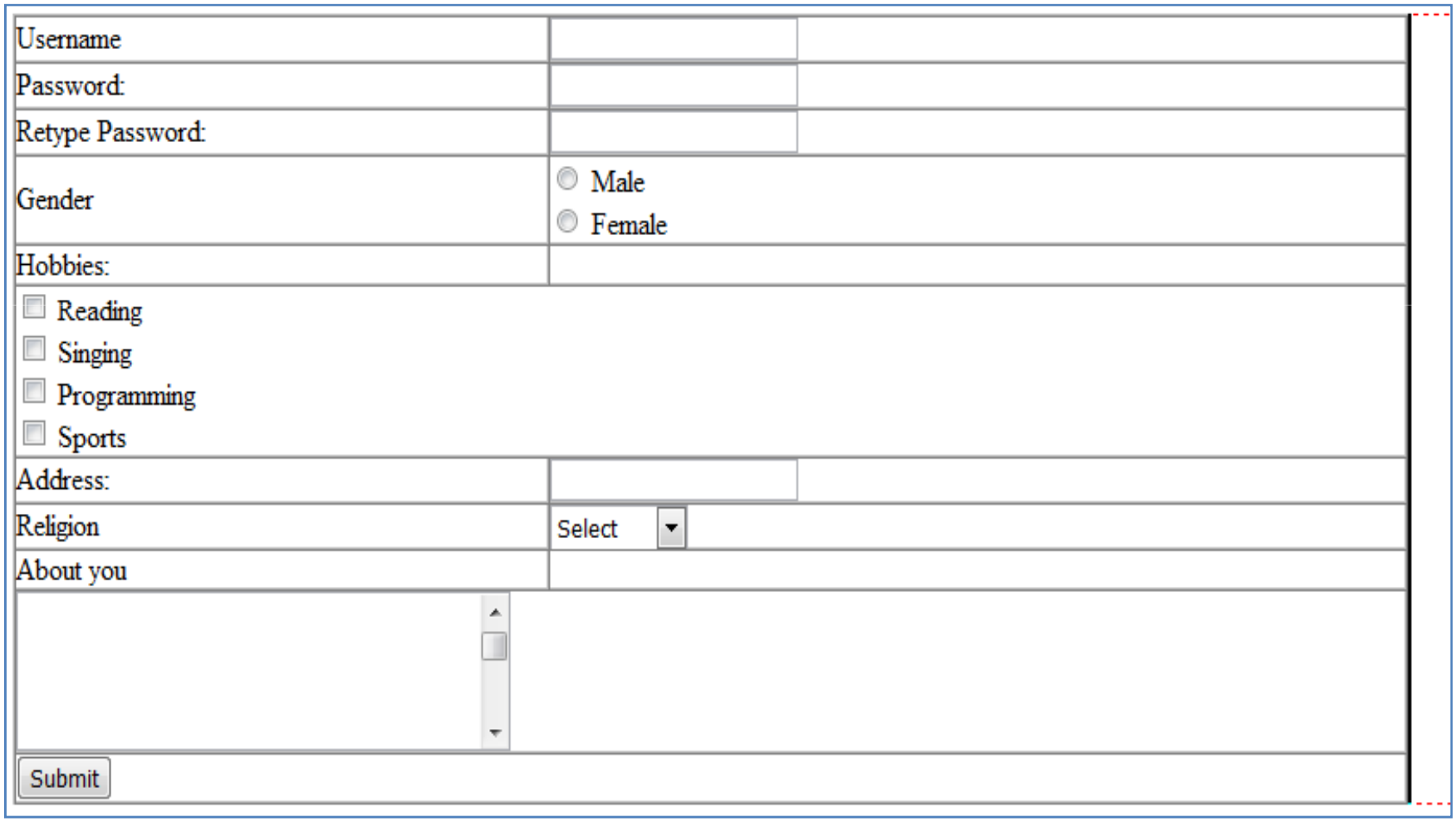
Pemrograman Web – PHP 2

Antonius RC - (C) 2012

PHP dan Form (1)



