



Nurul Fikri College of Technology  
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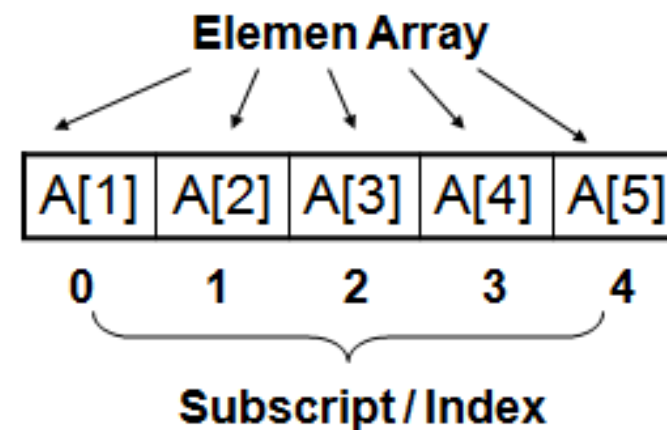
# Pemrograman Web 2

Dr. Sirojul Munir S.Si,M.Kom | [rojulman@nurulfikri.ac.id](mailto:rojulman@nurulfikri.ac.id) | @rojulman

# **3. Array dan Struktur Data**

# PHP Basic - Array

- ❖ Array adalah variable tipe data struktur yang digunakan untuk menyimpan data yang memiliki tipe data sama
- ❖ Elemen data pada array dibedakan dengan tanda subscript – tanda kurung siku [ ... ]
- ❖ Dari subscript maka dapat diambil nilai elemen array berdasarkan index dari data



# PHP Basic - Array

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- ⊕ Indexed Array – array dengan index numeric
- ⊕ Associative Array – array dengan menggunakan keys
- ⊕ Multidimensi Array – array mengandung satu atau lebih array didalamnya
- ⊕ Mendefinisikan array :
  - ⊠ `$_array = [ element array ] ;`
  - ⊠ `$_array = array ( element array ) ;`

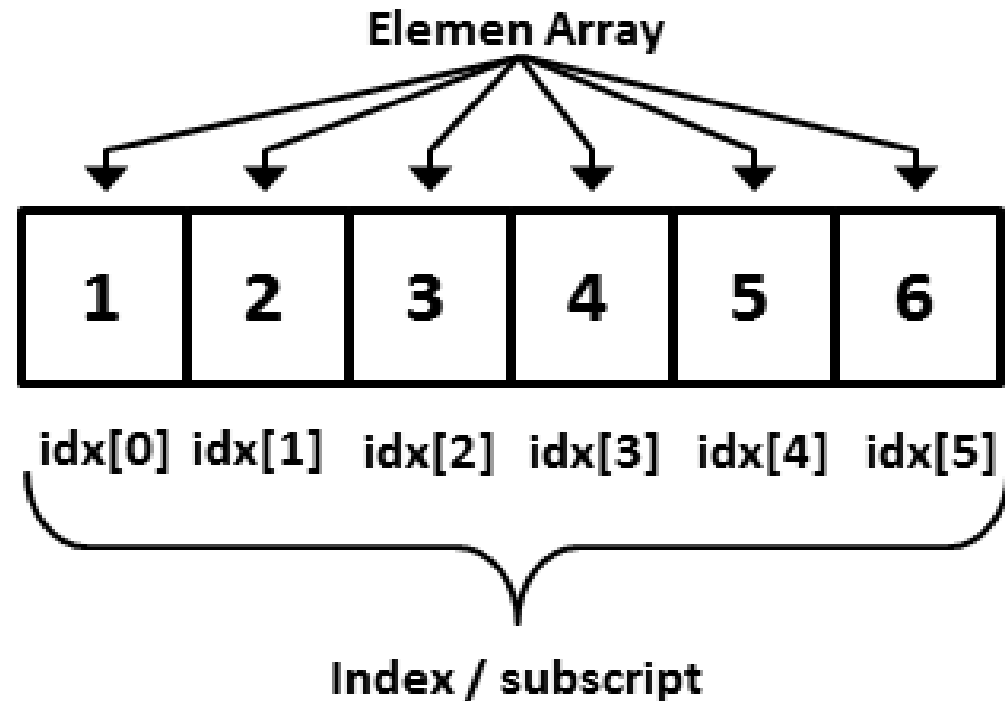
# PHP Array Dimensi Satu

- ➊ Setiap elemen array diakses melalui index numeric
- ➋ Secara default index dimulai dari 0

```
$datas = array(1,2,3,4,5,6);
```

```
$datas = [1,2,3,4,5,6];
```

```
echo $datas[3]; // 4
```



