

## MODUL 2 PEMROGRAMAN PHP LANJUT

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### 1. TUJUAN

- Mahasiswa dapat memahami pemrograman server side menggunakan PHP5
- Mahasiswa dapat mengetahui sintak-sintak yang digunakan dalam penanganan form dengan menggunakan metode GET dan POST
- Mahasiswa dapat melakukan beberapa validasi pada pembuatan form menggunakan pemrograman PHP5
- Mahasiswa mampu menyelesaikan beberapa permasalahan menggunakan pemrograman PHP

### 2. DASAR TEORI

#### 2.1 PHP5

PHP adalah bahasa programan untuk membangun sebuah website dinamis. PHP merupakan kependekan dari PHP:Hypertext Preprocessing. Pada Juni 2004 PHP versi 5.0 telah dirilis dan mengalami perubahan besar. Pada versi ini PHP memasukkan model pemrograman berorientasi objek. Sintak dasar program PHP yang sering digunakan seperti dibawah ini

```
<?php
    Isi program
?>
```

PHP sebagai bahasa pemrograman web memiliki beberapa kelebihan, diantaranya

- 'Bahasa pemrograman PHP adalah sebuah bahasa script yang tidak melakukan sebuah kompilasi dalam penggunaannya.'
- 'Web Server yang mendukung PHP dapat ditemukan dimana - mana dari mulai apache, IIS, Lighttpd, hingga Xitami dengan konfigurasi yang relatif mudah.'
- 'Dalam sisi pengembangan lebih mudah, karena banyaknya milis - milis dan developer yang siap membantu dalam pengembangan.'
- 'Dalam sisi pemahaman, PHP adalah bahasa scripting yang paling mudah karena memiliki referensi yang banyak.'
- 'PHP adalah bahasa open source yang dapat digunakan di berbagai mesin (Linux, Unix, Macintosh, Windows) dan dapat dijalankan secara runtime melalui console serta juga dapat menjalankan perintah-perintah system.'

#### 2.2 Pengolahan Data dari Form

Website menerima masukan dari pengguna atau pengunjung pada suatu form dapat menggunakan beberapa metode. Metode yang sering digunakan adalah metode GET dan POST. Metode GET merupakan variable array yang melewatkan data script pada parameter URL. Sedangkan Metode POST berupa variable array yang melewatkan data script melalui method HTTP POST.

Perbedaan antara metode GET dan metode POST antara lain :

Pada metode GET :

- Informasi yang dikirim dari form dengan metode GET adalah dapat terlihat (nama dan nilai variabel ditampilkan pada URL)
- GET mempunyai batasan jumlah informasi yang dikirim (2000 karakter)
- Karena variabel ditampilkan pada URL, kemungkinan dapat digunakan untuk bookmark halaman
- GET digunakan untuk mengirim data non-sensitive

Pada metode POST :

- Informasi yang dikirim dari form dengan metode POST tidak dapat terlihat (semua nama dan nilai variabel di-embedkan pada body HTTP request)
- POST tidak mempunyai batasan jumlah informasi yang dikirim
- POST mendukung masukan multi-part binary saat upload file ke server
- Karena variabel tidak ditampilkan pada URL, maka tidak mungkin untuk bookmark halaman

### 2.3 Validasi Form

Proses validasi merupakan hal yang harus diperhatikan dalam pembuatan web. Untuk melakukan validasi bias menggunakan Javascript maupun PHP script. Perbedaan dari keduanya, pada Javascript akan diproses pada sisi client, sedangkan pada PHP script akan diproses pada sisi server. Beberapa fungsi pada PHP script yang digunakan untuk validasi form diantaranya :

- Fungsi trim(), digunakan untuk menghapus spasi di kanan dan di kiri text
- Fungsi stripslashes(), digunakan untuk membuang karakter escape (karakter backslash “\”)
- Fungsi htmlspecialchars(), untuk menonaktifkan seluruh perintah-perintah HTML → mempertahankan penulisan HTML pada sebuah tampilan HTML

