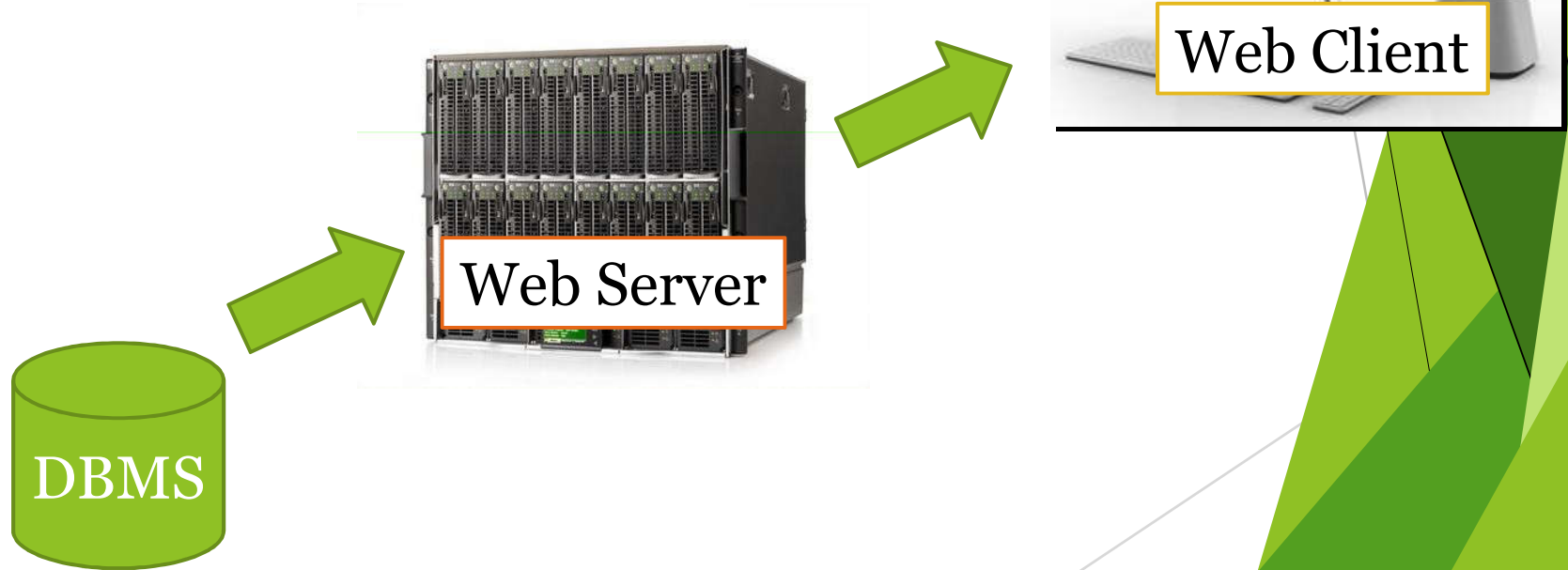


PHP Advanced DataBase-Session-Cookies

Arsitektur Web



PHP Database (MySQL)



Pengenalan MySQL

- υ RDBMS untuk website
- υ Open Source
- υ License :
 - υ GPL -> Free
 - υ Commercial
- υ Website : www.mysql.com

Advantage (keunggulan)

- ✓ **It's fast.** The main goal of the folks who developed MySQL was speed. Consequently, the software was designed from the beginning with speed in mind.
- ✓ **It's inexpensive.** MySQL is free under the open source GPL license, and the fee for a commercial license is very reasonable.
- ✓ **It's easy to use.** You can build and interact with a MySQL database by using a few simple statements in the SQL language, which is the standard language for communicating with RDBMSs. Check out Chapter 4 for the lowdown on the SQL language.
- ✓ **It can run on many operating systems.** MySQL runs on a wide variety of operating systems — Windows, Linux, Mac OS, most varieties of Unix (including Solaris, AIX, and DEC Unix), FreeBSD, OS/2, Irix, and others.
- ✓ **Technical support is widely available.** A large base of users provides free support via mailing lists. The MySQL developers also participate in the e-mail lists. You can also purchase technical support from MySQL AB for a very small fee.