# PHP Array Dimensi Satu

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## 🔗 Deklarasi Array

```
1  <?php
2  // cara lama
3  $matakuliah = array("Desain Web", "PHP Programming", "Database");
4  // cara baru
5  $siswas = ["Alissa", "Aulia", "Faiz", "Rosa"];
6  $_nilai = [80, 90, 75];
7  ?>
```

# PHP Array Dimensi Satu

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- ✚ Set array kosong

```
$_fruits = [ ];
```

- ✚ Index array dapat di set secara manual

```
$_fruits[0] = 'apple';
```

```
$_fruits[1] = 'orange';
```

```
$_fruits[2] = 'manggo';
```

- ✚ Panjang Array / Jumlah elemen array

```
$_jumlah = count($_fruits);
```

```
echo 'Jumlah Buah : ' . $_jumlah;
```

```
echo 'Buah index ke-2 ' . $_fruits[2];
```

# PHP Array Fungsi

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- ✚ Hapus seluruh data array <https://www.php.net/manual/en/ref.array.php>  
`unset($_fruits) ; // hapus seluruh elemen array`
- ✚ Hapus elemen array index tertentu  
`unset($_fruits[1]); // hapus elemen array index ke-1`
- ✚ Hapus elemen array terakhir  
`$buahs = array_pop($_fruits); // hapus buah terakhir`
- ✚ Memasukan elemen array di bagian akhir  
`array_push($buahs, "Duku", "Salak");`
- ✚ Cek apakah elemen ada dalam array  
`in_array($buahs, "Salak") // TRUE`



# PHP Basic - Indexed Array

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## 📍 Pengulangan / Loop Indexed Array

```
$_fruits = ["Pepaya","Mangga","Pisang","Jambu"];  
$jml_data = count($_fruits);  
  
for ($i = 0 ; $i < $jml_data ; $i++) {  
    echo 'Buah Index - ' . ' adalah ' . $_fruits[$i];  
    echo '<br/>';  
}
```

# PHP Basic – Array Associative

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- Array berpasangan dengan key dan value
- Cara buat 1:  
`$umur = [ 'ahmad'=>20, 'ali'=>21, 'dewi'=>19 ];`
- Cara buat 2:  
`$umur['ahmad'] = 20;`  
`$umur['ali'] = 21;`  
`$umur['dewi'] = 19;`

# PHP Basic - Associative Array

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## 🔗 Loop Associative Array

```
foreach ($umur as $key => $val) {  
    echo 'Key : ' . $key . ' , value ' . $val ;  
    echo '<br/>';  
}
```

# PHP Basic – Array Multidimensi

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- Array dengan elemen data berupa array

- ```
$ar_jus = [  
    ['buah'=>'Mangga','harga'=>8000 ],  
    ['buah'=>'Alpukat','harga'=>10000 ],  
    ['buah'=>'Durian','harga'=>14000 ],  
];
```

```
foreach($ar_jus as $jus){  
    echo 'Jus ' . $jus['buah'] . ' harganya : ' . $jus['harga'] . '<br/>';  
}
```

# Array – Table HTML

```
1 <?php
2     $matakuliah = [
3         ["kode"=>"MK02","nama"=>"Desain Web","dosen"=>"Laisa Nurin"],
4         ["kode"=>"MK03","nama"=>"PHP Programming","dosen"=>"Nasrul"],
5         ["kode"=>"MK04","nama"=>"Database","dosen"=>"Edo Riansyah"],
6     ];
7 ?>
8 <table border="1" width="100%">
9 <thead>
10 <tr><th>No</th><th>Kode MK</th><th>Nama Matakuliah</th>
11 <th>Dosen</th></tr>
12 </thead>
13 <tbody>
14 <?php
15     $nomor = 1;
16     foreach($matakuliah as $row){
17         echo '<td>'.$nomor.'</td>'
18         <td>'.$row['kode'].'</td>'
19         <td>'.$row['nama'].'</td>'
20         <td>'.$row['dosen'].'</td></tr>';
21         $nomor++; // nomor tambahkan 1
22     }
23 ?>
24 </tbody>
25 </table>
26 </select>
27 </form>
```

| No | Kode MK | Nama Matakuliah | Dosen        |
|----|---------|-----------------|--------------|
| 1  | MK02    | Desain Web      | Laisa Nurin  |
| 2  | MK03    | PHP Programming | Nasrul       |
| 3  | MK04    | Database        | Edo Riansyah |