## 3. LANGKAH PERCOBAAN

### 3.1 Latihan

- PHP5 case-sensitivity

Pada PHP semua fungsi, class dan keyword (if, else, while dan echo) → **Tidak Case-Sensitive**

```
<?php
ECHO "Politeknik Elektronika Negeri Surabaya<br>";
echo "Politeknik Elektronika Negeri Surabaya<br>";
EcHo "Politeknik Elektronika Negeri Surabaya<br>";
?>
```

Tampilan

Politeknik Elektronika Negeri Surabaya  
Politeknik Elektronika Negeri Surabaya  
Politeknik Elektronika Negeri Surabaya

Variabel pada PHP5 case-sensitive

```
<?php
$color="red";
echo "My car is " . $color . "<br>";
echo "My house is " . $COLOR . "<br>";
echo "My boat is " . $coLOR . "<br>";
?>
```

Tampilan

My car is red

Notice: Undefined variable: COLOR in C:\xampp\htdocs\pemrograman\_internet\php\variable-case-sensitive.php on line 13  
My house is

Notice: Undefined variable: coLOR in C:\xampp\htdocs\pemrograman\_internet\php\variable-case-sensitive.php on line 14  
My boat is

- Variabel \$GLOBALS pada PHP

```
<?php
$x = 75;
$y = 25;

function addition() {
    $GLOBALS['z'] = $GLOBALS['x'] + $GLOBALS['y'];
}

addition();
echo $z;
?>
```

## Tampilan

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- Variabel \$\_SERVER pada PHP

```
<?php
echo $_SERVER['PHP_SELF'];
echo "<br>";
echo $_SERVER['SERVER_NAME'];
echo "<br>";
echo $_SERVER['HTTP_HOST'];
echo "<br>";
echo $_SERVER['HTTP_REFERER'];
echo "<br>";
echo $_SERVER['HTTP_USER_AGENT'];
echo "<br>";
echo $_SERVER['SCRIPT_NAME'];
?>
```

## Tampilan

```
/pemrograman_internet/php/variable-server.php
localhost
localhost
http://localhost/pemrograman_internet/php/
Mozilla/5.0 (Windows NT 6.1; WOW64; rv:32.0) Gecko/20100101 Firefox/32.0
/pemrograman_internet/php/variable-server.php
```

## Mencoba variabel \$\_SERVER yang disediakan PHP

Element/Code	Description
\$_SERVER['PHP_SELF']	Returns the filename of the currently executing script
\$_SERVER['GATEWAY_INTERFACE']	Returns the version of the Common Gateway Interface (CGI) the server is using
\$_SERVER['SERVER_ADDR']	Returns the IP address of the host server
\$_SERVER['SERVER_NAME']	Returns the name of the host server (such as www.w3schools.com)
\$_SERVER['SERVER_SOFTWARE']	Returns the server identification string (such as Apache/2.2.24)
\$_SERVER['SERVER_PROTOCOL']	Returns the name and revision of the information protocol (such as HTTP/1.1)
\$_SERVER['REQUEST_METHOD']	Returns the request method used to access the page (such as POST)
\$_SERVER['REQUEST_TIME']	Returns the timestamp of the start of the request (such as 1377687496)
\$_SERVER['QUERY_STRING']	Returns the query string if the page is accessed via a query string
\$_SERVER['HTTP_ACCEPT']	Returns the Accept header from the current request
\$_SERVER['HTTP_ACCEPT_CHARSET']	Returns the Accept_Charset header from the current request (such as utf-8,ISO-8859-1)
\$_SERVER['HTTP_HOST']	Returns the Host header from the current request
\$_SERVER['HTTP_REFERER']	Returns the complete URL of the current page (not reliable because not all user-agents support it)
\$_SERVER['HTTPS']	Is the script queried through a secure HTTP protocol
\$_SERVER['REMOTE_ADDR']	Returns the IP address from where the user is viewing the current page
\$_SERVER['REMOTE_HOST']	Returns the Host name from where the user is viewing the current page
\$_SERVER['REMOTE_PORT']	Returns the port being used on the user's machine to communicate with the web server
\$_SERVER['SCRIPT_FILENAME']	Returns the absolute pathname of the currently executing script
\$_SERVER['SERVER_ADMIN']	Returns the value given to the SERVER_ADMIN directive in the web server configuration file (if your script runs on a virtual host, it will be the value defined for that virtual host) (such as someone@w3schools.com)
\$_SERVER['SERVER_PORT']	Returns the port on the server machine being used by the web server for communication (such as 80)
\$_SERVER['SERVER_SIGNATURE']	Returns the server version and virtual host name which are added to server-generated pages
\$_SERVER['PATH_TRANSLATED']	Returns the file system based path to the current script
\$_SERVER['SCRIPT_NAME']	Returns the path of the current script
\$_SERVER['SCRIPT_URI']	Returns the URI of the current page