Kode HTML - Form (2)

```
<body><form id="form1" name="form1" method="post" action="proses-form.php">
<table width="75%" border="1" cellspacing="0" cellpadding="0">
  <tr>
    <td>Username</td>
    <td><input type="text" name="username" id="username" /></td>
  </tr>
  <tr>
    <td>Password:</td>
    <td><input type="password" name="pass1" id="pass1" /></td>
  </tr>
  <tr>
    <td>Retype Password:</td>
    <td><input type="password" name="pass2" id="pass2" /></td>
  </tr>
  <tr>
    <td>Gender</td>
    <td><input type="radio" name="gender" id="radio" value="male" />
      Male<br />
      <input type="radio" name="gender" id="radio2" value="female" />
      Female</td>
  </tr>
```

Kode HTML - Form (3)

```
  <tr>
    <td>Hobbies:</td>
    <td> </td>
  </tr>
  <tr>
    <td colspan="2"><p>
          <input name="hobbies[]" type="checkbox" id="hobbies[]" value="reading" />
      Reading<br />
      <input name="hobbies[]" type="checkbox" id="hobbies[]" value="singing" />
      Singing
<br />
<input name="hobbies[]" type="checkbox" id="hobbies[]" value="programming" />
Programming<br />
<input name="hobbies[]" type="checkbox" id="hobbies[]" value="sport" />
Sports
    </p></td>
    </tr>
  <tr>
    <td>Address:</td>
    <td><input type="text" name="address" id="address" /></td>
  </tr>
  <tr>
    <td>Religion</td>
    <td><select name="religion" id="religion">
      <option value="islam">Islam</option>
```

Kode HTML - Form (4)

```
      <option value="katolik">Katolik</option>
      <option value="hindu">Hindu</option>
      <option value="buddha">Buddha</option>
      <option selected="selected">Select</option>
    </select></td>
  </tr>
  <tr>
    <td>About you</td>
    <td> </td>
  </tr>
  <tr>
    <td colspan="2"><textarea name="about" id="about" cols="45" rows="5"></textarea></td>
    </tr>
  <tr>
    <td colspan="2"><input type="submit" name="button" id="button" value="Submit" /></td>
    </tr>
</table>
</form>
```

Remember: Array global pada PHP

- $_GET[“variabel”] – untuk menerima variabel pada URL secara GET
- $_POST[“variabel”] – untuk menerima variabel dari POST form
- $_REQUEST[“variabel”] – untuk menerima variabel GET dan POST
- $_FILES[“variabel”] – untuk menerima upload file
- $_SESSION[“varname”] – untuk mengakses session
- $_COOKIE[“varname”] – untuk mengakses cookies

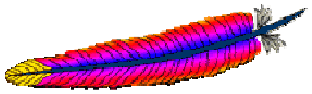
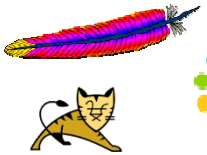
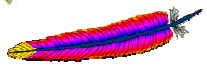
Kode PHP dan hasil

```php
<?php
if($_REQUEST["pass1"] !=  $_REQUEST["pass2"]) header("Location: form.php?err=pass");
else {
    $username = $_REQUEST["username"];
    $password = $_REQUEST["pass1"];
    $gender = $_REQUEST["gender"];
    $address = $_REQUEST["address"];
    $hobbies = $_REQUEST["hobbies"];
    $about = $_REQUEST["about"];
    $religion = $_REQUEST["religion"];

    echo "Thank you for registering. Here's your data:<br>";
    echo "Username: $username<br>";
    echo "Gender : $gender<br>";
    echo "Address : $address<br>";
    echo "Hobbies : <br>";
    foreach ($hobbies as $hobby){
        echo "$hobby,";
    }
    echo "<br>Religion : $religion<br>";
    echo "About you:<br>";
    echo $about;
}
?>
```

Thank you for registering. Here's your data:
Username: anton
Gender : male
Address : jalan wahidin
Hobbies :
reading,programming,
Religion : katolik
About you:
percobaan tentang saya

Popular Technology Stacks

LAMP	J2EE	.NET
  Perl 	 Java	 .net / C#
 MySQL	 MySQL	 MySQL
 Apache	  Apache Tomcat JBoss	   IIS Apache JBoss
 Linux	  Linux or Solaris	 Windows