# Tipe Data dan Casting Variable

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- Casting adalah mekanisme mengubah tipe data suatu variabel

**Table**      *Type Casting Operators*

| <b>Cast Operators</b>         | <b>Conversion</b> |
|-------------------------------|-------------------|
| (array)                       | Array             |
| (bool) or (boolean)           | Boolean           |
| (int) or (integer)            | Integer           |
| (object)                      | Object            |
| (real) or (double) or (float) | Float             |
| (string)                      | String            |

# Tipe Data dan Casting Variable

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- Ubah tipe data integer → double (floating point)

```
$variable1 = 13;  
$variable2 = (double) $variable1; // $variable2 is assigned the value 13.0
```

- Ubah tipe data double → integer

```
$variable1 = 4.7;  
$variable2 = 5;  
$variable3 = (int) $variable1 + $variable2; // $variable3 = 9
```

# Tipe Data dan Casting Variable

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- Ubah variabel ke array, nilai variabel menjadi elemen pertama dari array

```
$variable1 = 1114;  
$array1 = (array) $variable1;  
print $array1[0];           // The value 1114 is output.
```

- Jika suatu string text di ubah ke integer maka nilai variabel hasil casting adalah 0

```
$sentence = "This is a sentence";  
echo (int) $sentence; // returns 0
```



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## 4. PHP Form Processing

# Superglobal Array

| Variable name          | Description                                             |
|------------------------|---------------------------------------------------------|
| <code>\$_SERVER</code> | Data about the currently running server.                |
| <code>\$_ENV</code>    | Data about the client's environment.                    |
| <code>\$_GET</code>    | Data sent to the server by a <code>get</code> request.  |
| <code>\$_POST</code>   | Data sent to the server by a <code>post</code> request. |
| <code>\$_COOKIE</code> | Data contained in cookies on the client's computer.     |
| <code>\$GLOBALS</code> | Array containing all global variables.                  |

```
<?php
    // info.php
    phpinfo();
?>
```

```
foreach ($_SERVER as $var => $value) {
    echo "$var => $value <br />";
}
```

# Superglobal Array : \$\_SERVER

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- Cek PHP variable di phpinfo

