

MySQL, HTML, \LaTeX e Perl/PHP

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The Road to Knowledge? Simple:
Err, and Err, and Err again
But Less, and Less, and Less
Piet Hein

Real programmers can write assembly code in any language
Larry Wall

TIMTOWTDI: There is more than one Way to Do It!
Larry Wall



The Problem....

- ▶ Inspiration: PHPMyAdmin
www.phpmyadmin.net
- ▶ Administrators
Not for humans...
- ▶ BD e Tables
- ▶ Application:
Interface onto a *List of Tables*
- ▶ SQL Table
ID data1 data2... dataN
Matrix
- ▶ Relations between Tables
id data1.. id-of-table.. dataN
- ▶ Module in Layers
Language: whatever...
- ▶ Web Application



Table

- ▶ id: NOT NULL PRIMARY KEY AUTO_INCREMENT
- ▶ Data defined by hash:
"Sql"=> "VARCHAR(255)",
"Name"=> "Nome do Participante",
"Size"=> "25",
"Compulsory"=> 1,
"Visible"=> 1,
- ▶ Basic Types:
INT - REAL - VARCHAR - TEXT - ENUM - PASSWORD
- ▶ Advanced Types:
Derived: Authors from Author1,...
SQL Derived (other table)
File (Upload)



Data & HTML

- ▶ ID: Never seen - Always Used
- ▶ INT - REAL: INPUT TEXT
- ▶ VARCHAR: INPUT TEXT
- ▶ PASSWORD: INPUT PASSWORD
- ▶ TEXT: TEXTAREA
- ▶ ENUM: SELECT
or RADIO SET or CHECKBOX
- ▶ FILE: INPUT FILE (enctype!)
- ▶ Derived: No edit!
→ PostProcessing
- ▶ SQL Derived: SELECT
Table name
Data to read in other table
WHERE Group='2' OR Group='3'



One Item

- ▶ Singular view: One Row

DataName1:	InputField or Show
DataName2:	InputField or Show
..	..
DataNameN:	InputField or Show

- ▶ HTML Form:

- ▶ Show - Another TABLE...

- ▶ Edit: FORM

- ▶ Print: \LaTeX \rightarrow PDF

- ▶ Delete - \gg Are You Sure? \ll

- ▶ Filter:

`#Name`

\rightarrow File

- ▶ Add - Copy

- ▶ Permissions on Individual Data: None - Read - Write



ENUMs

- ▶ "Group"=> array
(
 "Name"=> "Grupo",
 "Sql"=> "ENUM",
 "Values"=> array
 ("Administrativo","Docente",
 "Substituto","Outros",)
 "Public"=> 1,
)
▶ As Values or as 1,2,3,...
▶ -> SELECT or CHECKBOX/RADIO



SQL ID

```
"Name" => "Bibliografia Complementar Nº " . ($k+1),  
"Sql" => "INT",  
"SqlTable" => "Bibliografias",  
"SqlDerivedFilter" => "#Authors - #Name: ".  
                        "#SName - #Volume - (#ID)",  
"SqlDerivedData" => array("Name", "SName", "Authors",  
                            "Editor", "City", "Country",  
                            "Year", "Volume", "Edition"),  
"SqlDerivedSkelVar" => "Book",  
"NamerLink" => "Bibliografies.php?Edit=1&ID",  
"NamerText" => "Editor Bibliografia",  
"ShowIDCols" => array("Coordinator", "Teacher"),  
"EditIDCols" => array("Coordinator");,  
"Public" => 1,
```



List of Items

- ▶ Plural view: (Sub)Matrix
- ▶ List of id's
- ▶ Show in List
- ▶ Edit in List
- ▶ Print int List
- ▶ Select Data & Search
L^AT_EX Skeletons -> PDF
- ▶ Export
HTML - L^AT_EX- PDF - CSV - SQL
HTML headers
- ▶ Search -> SearchVars -> ListOfIDs
- ▶ Sort by DataK,.. - (Reverse)
#ID_#DataK_#DataaKK...
- ▶ Data Groups



Table Interface

- ▶ Menus: Navigation
- ▶ Left Menu: Application Level
Other Tables
- ▶ Top Menu(s):
Singular: Show - Edit - Delete - Print

Head: Company Info - Logos	
Left Menu	Top Menu
	Table: Singular/Plural - Baile!
Tail: App. Info,...	