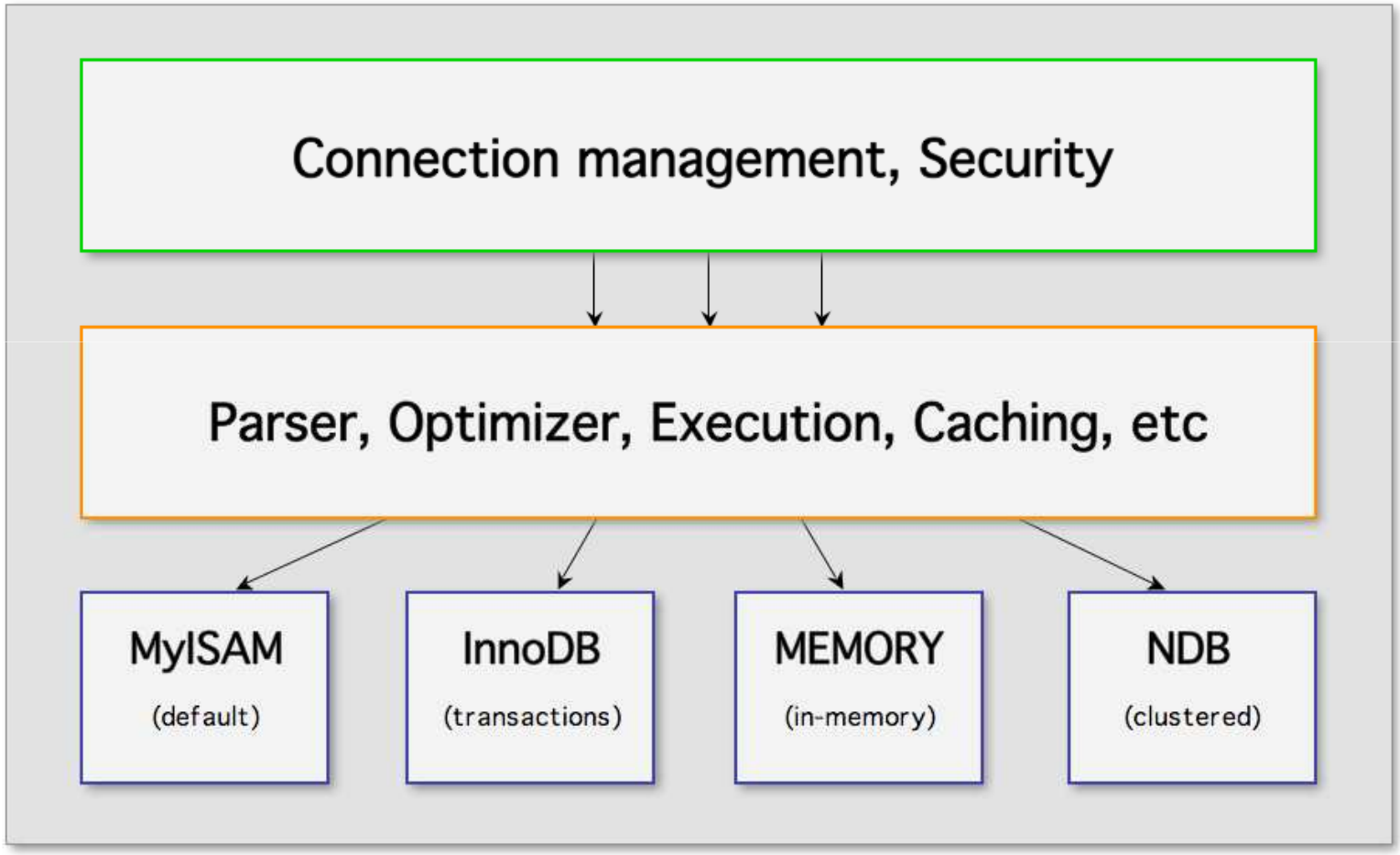
Main Features of MySQL

- Fully **multi-threaded** using **kernel threads**
- Works on many **different platforms**
- **Many column** types
- Full SQL support
- A privilege and password system that is very **flexible** and **secure**
- Handles **large databases**
- Tested with a broad range of different compilers.
- Full support for several **different character sets**

More Features

- Multiple **storage-engine** architecture
- ACID compliant transactions
- Standards based SQL, aiming for SQL-2003
- Syntax based **query caching**
- Master/Slave replication support
- Written in C, C++ and ASM, it fast!
  - 80% in C
  - Parse tree and optimizer in C++
  - String functionality in ASM on some platforms

Storage Engine Architecture



Storage Engine: **Memory**

- **RAM based storage engine**
  - Data is stored *only* in system memory
  - Schema persists on disk
- **Very fast**
  - No disk I/O
  - Basic data structures
- **Quite limited**
  - Fixed column widths – no VARCHAR
  - Limited indexes available