Advantage (keunggulan)

- ✓ **It's secure.** MySQL's flexible system of authorization allows some or all database privileges (for example, the privilege to create a database or delete data) to specific users or groups of users. Passwords are encrypted.
- ✓ **It supports large databases.** MySQL handles databases up to 50 million rows or more. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
- ✓ **It's customizable.** The open source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

MySQL and PHP, the Perfect Pair



PHP

MySQL

- ✓ **They're free.** It's hard to beat free for cost-effectiveness.
- ✓ **They're Web-oriented.** Both were designed specifically for use on Web sites. Both have a set of features that are focused on building dynamic Web sites.
- ✓ **They're easy to use.** Both were designed to get a Web site up quickly.
- ✓ **They're fast.** Both were designed with speed as a major goal. Together they provide one of the fastest ways to deliver dynamic Web pages to users.
- ✓ **They communicate well with one another.** PHP has built-in features for communicating with MySQL. You don't need to know the technical details; just leave it to PHP.
- ✓ **A wide base of support is available for both.** Both have large user bases. Because they are often used as a pair, they often have the same user base. Many people are available to help, including those on e-mail discussion lists who have experience using MySQL and PHP together.
- ✓ **They're customizable.** Both are open source, thus allowing programmers to modify the PHP and MySQL software to fit their own specific environments.

MySQL PHP Functions

- ⌚ Fungsi-fungsi di dalam PHP yang mendukung koneksi dan manipulasi basisdata MySQL
- ⌚ <http://id1.php.net/manual/en/book.mysql.php>

Function list (yang biasa digunakan)

- ✧ `mysql_connect()`
- ✧ `mysql_close()`
- ✧ `mysql_select_db()`
- ✧ `mysql_query()`
- ✧ `mysql_fetch_array()`
- ✧ `mysql_insert_id()`

mysql_connect()

- ▮ Membuka koneksi ke server basis data
- ▮ Struktur fungsi

```
▮ $link = mysql_connect('servername', 'username', 'password');
```

mysql_close()

- ▮ Digunakan untuk menutup koneksi basisdata
- ▮ Terkadang tidak dibutuhkan karena PHP memiliki garbage collector
- ▮ Struktur fungsi :
 - ▮ `mysql_close($link) ;`

mysql_select_db()

- Memilih database yang akan digunakan
- Struktur fungsi

```
$db_selected = mysql_select_db($database_name,$link);
```

mysql_query()

- ❖ Fungsi ini digunakan untuk mengeksekusi SQL query
- ❖ Struktur fungsi :
 - ❖ `$result = mysql_query('INSERT INTO ...');`

mysql_fetch_array()

- ❧ Fungsi ini digunakan untuk mengembalikan data ke dalam bentuk array
- ❧ Struktur fungsi :
 - ❧ `mysql_fetch_array($result, $result_type);`
- ❧ `$result_type` :
 - ❧ **MYSQL_ASSOC**, **MYSQL_NUM**, and **MYSQL_BOTH**

Requirement

- ▮ Sebelum melakukan koneksi php ke mysql, pastikan hal-hal berikut:
 - ▮ Nama host : “localhost”,
 - ▮ Username MySQL
 - ▮ Password MySQL
 - ▮ Nama database

Urutan command



mysql_connect

mysql_select_db

mysql_query

mysql_fetch_array

```
<?php
    $host = "localhost";
    $user = "root";
    $passwd = "root";
    $database = "db_toko";

    $koneksi = mysql_connect($host,$user,$passwd);
    mysql_select_db($database, $koneksi);

    $query_ambil = mysql_query("select * from lemari");

    $row = mysql_fetch_array($query_ambil);
?>
```