Pilih 5 variabel \$\_SERVER pada tabel (selain yang sudah dicoba), jalankan dan tampilkan hasilnya.

- Penanganan form menggunakan metode \$\_GET  
Pembuatan form


```
<form action="welcome_get.php" method="get">
Name: <input type="text" name="name"><br>
E-mail: <input type="text" name="email"><br>
<input type="submit">
</form>
```

welcome\_get.php

```
Welcome <?php echo $_GET["name"]; ?><br>
Your email address is: <?php echo $_GET["email"]; ?>
```

Tampilan

Name:   
E-mail:



localhost/pemrograman\_internet/php/welcome\_get.php?name=Aji+Firmansyah&email=aji.firman%40gmail.com

Welcome Aji Firmansyah  
Your email address is: aji.firman@gmail.com

- Penanganan form menggunakan metode POST  
Pembuatan form


```
<form action="welcome.php" method="post">
Name: <input type="text" name="name"><br>
E-mail: <input type="text" name="email"><br>
<input type="submit">
</form>
```

welcome.php

```
Welcome <?php echo $_POST["name"]; ?><br>
Your email address is: <?php echo $_POST["email"]; ?>
```

Tampilan

Name:   
E-mail:



localhost/pemrograman\_internet/php/welcome.php

Welcome Aji Firmansyah  
Your email address is: aji.firman@gmail.com

- Validasi Form  
Script validasi

```
<?php
// define variables and set to empty values
$name = $email = $gender = $comment = $website = "";

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    $name = test_input($_POST["name"]);
    $email = test_input($_POST["email"]);
    $website = test_input($_POST["website"]);
    $comment = test_input($_POST["comment"]);
    $gender = test_input($_POST["gender"]);
}

function test_input($data) {
    $data = trim($data);
    $data = stripslashes($data);
    $data = htmlspecialchars($data);
    return $data;
}
?>
```

## Pembuatan form

```
<h2>PHP Form Validation Example</h2>
<form method="post" action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]);?>">
  Name: <input type="text" name="name">
  <br><br>
  E-mail: <input type="text" name="email">
  <br><br>
  Website: <input type="text" name="website">
  <br><br>
  Comment: <textarea name="comment" rows="5" cols="40"></textarea>
  <br><br>
  Gender:
  <input type="radio" name="gender" value="female">Female
  <input type="radio" name="gender" value="male">Male
  <br><br>
  <input type="submit" name="submit" value="Submit">
</form>
```

## Menampilkan data masukan

```
<?php
echo "<h2>Your Input:</h2>";
echo $name;
echo "<br>";
echo $email;
echo "<br>";
echo $website;
echo "<br>";
echo $comment;
echo "<br>";
echo $gender;
?>
```

## Tampilan

### PHP Form Validation Example

Name:

E-mail:

Website:

Comment:

Gender:  Female  Male

### Your Input:

Aji Firmansyah  
aji.firman@gmail.com  
www.aji-firman.net  
Belajar validasi form  
male

## Pengujian validasi form dengan memberi masukan berupa spasi

### PHP Form Validation Example

Name:

E-mail:

Website:

Comment:

Gender:  Female  Male

### Your Input:

Aji Firmansyah  
aji.firman@gmail.com  
www.aji-firman.net  
Belajar validasi form  
male