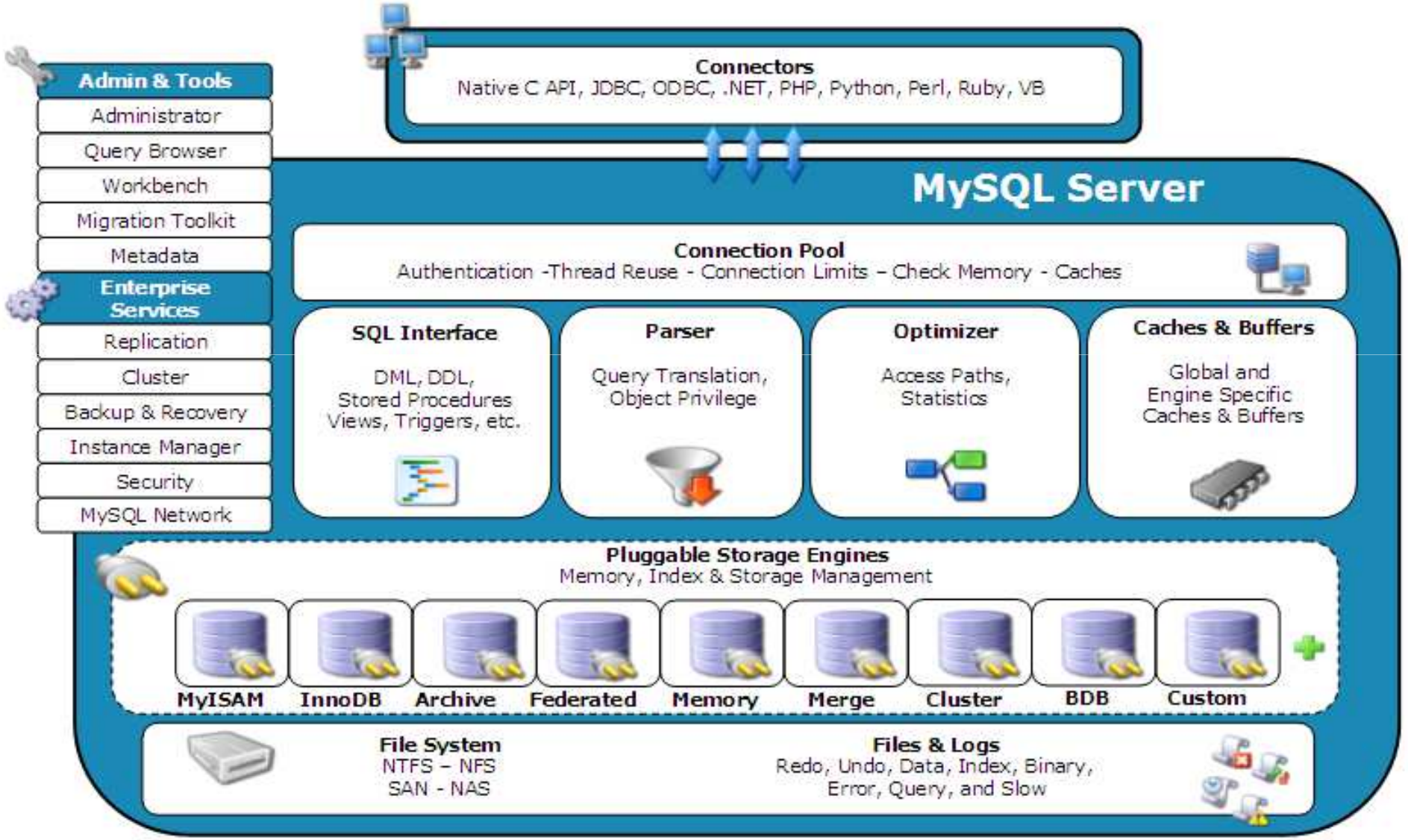
Storage Engine: **MyISAM** (Index Sequential Access Method)

- **File based storage**
  - .MYD – table data
  - .MYI – index data
  - .FRM – table definition (schema)
- **Easily maintained**
  - Architecture-independent data
  - Files can be **copied** across platforms
- **Low overhead**
  - No transactions
  - Table level locking support
  - Excel export support
- **Limited**
  - Write concurrency
  - Potential for corruption with limited recovery (no transactions)
  - Limited data dictionary
- **Made MySQL…**
  - A “SQL enabled file system”

