

Pengembangan Aplikasi Web

Pertemuan Ke-2 (Pengenalan PHP)

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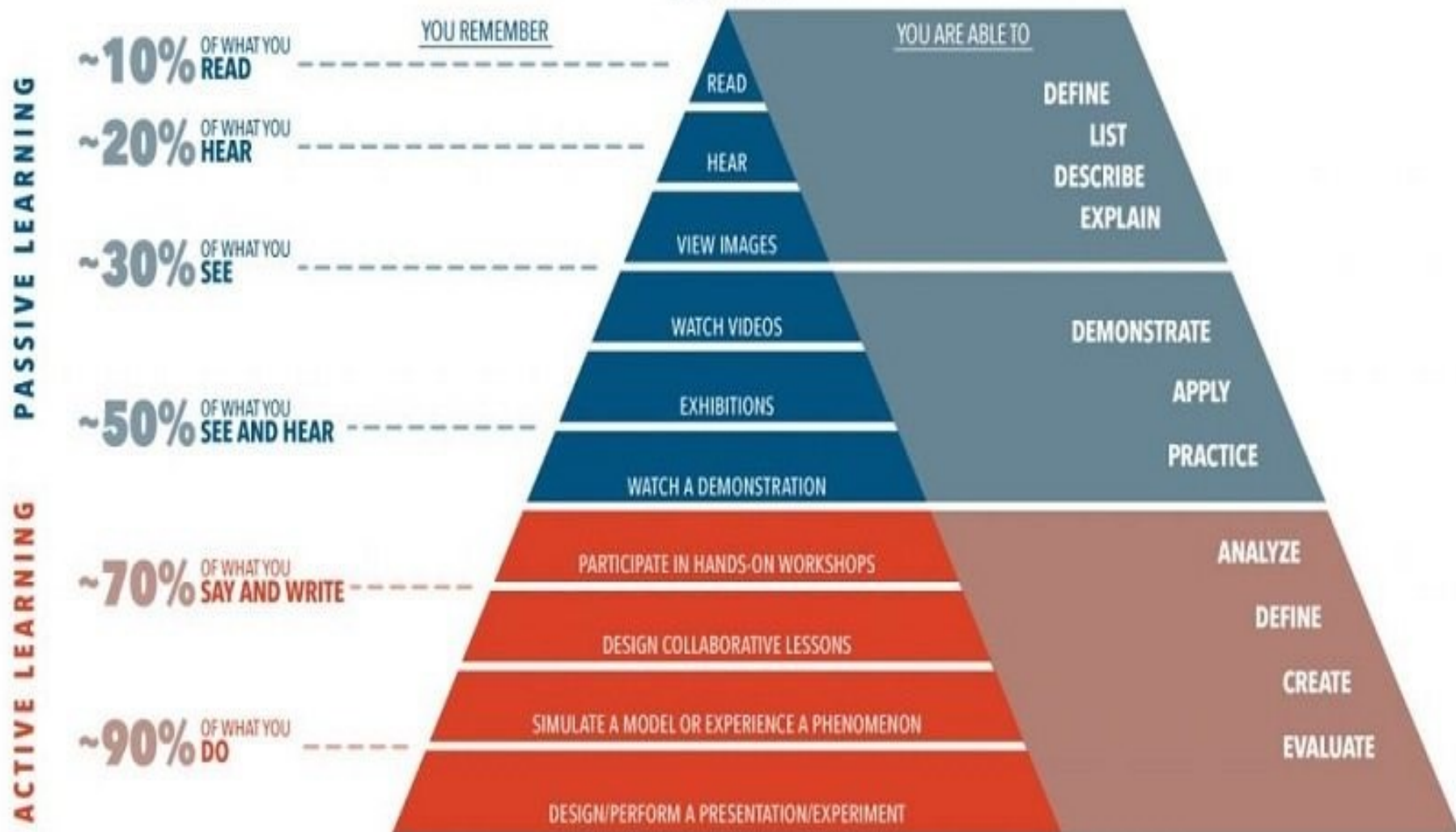
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Semester Gasal 2023/2024

S1 Teknik Informatika – Universitas Trunojoyo Madura (UTM)

CONE OF EXPERIENCE

EDGAR DALE



<https://elearningindustry.com/>

SOFT SKILLS FOR STUDENTS

6 SKILLS TO HELP YOU SUCCEED



START

1 Problem Solving

Do you see problems as interesting opportunities? Problem solvers anticipate potential stumbling blocks and act to prevent them or mitigate their effects.