### Pengujian validasi form dengan memberi masukan berupa tanda backslash PHP Form Validation Example

Name:

E-mail:

Website:

Comment:   
Belajar \validasi form\

Gender:  Female  Male

**Your Input:**  
Aji Firmansyah  
aji.firman@gmail.com  
www.aji-firman.net  
Belajar validasi form  
male

### Pengujian validasi form dengan memberi masukan berupa script HTML PHP Form Validation Example

Name:

E-mail:

Website:

Comment:   
Belajar <script>HTML</script> HTML<br><a href='test'>Test</a>

Gender:  Female  Male

**Your Input:**  
Aji Firmansyah  
aji.firman@gmail.com  
www.aji-firman.net  
Belajar sintak HTML <a href='test'>Test</a>  
male

### Nonaktifkan fungsi htmlspecialchars()

```
function test_input($data) {  
    $data = trim($data);  
    $data = stripslashes($data);  
    // $data = htmlspecialchars($data);  
    return $data;  
}
```

### Tampilan PHP Form Validation Example

Name:

E-mail:

Website:

Comment:   
Belajar <script>HTML</script> HTML<br><a href='test'>Test</a>

Gender:  Female  Male

**Your Input:**  
Aji Firmansyah  
aji.firman@gmail.com  
www.aji-firman.net  
Belajar sintak HTML Test  
male

- Validasi form → required field  
Mendefinikan warna yang digunakan saat error

```
<style>  
.error {color: #FF0000;}  
</style>
```

## Mendefinisikan variabel dan menentukan nilai yang kosong

```
<?php
// define variables and set to empty values
$nameErr = $emailErr = $genderErr = $websiteErr = "";
$name = $email = $gender = $comment = $website = "";

if ($_SERVER["REQUEST_METHOD"] == "POST") {
    if (empty($_POST["name"])) {
        $nameErr = "Name is required";
    } else {
        $name = test_input($_POST["name"]);
    }

    if (empty($_POST["email"])) {
        $emailErr = "Email is required";
    } else {
        $email = test_input($_POST["email"]);
    }

    if (empty($_POST["website"])) {
        $website = "";
    } else {
        $website = test_input($_POST["website"]);
    }

    if (empty($_POST["comment"])) {
        $comment = "";
    } else {
        $comment = test_input($_POST["comment"]);
    }
}
```

## Menampilkan form

```
<h2>PHP Form Validation Example</h2>
<p><span class="error">* required field.</span></p>
<form method="post" action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]);?>">
    Name: <input type="text" name="name">
    <span class="error">* <?php echo $nameErr;?></span>
    <br><br>
    E-mail: <input type="text" name="email">
    <span class="error">* <?php echo $emailErr;?></span>
    <br><br>
    Website: <input type="text" name="website">
    <span class="error"><?php echo $websiteErr;?></span>
    <br><br>
    Comment: <textarea name="comment" rows="5" cols="40"></textarea>
    <br><br>
    Gender:
    <input type="radio" name="gender" value="female">Female
    <input type="radio" name="gender" value="male">Male
    <span class="error">* <?php echo $genderErr;?></span>
    <br><br>
    <input type="submit" name="submit" value="Submit">
</form>
```

## Menampilkan data masukan

```
<?php
echo "<h2>Your Input:</h2>";
echo $name;
echo "<br>";
echo $email;
echo "<br>";
echo $website;
echo "<br>";
echo $comment;
echo "<br>";
echo $gender;
?>
```

### Pengecekan required field PHP Form Validation Example

\* required field.

Name:  \*

E-mail:  \*

Website:  www.aji-firman.net

Comment:  Belajar validasi form

Gender:  Female  Male \*



### PHP Form Validation Example

\* required field.

Name:  \* Name is required

E-mail:  \* Email is required

Website:

Comment:

Gender:  Female  Male \* Gender is required

### Your Input:

www.aji-firman.net  
Belajar validasi form

### Pengecekan data masukkan nama PHP Form Validation Example

\* required field.

Name:  Aji Firmansyah 00123 \* Only letters and white space allowed

E-mail:  \* Email is required

Website:

Comment:

Gender:  Female  Male \* Gender is required



### PHP Form Validation Example

\* required field.