Storage Engine: **InnoDB**

- **ACID Compliant**
  - Atomicity/Consistency/Isolation/Durability
  - Full transactional support and multi-versioning
  - Read Uncommitted, Read Committed, Repeatable Read, Serializable
  - Foreign keys constraints support
- **Locking and logging**
  - Row-level and next-key locking
  - Logging support
  - Commit and rollback segments
- **Fault tolerance and table spaces**
  - Large datasets, raw partitions
  - Online backups
- **Next generation indexing and data storage**
  - Clustered and B-tree indexes
- **Made MySQL…**
  - Competitive in the **enterprise database** market

MySQL Architecture



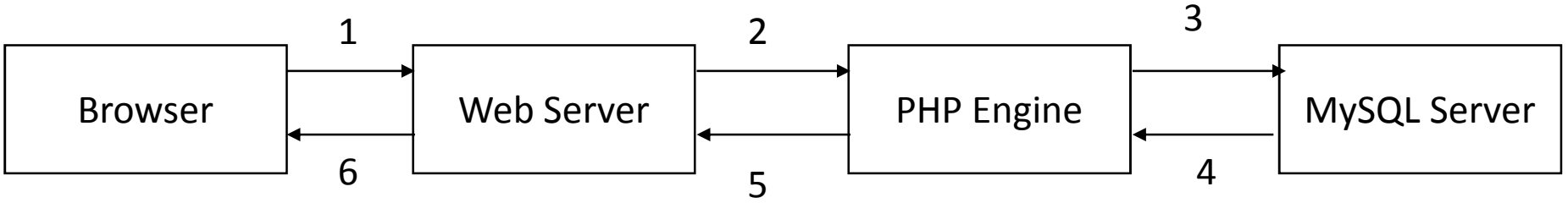
Koneksi dengan MySQL

- MySQL adalah RDBMS server (www.mysql.com)
- PHP dapat dikoneksikan dengan MySQL dengan mudah dan cepat
- Tahapan PHP berkomunikasi dengan MySQL:
  - Buat Koneksi
  - Select database
  - Buat query
  - Kirim query dan ambil hasilnya
  - Tutup koneksi

Tool untuk Pembuatan tabel

- PHPMyAdmin
- PHPMiniAdmin
- SqlBuddy
- SqlYog
- HeidiSQL

Web Database Architecture with PHP and MySQL



1. Browser issues an HTTP request for a particular web page
2. Web server receives the request, retrieves the file and passes it to the PHP engine for processing
3. **PHP engine connects to the MySQL** server and sends the query
4. **MySQL server receives the query, processes it, and sends the results back to the PHP engine**
5. PHP engine receives the results, prepares the HTML page and send it to the web server
6. Web server sends the HTML page to the browser and browser displays the page to the user

Koneksi Database MySQL

- mysql_connect(<host>,<username>,<password>
- mysql_select_db(<nama_db>)
- mysql_query(<query>)
- mysql_fetch_array(<hasil_query>)
- mysql_fetch_object(<hasil_query>)
- mysql_close()

Koneksi Database MySQL (mysqli)

- Merupakan extensions MySQL yang mampu bersifat procedural ataupun OOP
  - mysqli_connect(<host>,<username>,<password>
  - mysqli_select_db(<nama_db>)
  - mysqli_query(<query>)
  - mysqli_fetch_array(<hasil_query>)
  - mysqli_fetch_object(<hasil_query>)
  - mysqli_close()
- http://www.php.net/manual/en/mysqli.summary.php

Mysql_connect

- **mysql_connect(server, username, password)**
  - connects to a MySQL server through a port
  - the default is the string "localhost:3306"
  - username is a string for the user name
  - password is a string for the password
  - returns FALSE on failure
- Example
  - $db_link = mysql_connect("localhost:3306", “root", “password");
- there is also the persistent **mysql_pconnect()**
- **myql_close()** for closing the connection

Mysql_select_db

- **mysql_select_db**(name, link)
  - select a database given by the string name
  - the link is optional and specifies the open link value such as $db_link returned by a connect statement.
  - if not supplied the last **opened link is used**.
  - returns TRUE on success else FALSE
- Example
  - mysql_select_db(“mahasiswa“,$db_link);