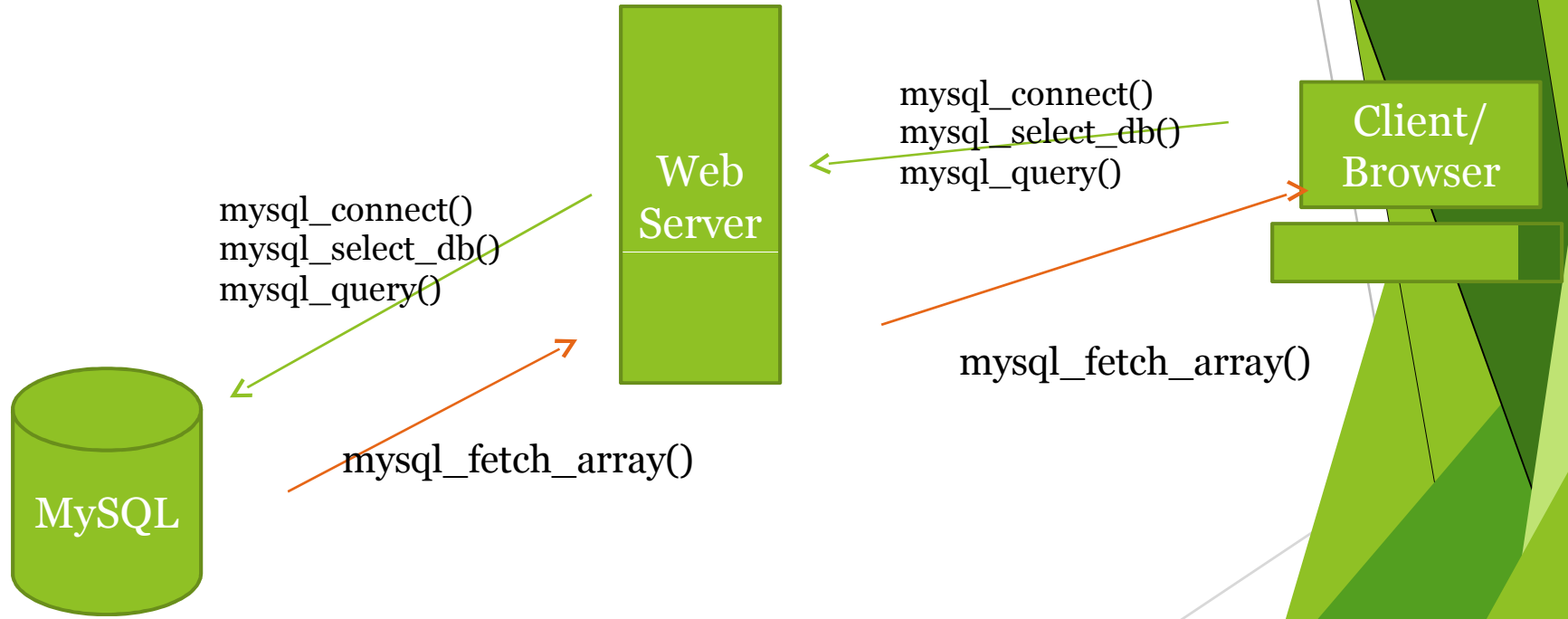

Koneksi database PHP dan MySQL

```
<?php
    $host = "localhost";
    $user = "root";
    $passwd = "root";
    $db = "db_toko";

    $koneksi = mysqli_connect($host,$user,$passwd,$db);

?>
```

Koneksi database PHP dan MySQL



Storing Credential Data

An abstract graphic design featuring various shades of green. On the right side, there are several overlapping, angular shapes in different tones of green, creating a layered, geometric effect. The background is a light, off-white color.

Session

- Session digunakan untuk mengidentifikasi setiap user/pengguna yang mengunjungi suatu web site.
- Di-handle oleh sebuah variabel global `$_SESSION`

Session functions

- ▮ `session_start()`
- ▮ `session_destroy()`
- ▮ `session_unset()`

`session_start()`

- Menginisialisasi data session
- Dipanggil sebelum melakukan pengolahan data session

session_destroy()

- Memusnahkan semua data yang didaftarkan di dalam session

session_unset()

- Mengosongkan semua variabel yang didaftarkan ke dalam session.

COOKIE

- Juga digunakan untuk menyimpan data user seperti halnya Session

- Function

- `setcookie (string $name [, string $value [, int $expire = 0
[, string $path [, string $domain [, $secure = false [,
$httponly = false]]]]]) ;`

- *Di-handle* oleh sebuah variabel global `$_COOKIE`

COOKIE vs SESSION

- ❖ COOKIE disimpan di browser pengguna
 - ❖ Akan tetap disimpan di browser selama tidak dihapus
 - ❖ Perlu diaktifkan untuk menggunakan COOKIE
- ❖ SESSION disimpan di server
 - ❖ Saat koneksi terputus maka SESSION juga akan hilang
 - ❖ Dalam pembuatan koneksi baru maka SESSION baru juga akan dibuat

Short Workshop



Membuat tabel

- ▮ Buat sebuah database dengan menggunakan Phpmyadmin yang ada di local server
- ▮ Buat 2 tabel,
 - ▮ users
 - ▮ credentials