Name:  Aji Firmansyah \*

E-mail:  \* Email is required

Website:

Comment:

Gender:  Female  Male \* Gender is required

### Pengecekan validasi e-mail PHP Form Validation Example

\* required field.

Name:  Aji Firmansyah \*

E-mail:  aji.firman@gmail.com \* Invalid email format

Website:

Comment:

Gender:  Female  Male \* Gender is required



### PHP Form Validation Example

\* required field.

Name:  Aji Firmansyah \*

E-mail:  aji.firman@gmail.com \*

Website:

Comment:

Gender:  Female  Male \* Gender is required



### Pengecekan validasi URL/website PHP Form Validation Example

\* required field.

Name:  \*

E-mail:  \*

Website:  Invalid URL

Comment:

Gender:  Female  Male \* Gender is required



### PHP Form Validation Example

\* required field.

Name:  \*

E-mail:  \*

Website:

Comment:

Gender:  Female  Male \* Gender is required

### Pengecekan validasi komentar PHP Form Validation Example

\* required field.

Name:  \*

E-mail:  \*

Website:

Comment:

Gender:  Female  Male \* Gender is required



### PHP Form Validation Example

\* required field.

Name:  \*

E-mail:  \*

Website:

Comment:

Gender:  Female  Male \* Gender is required

### Your Input:

Aji Firmansyah  
aji.firman@gmail.com  
http://aji-firman.net  
Belajar validasi form

### Pengecekan validasi jenis kelamin PHP Form Validation Example

\* required field.

Name:  \*

E-mail:  \*

Website:

Comment:

Gender:  Female  Male \* Gender is required



### PHP Form Validation Example

\* required field.

Name:  \*

E-mail:  \*

Website:

Comment:

Gender:  Female  Male \*

- Include File

footer.php

```
<?php  
echo "<p>Copyright &copy; 2013-" . date("Y") . " www.aji-firman.net</p>";  
?>
```

Main program

```
<h1>Welcome to my home page!</h1>  
<p>Some text.</p>  
<p>Some more text.</p>  
<?php include 'footer.php';?>
```

Tampilan

## Welcome to my home page!

Some text.

Some more text.

Copyright © 2013-2014 www.aji-firman.net

- Include file → akses variabel variabel.php

```
<?php  
$color='red';  
$car='BMW';  
?>
```

Main program

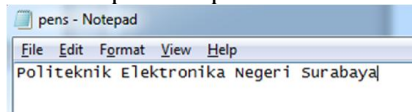
```
<h1>Welcome to my home page!</h1>  
<?php include 'variabel.php';  
echo "I have a $color $car.";  
?>
```

Tampilan

## Welcome to my home page!

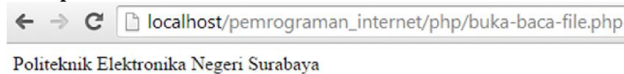
I have a red BMW.

- Buka dan baca file  
Buat file pens.txt pada direktori aktif



```
<?php  
$myfile = fopen("pens.txt", "r") or die("Unable to open file!");  
echo fread($myfile, filesize("pens.txt"));  
fclose($myfile);  
?>
```

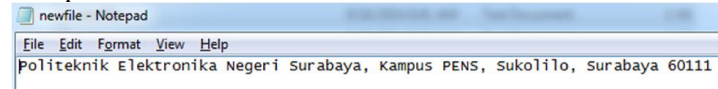
Tampilan



- Membuat file

```
<?php  
$myfile = fopen("newfile.txt", "w") or die("Unable to open file!");  
$txt = "Politeknik Elektronika Negeri Surabaya, ";  
fwrite($myfile, $txt);  
$txt = "Kampus PENS, Sukolilo, Surabaya 60111";  
fwrite($myfile, $txt);  
fclose($myfile);  
?>
```

## Tampilan



- Upload file

### Tampilan form

```
<form action="upload_file.php" method="post"
enctype="multipart/form-data">
<label for="file">Filename:</label>
<input type="file" name="file" id="file"><br>
<input type="submit" name="submit" value="Submit">
</form>
```