Mysql_error()

- **mysql_error**($db_link)
  - Return an error string or error number
  - the link is optional
  - if not supplied the last opened link is used.
  - Empty string is returned if there is no error.
- Example
  - mysql_error($db_link);

```
<?php
   mysql_connect("localhost", "mysql_user",
"mysql_password");

   mysql_select_db("nonexistentdb");
   echo mysql_errno() . ": " . mysql_error(). "\n";

   mysql_select_db("kossu");
   mysql_query("SELECT * FROM nonexistenttable");
   echo mysql_errno() . ": " . mysql_error() . "\n";
?>
```

mysql_query

- **mysql_query**($query, $link)
  - Make a query (link is optional)
  - Query is a SQL string for the MySQL query
  - Don't end the query with a semi-colon
- the query are:
  - Select, describe
    - Return array
  - Create, Insert, update, delete, drop, truncate
    - Return true / false

Informasi kolom-kolom tabel

- **mysql_list_fields**($database, $table, $link)
  - For a select query it retrieves information from given table in given database. link is optional
  - The returned resource can be used to obtain properties of the table such as names of the table columns and field type information
- Example
  - $fields = mysql_list_fields("web_db","books");

Jumlah Fields

- **mysql_num_fields**($result)
  - return the numbers of columns in a table
  - result is the resource returned by a call to the mysql_list_fields function
- Example
  - $fields = mysql_list_fields("web_db", "books");
  - $num_columns = mysql_num_fields($fields);

Field name

- **mysql_field_name**($result, $index)
  - return the name of the table column whose position is given by index (0,1,...)
  - result is the resource returned by a call to mysql_list_fields
- Example: the first column name
  - $fields = mysql_list_fields("web_db", "books");
  - $isbn = mysql_field_name($fields, 0);

Mysql_fetch_array

- **mysql_fetch_array**($result)
  - combines mysql_fetch_row, mysql_fetch_assoc, mysql_fetch_object
  - returns row information as both an associative array and an indexed array or object

```
$query = "SELECT * FROM books";
$result = mysql_query($query);
$row = mysql_fetch_array($result); // row 0
$isbnA = $row[0]; // isbn for row 0
$isbnB = $row['isbn']; // can also get it this way
```

Beberapa fungsi lain

- **mysql_num_rows**($result)
  - returns number of rows from a select query
  - result is the resource returned by the select query
- **mysql_affected_rows**($result)
  - used after an INSERT, UPDATE, or DELETE query to return the number of rows affected
  - result is the resource returned
- **mysql_close**($link)
  - close the database connection associated with the given link
  - doesn't do anything for persistent links.

Contoh kasus: Tabel **Blog**

- Blog
  - id UNSIGNED INT AUTOINCREMENT
  - title VARCHAR(255)
  - post TEXT
  - tgl TIMESTAMP default CURRENT_TIMESTAMP
- Buat View/Select
- Buat Add/Insert
- Buat Delete
- Buat Edit/Update

Create Code

```
CREATE TABLE `blog` (
    `id` INT(10) NOT NULL AUTO_INCREMENT,
    `title` VARCHAR(255) NULL DEFAULT NULL,
    `post` TEXT NULL,
    `tgl` TIMESTAMP NOT NULL DEFAULT CURRENT_TIMESTAMP,
    PRIMARY KEY (`id`)
)
```

#	Name	Datatype	Length/Set	Unsign...	Allow NULL	Zerofill	Default
1	id	INT	10	☐	☐	☐	AUTO_INCREMENT
2	title	VARCHAR	255		☑		NULL
3	post						
4	tgl						

id	title	post	tgl
1	judul kedua	ini isinya posting kedua	2012-10-03 10:38:54
2	coba post	ini isinya post pertama kali	2012-10-03 12:38:54
3	ini yang ketiga	ketiga isinya apa ya	2012-10-03 15:28:54
4	yang keempat	empat tambah empat berapa ya	2012-10-03 19:38:38

Contoh Select

```php
<?php
$con = mysql_connect("localhost","root","");
mysql_select_db("test",$con);
$hasil = mysql_query("select * from blog",$con);
while($baris = mysql_fetch_array($hasil)){
    echo "<strong>Judul</strong>: ".$baris["judul"]."<br>";
    echo $baris["post"]."<br>";
    echo "Tgl post:".$baris["tgl"]."<hr>";
}
?>
```