Layers (Camadas)

Divide & Conquer

- ▶ Base: Basic methods
- ▶ Html: HTML tables, selects, etc.
- ▶ Latex: \LaTeX tables, etc.
- ▶ CGI: CGI environment
- ▶ Actions: Actions and Menus
- ▶ TInterface: Make Interface
- ▶ MySql: Mess with the DB
- ▶ Login: Authentication
- ▶ Access: Authorization



Layers (Camadas)

- ▶ Data: Datas and Data Types
- ▶ DataGroups: Groups of Data
- ▶ Item: One Item
- ▶ Items: Several Items
- ▶ Paging: Paging when Several Items
- ▶ Search: Searching/Selecting
- ▶ Sort: Sort for ex. Alfabetically
- ▶ Export: Dump to other formats
- ▶ Table: Handlers



Web Application

- ▶ List of Involved Tables
- ▶ Module per Table
Herits MySqlObj + Specifics
- ▶ Access Levels
Public - Human Being - Admin
Groups
- ▶ Session: Authentication
Login - Logoff - Change Pwd
- ▶ Authorization
- ▶ Multiple Setups: Company1,...
- ▶ Modules and State
Search Vars - Sort Vars - Data Group



HTML/HTTP Features

- ▶ CGI: GET & POST
- ▶ Cookie Vars
- ▶ Hidden Vars
- ▶ CSS
- ▶ HTTP headers: Output
HTML - TEXT - PDF - \LaTeX - CSV



Application: Inscription

- ▶ Participants
 - 1-Table Model: Slicing
- ▶ Persons Data: Name - Email - Password
- ▶ Public: Registration
- ▶ Logon
- ▶ Admin Interface
- ▶ Inscription Specific Data
 - Fx. Talk Prefs - Assessors
- ▶ Internal Data
 - Fx. Assessment - Certificate Data
- ▶ 2-Table Model <- best
 - Site Users - Events - Participants
- ▶ Schools and Pupils (Olympiad)
- ▶ PostGrad Inscription: Teacher Assessments



Application: Planos de Ensino

- ▶ SPE: Sistema de Planos de Ensino
Pessoas - Plano de Ensino - Horarios & Salas
- ▶ Cursos
- ▶ Disciplinas
- ▶ Bibliografias
- ▶ Turmas
- ▶ Plan
- ▶ Print Plano: \LaTeX Skeleton
- ▶ Admin - Cadastros Básicos
- ▶ Coordenador - Ementas - Bibliografias - Livro Adotado
- ▶ Professor - Metodologia - Avaliação
- ▶ User May Use \LaTeX !!!
- ▶ Public - Planos - Horarios - Salas
- ▶ IME & ProGrad, UFG, 2010/11



Application: Distr. de Salas Univ.

- ▶ SiDS: Sistema de Distribuição de Salas
- ▶ Cursos: Coordenador - Períodos
- ▶ Disciplinas - Grade
- ▶ Turmas
- ▶ Horários & Salas
Tipo de Sala - Capacidade
- ▶ Distribuição
Pedidos
Tabela de: `SELECT Rooms Disponivel AND CapacityOK`
Quanto Distribuído Horário não Altera
- ▶ Relatórios: Por Turma/Curso - Por Sala/Prédio
- ▶ IME & ProGrad, UFG, 2010/11



Application: Unidade Acadêmica

- ▶ Pessoas: Tec. Adm. Docentes - Substitutos
- ▶ Cursos: Projeto - Grade - Disciplinas
- ▶ Turmas - Planos de Ensino
Horários & Salas - Distribuição
- ▶ Web Users & Inscriptions
- ▶ Diário Eletrônico
- ▶ Conselhos e Atas
- ▶ Interface Público/Restrito
- ▶ UnidadeS AcadêmicaS...
- ▶ The Project goes one...
IME & ProGrad, UFG



To Do

- ▶ Errors
- ▶ Users & Groups
- ▶ Logging
- ▶ Import
- ▶ Interface on Data defs
- ▶ Import
- ▶ ...



The End

- ▶ Idéias - Cementes - Fertilíssimos
Divide and it's Still Yours!!!
- ▶ My Projects goes on:
 - » UnidadeS AcadêmicaS...
 - » Computational Geometry
 - » Optimization VisualizedFree Software, Thinking, Society, University, Science...
Os Gambal Livre
- ▶ Life sure is a Mystery to be Lived
Not a Problem to be Solved
- ▶ Live as Though You Should Die Tomorrow
Learn as Though You Should Life Forever - *Mahatma*