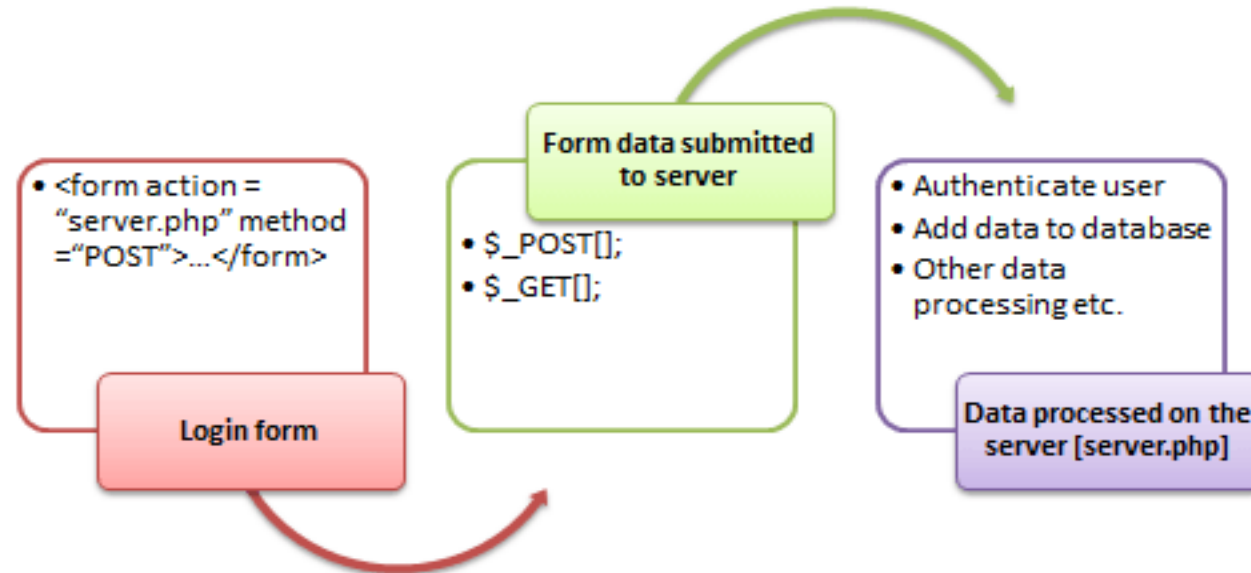
## PHP Variables

| Variable                   | Value           |
|----------------------------|-----------------|
| \$_SERVER['SERVER_NAME']   | localhost       |
| \$_SERVER['SERVER_ADDR']   | 127.0.0.1       |
| \$_SERVER['SERVER_PORT']   | 80              |
| \$_SERVER['REMOTE_ADDR']   | 127.0.0.1       |
| \$_SERVER['DOCUMENT_ROOT'] | D:/xampp/htdocs |

```
<?php
    echo 'DOKUMEN ROOT ' . $_SERVER['DOCUMENT_ROOT'];
?>
```

# PHP – Form Processing

- Salah satu fungsi dari PHP adalah untuk memproses form web



Menangkap Request:

Array Global Variabel

`$_POST[]`

`$_GET[]`

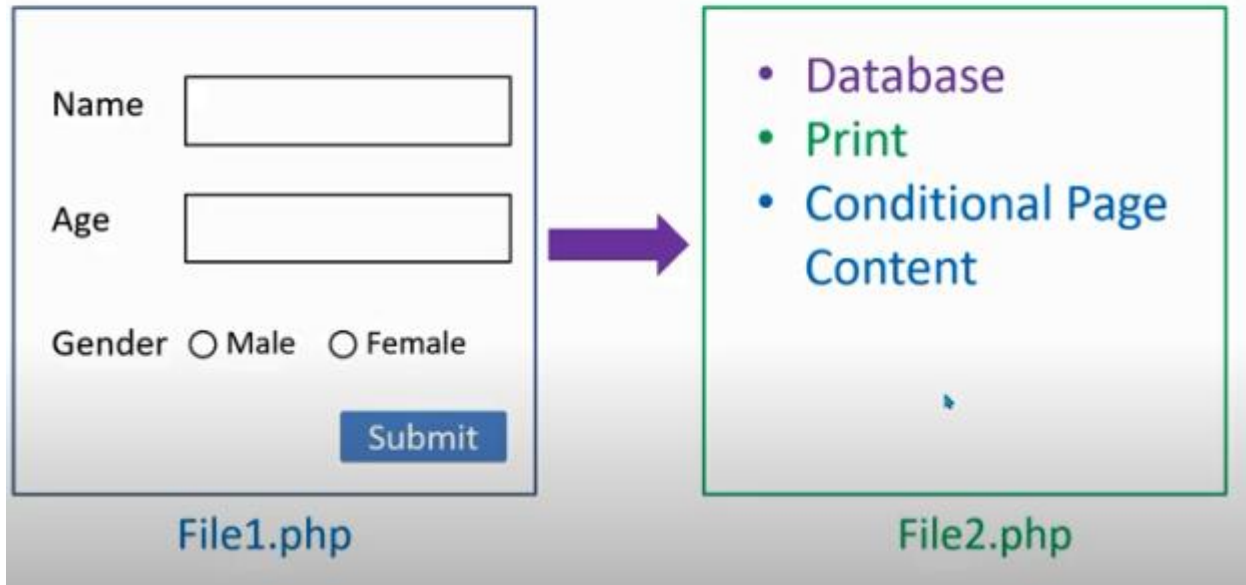
`$_REQUEST[]`

- Elemen Form:
  - Method : GET, POST
  - Action : alamat file PHP yang akan memproses data kiriman melalui Form

```
<form action="welcome.php" method="post">
```

