Summary of the tools for CoMa

1 What is CoMa?

CoMa is a Conferencing Manager, which should be implemented as a
Server/Client Architecture using HTML.
In this context the following tools are our choice.

2 The Web Server - Apache

http://www.apache.org

Pro's:

- it costs nothing
- easy to install
- it's fast
- it's easy to configure
- robust
- embedded PHP-Module

Contra's:

- costs plenty of ressources

3 The Database Management System - MySQL

http://mysql.com

Pro's:

- it costs nothing
- easy to install
- it's fast
- easy to configure
- all base SQL elements are supported
- lots of functionalities (like timecount and complete view on datastrukture)

Contra's:

- doesn't match all SQL-standards, no one does :P
- limited support of transactions

- supports no "Union"-Queries (subselect)
- supports no "views"
- supports no "stored procedures"
- supports no "trigger"

4   The Programming-Language - PHP

http://www.php.net The URL also includes a good overview of all existing php-functions and tutorials.

Pro's:

- easy to learn (close to c syntax)
- costs nothing
- ditributed freely an easy to install
- special design for WWW-oriented codings
- automated typing (weak typed)
- assoziative und indizierte Arrays, die zur Laufzeit dynamisch erweitert werden können
- easy to use Database-Interface
- less code generating much Output (Output-oriented)
- optional possibility of object oriented coding Style
- build-in web-functions (Sessions, Cookies, Headers)
- *Write-And-Run-Programming* (no compiling, no reboot of server, etc.)
- platformindependent, code is copied in plain text

Contra's:

- existing ceiling of Access-Capacity
- security risks:
  1. Code is "plain text"
  2. weak typing
  3. automated Embedding of GET- and POST-Parametres
  4. vulnerable to denial of service attack
- relatively high amount of runtime at complex module architecture
- relatively complicated module architecture at complex modules
- due to weak typing no error messages on wrong use of variables etc

5 Enhancing Software - PHPMyAdmin

http://www.sourceforge.net/projects/phpmyadmin/

Pro's:

- costs nothing
- easy to install
- guarantees full access on the mysql database via webinterface
- clearly laid out
- intuitive usage (Data oriented)

Contra's:

- requires PHP
- requires MySQL (PostGres or MSSQL avariants available)

6 SVN

http://subversion.tigris.org/

Pro's:

- costs nothing
- easy to install
- plug-ins for several Programming APIs available
- plug-in for windows explorer available (TortoiseSVN)

7 Editoren

Pro's:

Due to the choice of PHP and SVN there is no need of a special Programming-API, for the Code of PHP is understood by all Editors, which understand plain text. So every programmer is able to use his/her favorite API (e.g. Eclipse, Emacs, VI, Notepad, ...)

Contra's:

- no guarantee for uniform coding (Line-Feeds, Tabs, etc)
- perhaps editor built-in additions in the sourcecode