Filename:  pens.txt

### upload\_file.php

```
<?php
if ($_FILES["file"]["error"] > 0) {
    echo "Error: " . $_FILES["file"]["error"] . "<br>";
} else {
    echo "Upload: " . $_FILES["file"]["name"] . "<br>";
    echo "Type: " . $_FILES["file"]["type"] . "<br>";
    echo "Size: " . ($_FILES["file"]["size"] / 1024) . " kB<br>";
    echo "Stored in: " . $_FILES["file"]["tmp_name"];
}
?>
```

## Tampilan

Upload: pens.txt  
Type: text/plain  
Size: 0.037109375 kB  
Stored in: C:\xampp\tmp\phpA40B.tmp

- Upload dibatasi tipe dan ukuran file

```
<?php
$allowedExts = array("gif", "jpeg", "jpg", "png");
$temp = explode(".", $_FILES["file"]["name"]);
$extension = end($temp);

if ((($_FILES["file"]["type"] == "image/gif")
|| ($_FILES["file"]["type"] == "image/jpeg")
|| ($_FILES["file"]["type"] == "image/jpg")
|| ($_FILES["file"]["type"] == "image/pjpeg")
|| ($_FILES["file"]["type"] == "image/x-png")
|| ($_FILES["file"]["type"] == "image/png"))
&& ($_FILES["file"]["size"] < 20000)
&& in_array($extension, $allowedExts)) {
    if ($_FILES["file"]["error"] > 0) {
        echo "Error: " . $_FILES["file"]["error"] . "<br>";
    } else {
        echo "Upload: " . $_FILES["file"]["name"] . "<br>";
        echo "Type: " . $_FILES["file"]["type"] . "<br>";
        echo "Size: " . ($_FILES["file"]["size"] / 1024) . " kB<br>";
        echo "Stored in: " . $_FILES["file"]["tmp_name"];
    }
} else {
    echo "Invalid file";
}
?>
```

## Pengujian

Filename:  pens.txt

Filename:  gambar-3MB.jpg

Filename:  gambar-9,34KB.jpg

### Simpan file upload

```
<?php
$allowedExts = array("gif", "jpeg", "jpg", "png");
$temp = explode(".", $_FILES["file"]["name"]);
$extension = end($temp);

if ((($_FILES["file"]["type"] == "image/gif")
|| ($_FILES["file"]["type"] == "image/jpeg")
|| ($_FILES["file"]["type"] == "image/jpg")
|| ($_FILES["file"]["type"] == "image/pjpeg")
|| ($_FILES["file"]["type"] == "image/x-png")
|| ($_FILES["file"]["type"] == "image/png"))
&& ($_FILES["file"]["size"] < 20000)
&& in_array($extension, $allowedExts)) {
    if ($_FILES["file"]["error"] > 0) {
        echo "Return Code: " . $_FILES["file"]["error"] . "<br>";
    } else {
        echo "Upload: " . $_FILES["file"]["name"] . "<br>";
        echo "Type: " . $_FILES["file"]["type"] . "<br>";
        echo "Size: " . ($_FILES["file"]["size"] / 1024) . " kB<br>";
        echo "Temp file: " . $_FILES["file"]["tmp_name"] . "<br>";
        if (file_exists("upload/" . $_FILES["file"]["name"])) {
            echo $_FILES["file"]["name"] . " already exists. ";
        } else {
            move_uploaded_file($_FILES["file"]["tmp_name"],
                "upload/" . $_FILES["file"]["name"]);
            echo "Stored in: " . "upload/" . $_FILES["file"]["name"];
        }
    }
} else {
    echo "Invalid file";
}
?>
```



Buat dulu folder upload pada direktori aktif

## Tampilan

Filename:  gambar-9,34KB.jpg

Upload: gambar-9,34KB.jpg  
 Type: image/jpeg  
 Size: 9.3447265625 kB  
 Temp file: C:\xampp\tmp\php153B.tmp  
 Stored in: upload/gambar-9,34KB.jpg