Judul:
ini isinya posting kedua
Tgl post:2012-10-03 10:38:54

Judul:
ini isinya post pertama kali
Tgl post:2012-10-03 12:38:54

Judul:
ketiga isinya apa ya
Tgl post:2012-10-03 15:28:54

Judul:
empat tambah empat berapa ya
Tgl post:2012-10-03 19:38:38

MySQL fetch_object dan Num_rows

```php
<?php
$con = mysql_connect("localhost","root","");
mysql_select_db("test",$con);
$hasil = mysql_query("select * from blog",$con);
while($baris = mysql_fetch_object($hasil)){
    echo "<strong>Judul</strong>: ".$baris->judul."<br>";
    echo $baris->post."<br>";
    echo "Tgl post:".$baris->tgl."<hr>";
}
echo "Jumlah data: ".mysql_num_rows($hasil);
?>
```

Judul:
ini isinya posting kedua
Tgl post:2012-10-03 10:38:54

Judul:
ini isinya post pertama kali
Tgl post:2012-10-03 12:38:54

Judul:
ketiga isinya apa ya
Tgl post:2012-10-03 15:28:54

Judul:
empat tambah empat berapa ya
Tgl post:2012-10-03 19:38:38

Jumlah data: 4

Contoh update dan delete

```php
<?php
$con = mysql_connect("localhost","root","");
mysql_select_db("test",$con);
$jdl = "Judul yang baru";
$id = 1;
$hasil = mysql_query("update blog set title='$jdl' where id=$id",
$con);
if($hasil == 1) echo "Berhasil - ".mysql_affected_rows($con)."
teredit";
else echo "Gagal!";
?>
```

```php
<?php
$con = mysql_connect("localhost","root","");
mysql_select_db("test",$con);
$id = 2;
$hasil = mysql_query("delete from blog where id=$id",$con);
if($hasil == 1) echo "Berhasil - ".mysql_affected_rows($con)."
terdelete";
else echo "Gagal!";
?>
```

Insert data

```php
<?php
$con = mysql_connect("localhost","root","");
mysql_select_db("test",$con);
$jdl = "Judul Tambahan";
$post = "Ini post tambahan";
$hasil = mysql_query("insert into blog(title,post)
values('$jdl','$post')",$con);
if($hasil == 1) echo "Berhasil - ".mysql_affected_rows($con)."
ditambahakan";
else echo "Gagal!";
?>
```

Searching

```php
<?php
$con = mysql_connect("localhost","root","");
mysql_select_db("test",$con);
$cari = "empat";
$hasil = mysql_query("select * from blog where post like '%$cari%'",$con);
while($baris = mysql_fetch_object($hasil)){
    echo "<strong>Judul</strong>: ".$baris->judul."<br>";
    $post_tmp = $baris->post;
    $hasil_post = str_replace($cari,"<span style='color:red;'>$cari</span>",
$post_tmp);
    echo $hasil_post."<br>";
    echo "Tgl post:".$baris->tgl."<hr>";
}
echo "Jumlah data: ".mysql_num_rows($hasil);
?>
```

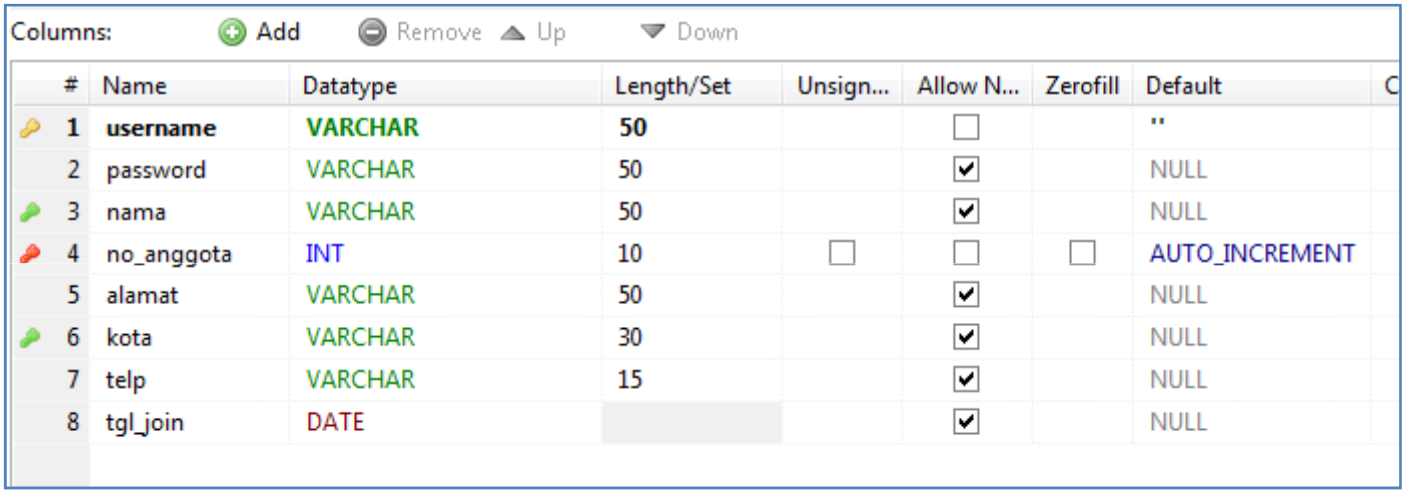
Judul:
ketiga dan keempat isinya apa ya
Tgl post:2012-10-03 15:28:54

