: Varchar
 - baugruppe_bez: VA
- lager
 - id_lager: INTEGER
 - lager: Varchar(45)
- lager_position
 - id_lager_position: INT
 - id_lager: INTEGER (FK)
 - position: Varchar(20)
- lager_hat_artikel
 - id_lager: INTEGER (FK)
 - id_lager_position: INT
 - id_lager_artikel: INT
 - barcode: Varchar(45)
 - stk: INTEGER
 - eingangam: DATET
 - ausgangam: DATET

Adressen

- adresse
 - idadresse: INTEGER
 - id_lokation: INTEGER (FK)
 - idland: INTEGER (FK)
 - idadresse_kat: INTEGER (FK)
 - idadresse_subkat: INTEGER (FK)
 - idadresse_anrede: INTEGER (FK)
 - idadresse_titel: INTEGER (FK)
 - name: Varchar(45)
 - vonname: Varchar(15)
 - firmazusatz: Varchar(255)

Page Setup

Mcdel

Pagesize: A4 (210x297 mm, 8.26x11.7 inches)

Orientation: Portrait Landscape

Pages: Horizontal: 4 Vertical: 4

Print Dialog

Navigator & Info

Datatypes

- INTEGER
- FLOAT
- VARCHAR
- CATETIME
- BOO_
- TEXT
- LONGBLOB
- Varchar(20)
- Varchar(45)
- Varchar(255)

DB Model

Tables

- wehuser_druckzeit
- wehuser_erraikkonto
- lager_artikel_ha_lieferant
- lager_artikel_einheit
- lager_artikel_baugruppe
- lager_artikel_medium
- lager_position
- lager_hat_artikel
- lager
- doc_hat_recht
- recht_gruppe
- webprinter
- webuser_ha_recht
- recht
- webuser_azplaz_tastigkeit
- webform
- webformsettings
- webuser_abteilung
- webuser_azart
- webuser_azplaz
- webuser_gruppe

abteilung: Varchar(45)

adresse_position

- idadresse_position: INTEGER
- position: Varchar(45)

75%

Pointer [0] (Click on a Table, Note, ... to select the object. Hold Ctrl to select more than one object.)

Connected to Database root@ibd4order

Due to several attacks against the DBDesigner4 forum it has now been closed down. We simply cannot understand the sick motivation of people to attack Open Source projects.

So please understand that we will not provide any support from now on.

We will continue to host the DBD4 download till the release of the MySQL Workbench, its successor application that will be an official MySQL product. Then this project will rest in peace.

Best regards,
fabFORCE.net team



- <http://www.dbwrench.com>
- <http://www.nizana.com>
- <http://www.gnu.org/software/ferret/project/what.html>
- Ferret Hacking Guide, version 1.0.0
- <http://www.pr.gov.br/batebyte/edicoes/1996/bb56/aquisi.htm>
- <http://www.devmedia.com.br/articles/viewcomp.asp?comp=1505>
- <http://www.fabforce.net>
- <http://www.mysql.org>
- <http://dbdesigner2pg.codigolivres.org.br/>