PHP3 (www.php3.net)

- Server-side scripting language
- CGI (Common Gateway Interface)
- Imbedded into HTML code
- Allows to create active Web-pages
- Provides programmatic access to a variety of DBMSs
Client/Server Architecture

1. Web Browser
   http://server.vt.edu/cgi-bin/php.exe/mark/index.php3

2. Web Server
   server.vt.edu

3. File System
   - www-root
   - cgi-bin
     - php.exe
   - kathy
   - mark
     - index.php3

4. File System
5. Web Server
PHP3 Interpreter

<?php
    echo( "Hello World!" );
?>

Hello World!
PHP3 Syntax

• Borrowed from C, Java and Perl
• No variable declaration necessary
• $a can store a scalar (numeric or string) value:
  $year = 1999;
  $year = “1999”;
• scope is static
PHP3 Variables

• Defined (used) in the script
• Defined by the Web-Server (CGI)
  – $SERVER_NAME,
  – $SERVER_PROTOCOL,
  – $SERVER_PORT, etc.
• Defined by the PHP3 interpreter:
  – environment variables ($HOME, etc...)
  – HTML forms
  – URL decoding
HTML Forms

<form method=get action=test.php3>
<input type=text name=test value="Hello World!">
<input type=submit>
</form>

• When test.php3 script is processed, $test would be pre-defined by PHP3 to have the string value “Hello World!”. 
URL Decoding

http://.../mark/test.php3?month=April&year=1999

• When test.php3 script is processed, PHP3 interpreter would pre-define:
  – $month to have the string value “April”,
  – $year to have the numeric value 1999.
Database Operation

- Connect
  - receive a descriptor

- Query
  - use the connection descriptor
  - receive a result descriptor

- Process result
  - use the result descriptor to iterate tuples

- Close connection
  - use the connection descriptor
PHP3 Functions

• Predefined
  – array
  – HTTP-related
  – regular expressions
  – string
  – network
  – ODBC (and native database support)
  – etc.

• User-defined