Judul:
empat tambah empat berapa ya
Tgl post:2012-10-03 19:38:38

Jumlah data: 2

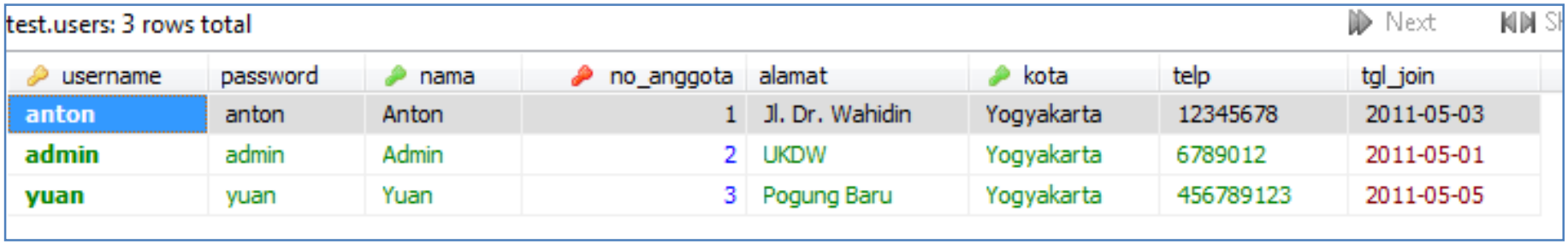
Demo **Login** dgn MySQL

- Tabel : **users**



Columns: Add Remove Up Down

#	Name	Datatype	Length/Set	Unsign...	Allow N...	Zerofill	Default
1	**username**	**VARCHAR**	**50**		☐		''
2	password	VARCHAR	50		☑		NULL
3	nama	VARCHAR	50		☑		NULL
4	no_anggota	INT	10	☐	☐	☐	AUTO_INCREMENT
5	alamat	VARCHAR	50		☑		NULL
6	kota	VARCHAR	30		☑		NULL
7	telp	VARCHAR	15		☑		NULL
8	tgl_join	DATE			☑		NULL



test.users: 3 rows total Next

username	password	nama	no_anggota	alamat	kota	telp	tgl_join
anton	anton	Anton	1	Jl. Dr. Wahidin	Yogyakarta	12345678	2011-05-03
admin	admin	Admin	2	UKDW	Yogyakarta	6789012	2011-05-01
yuan	yuan	Yuan	3	Pogung Baru	Yogyakarta	456789123	2011-05-05

Skrip PHP

```php
<?php
session_start();
$con = mysql_connect("localhost","root","");
mysql_select_db("test",$con);
$user = "anton";
$pass = "anton";
$hasil = mysql_query("select * from users3 where username='$user' and
password='$pass'",$con);
if($hasil){
    if(mysql_num_rows($hasil)==1){
        $_SESSION["UNAME"] = $user;
        $_SESSION["PASS"] = $pass;
        $_SESSION["LOG-IN"] = "true";
        session_regenerate_id(true);
        if (!headers_sent()) header("Location: home.php");
    }
    else {
        header("Location: login.php?err=1");
    }
}
?>
```

NEXT

- PHP Advanced dan OOP