Menambahkan field

- ↳ Untuk masing-masing tabel buat field-field berikut :
 - ↳ Tabel users
 - ↳ id, nama, alamat, email, file
 - ↳ Tabel credentials
 - ↳ id, user_id, username, password

Membuat koneksi database

Sebuah file config/database.php yang menyimpan informasi basisdata dan melakukan koneksi

```
<?php
    $server = "localhost";
    $user = "root";
    $password = "";
    $connection = mysql_connect($server,$user,$password) ;
    if (!$connection){
        die("Tidak bisa tersambung ke database : "
        .mysql_error() );
    } else {
        echo "Tersambung ke database.";
    }
    mysql_close($connection) ;
?>
```

Mengaktifkan basisdata

Menambahkan fungsi ke file config/database.php
untuk mengaktifkan basisdata yang ingin digunakan.

```
<?php
```

```
    $database = "myDatabase";
```

```
    $selectedDB = mysql_select_db($database,  
    $connection);
```

```
    if(!$selectedDB){
```

```
        die("Tidak bisa menggunakan database {$database} :  
        ".mysql_error() );
```

```
    } else {
```

```
        echo "Database '{$database}' dapat digunakan.";
```

```
    }
```

```
?>
```

Menyisipkan database.php

Membuat file process.php untuk mengelola data yang dikirim oleh form html.

```
<?php  
    require_once('config/database.php') ;  
?>
```


Tracking SQL Error

Mendeteksi error pada syntax sql

```
mysql_query($query) or die('failed!' . mysql_error());
```

Melihat data yang disubmit

Dalam file process.php tambahkan kode untuk mencetak data yang disubmit

```
<?php
    echo "<pre>";print_r($_POST);echo "</pre>";
    echo "<pre>";print_r($_FILES);echo "</pre>";
?>
```

Menyimpan data yang disubmit

Dalam process.php tambahkan kode untuk menyimpan data ke dalam database

```
<?php
```

```
$query1 = ("INSERT INTO users (nama,alamat,email) VALUES  
( '{$_POST['nama']}' , '{$_POST['alamat']}' , '{$_POST['email'] }' )");
```

```
mysql_query($query1);
```

```
$lastInsertID = mysql_insert_id();
```

```
$query2 = ("INSERT INTO credentials  
(user_id,username,password) VALUES  
({$lastInsertID}, '{$_POST['username']}' , '{$_POST['password'] }' )");
```

```
mysql_query($query2);
```

```
?>
```

Menyimpan file ke dalam server

Dalam process.php tambahkan kode untuk menyimpan file ke dalam server

```
<?php
$uploads_dir = __DIR__ . '\files';
if ($_FILES['photo']['error'] == UPLOAD_ERR_OK) {
    $tmp_name = $_FILES["photo"]["tmp_name"];
    $name = $_FILES["photo"]["name"];
    move_uploaded_file($tmp_name, "$uploads_dir\\$name");
}
?>
```

Menampilkan data yang disimpan

Dalam sebuah file view.php ditambahkan kode untuk mengambil data dari database

```
<?php
require_once('config/database.php');

$query1 = ("SELECT * FROM users AS u JOIN (credentials
as c) ON (u.id = c.user_id) ");

$result = mysql_query($query1);
while($row = mysql_fetch_array($result,MYSQL_ASSOC)){
    $data[] = $row;
}
?>
```

Melakukan proses login

Dalam file prosesLogin.php kita gunakan fungsi-fungsi untuk mengelola SESSION dan COOKIE

```
<?php session_start();
require_once('config/database.php');
$query1 = ("SELECT * FROM credentials
as c JOIN (users as u) ON
(u.id = c.user_id) WHERE username = '{$_POST['username']}' AND
password = '{$_POST['password']}'");
$result = mysql_query($query1);
while($row = mysql_fetch_array($result,MYSQL_ASSOC)){
    $data[] = $row;
}
if($data){
    $_SESSION['User']['nama'] = $data[0]['nama'];
    $_SESSION['User']['email'] = $data[0]['email'];

    setcookie("User[email]", $data[0]['email'], time()+3600);
}
?>
```

Melakukan proses logout

Dalam file prosesLogin.php kita gunakan fungsi-fungsi untuk mengelola SESSION dan COOKIE

```
<?php  
  
session_start();  
  
session_destroy();  
  
setcookie("User[email]", "", time()-3600);  
  
?>
```