# Contoh : \$\_GET

## PHP : \$\_GET & \$\_POST



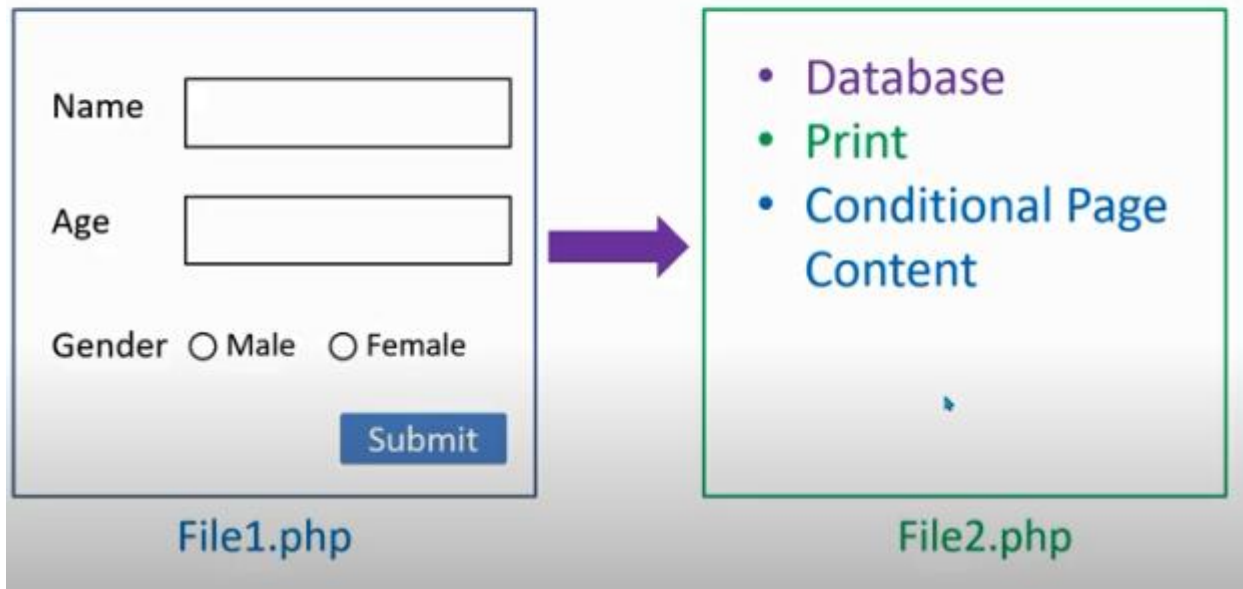
```
$_name = $_GET['name'];  
$_age = $_GET['age'];
```

```
1 <!DOCTYPE html>  
2 <html lang="en">  
3 <head>  
4     <title>Example of PHP GET method</title>  
5 </head>  
6 <body>  
7 <?php  
8     if(isset($_GET["name"])){  
9         echo "<p>Hi, " . $_GET["name"] . "</p>";  
10    }  
11    ?>  
12    <form method="get" action="<?php echo $_SERVER["PHP_SELF"];?>">  
13        <label for="inputName">Name:</label>  
14        <input type="text" name="name" id="inputName">  
15        <input type="submit" value="Submit">  
16    </form>  
17 </body>  
18 </html>
```

<https://www.devopsschool.com>

# Contoh : \$\_POST

## PHP : \$\_GET & \$\_POST



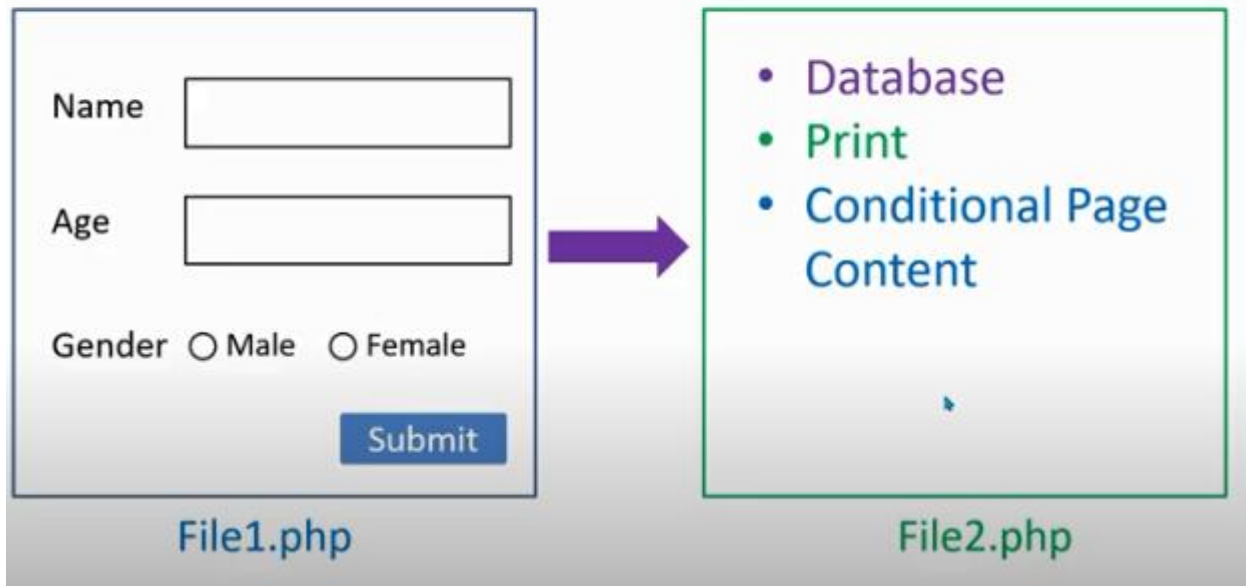
```
$_name = $_POST['name'];  
$_age = $_POST['age'];
```

```
1 <!DOCTYPE html>  
2 <html lang="en">  
3 <head>  
4     <title>Example of PHP POST method</title>  
5 </head>  
6 <body>  
7 <?php  
8     if(isset($_POST["name"])){  
9         echo "<p>Hi, " . $_POST["name"] . "</p>";  
10    }  
11    ?>  
12    <form method="post" action="<?php echo $_SERVER["PHP_SELF"];?>">  
13        <label for="inputName">Name:</label>  
14        <input type="text" name="name" id="inputName">  
15        <input type="submit" value="Submit">  
16    </form>  
17 </body>
```

<https://www.devopsschool.com>

# Contoh : \$\_REQUEST

## PHP : \$\_GET & \$\_POST



```
$_name = $_REQUEST['name'];  
$_age = $_REQUEST['age'];
```

\$\_REQUEST dapat handle Request data \$\_GET dan \$\_POST sekaligus

```
1 <!DOCTYPE html>  
2 <html lang="en">  
3 <head>  
4     <title>Example of PHP $_REQUEST variable</title>  
5 </head>  
6 <body>  
7 <?php  
8     if(isset($_REQUEST["name"])){  
9         echo "<p>Hi, " . $_REQUEST["name"] . "</p>";  
10    }  
11    ?>  
12    <form method="post" action="<?php echo $_SERVER["PHP_SELF"];?>">  
13        <label for="inputName">Name:</label>  
14        <input type="text" name="name" id="inputName">  
15        <input type="submit" value="Submit">  
16    </form>  
17 </body>  
18 </html>
```

<https://www.devopsschool.com>

# Form Validation

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- Memastikan data yang di isi melalui Form adalah valid !
- Tidak ada data yang kosong/spasi kosong (required field)
- Data sesuai dengan tipe data dan format yang diinginkan
  - Contoh : number – uang , date – tanggal, string - kode



# Contoh: PHP Form Validation

## PHP Form Validation Example

\* required field

Name:  \*

E-mail:  \*

Website:

Comment:

Gender: ☐ Female ☐ Male ☐ Other \*

Submit

```
<?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;
}
?>
```

[https://www.w3schools.com/php/php\\_form\\_validation.asp](https://www.w3schools.com/php/php_form_validation.asp)

# Contoh: PHP Form Required

```
<?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"]);
}

if (empty($_POST["gender"])) {
    $genderErr = "Gender is required";
} else {
    $gender = test_input($_POST["gender"]);
}
?>
```

[https://www.w3schools.com/php/php\\_form\\_required.asp](https://www.w3schools.com/php/php_form_required.asp)

# Question ?

---

- Kapan menggunakan Form method GET ?
- Kapan menggunakan Form method POST ?

```
<form action="welcome.php" method="get">  
First name: <input type="text" name="fname">  
</form>
```

```
<html>  
<body>  
Welcome <?php echo  ; ?>  
</body>  
</html>
```