TIP: You don't always need to start by trying to solve the problem. First, aim to understand the root of the problem.



2 Creativity

Are you able to think outside of the box even when you're not asked to? Everyone has creative abilities. Creative thinking skills help you to look at problems and situations from a fresh perspective.

3 Communication

Are you an effective communicator and active listener? Communication skills will help you understand others and be better understood in return. This can help make each interaction you have in both your work and social life a more positive experience.



4 Time Management

Are you an organized person who meets deadlines? Good time management skills enable you to do more in less time, helping you reduce stress and maintain a better work-life balance.



TIP: Prioritize your tasks and delegate a time limit to how long you spend on each one.

5 Stress Management

Can you identify and tackle your stress triggers? Being able to manage stress allows you to break the hold it can have on your life. This will make you happier, healthier, and more productive in return.



TIP: Set limits and learn to say no to requests that would create excessive stress in your life.

6 Teamwork

Are you a team player who collaborates well with others? Teamwork requires leadership and goal orientation. Whether in school or a job, the better you work within a team, the better your work will be!



TIP: Always clarify roles, responsibilities and accountability with your team members.

END

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You won't always be a priority to others,
and that's why you have to be a priority to yourself.


Learn to respect yourself, take care of yourself,
and become your own support system.

Your needs matter. Start meeting them. Don't wait
for others to choose you. Choose yourself.

Jazz Zo Marcellus

Tabu Bagi Mahasiswa Teknik Informatika

- ❖ Tidak dapat beradaptasi dengan (perkembangan) teknologi
- ❖ Tidak dapat membaca atau memahami instruksi
- ❖ Tidak dapat membuat program



**LEARNING IS NEVER
DONE WITHOUT
ERRORS AND DEFEAT**

VLADIMIR LENIN

PICTUREQUOTES.com



PICTUREQUOTES

Sub Pokok Bahasan

- PHP
- Instalasi Software
- Aktivasi Modul
- Pengujian Instalasi
- Dasar PHP:
 - Struktur dan Sintaks
 - Contoh Sederhana
 - Penggunaan Komentar
 - Penulisan Kombinasi HTML dan PHP
 - Penggunaan Echo
 - Penggunaan *Concatenation*
 - Penggunaan Tanda Petik
- Langkah Operasional
- Variabel dan Tipe Data

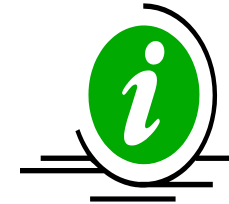
PHP



- Merupakan *server-side scripting language*
- Mirip dengan sintaks C, Java dan Perl
- Sejarah:
 - ❑ Dikembangkan oleh Rasmus Lerdorf pada tahun 1994
 - ❑ Sekarang dikelola oleh PHP Group (<http://php.net/>)
- *Cross Platform*
 - ❑ (*Free*) untuk Windows, Linux, Mac dan Unix
 - ❑ Dapat bekerja dengan berbagai *web server* (contoh: IIS, Apache) dan sistem basisdata (contoh: MySQL, MS SQL Server, Oracle)
- Dokumentasi: <http://www.php.net/docs.php>

Instalasi Software

Dibutuhkan	Spesifikasi	
<i>Web Server</i>	Apache	Software Package: XAMPP
<i>PHP Engine</i>	Minimal versi 7	
<i>Database Server</i>	MySQL/MariaDB	
<i>Text Editor</i>	Notepad++	
<i>Web Browser</i>	Google Chrome	



X: Cross-Platform
A: Apache
M: MySQL
P: PHP
P: Perl

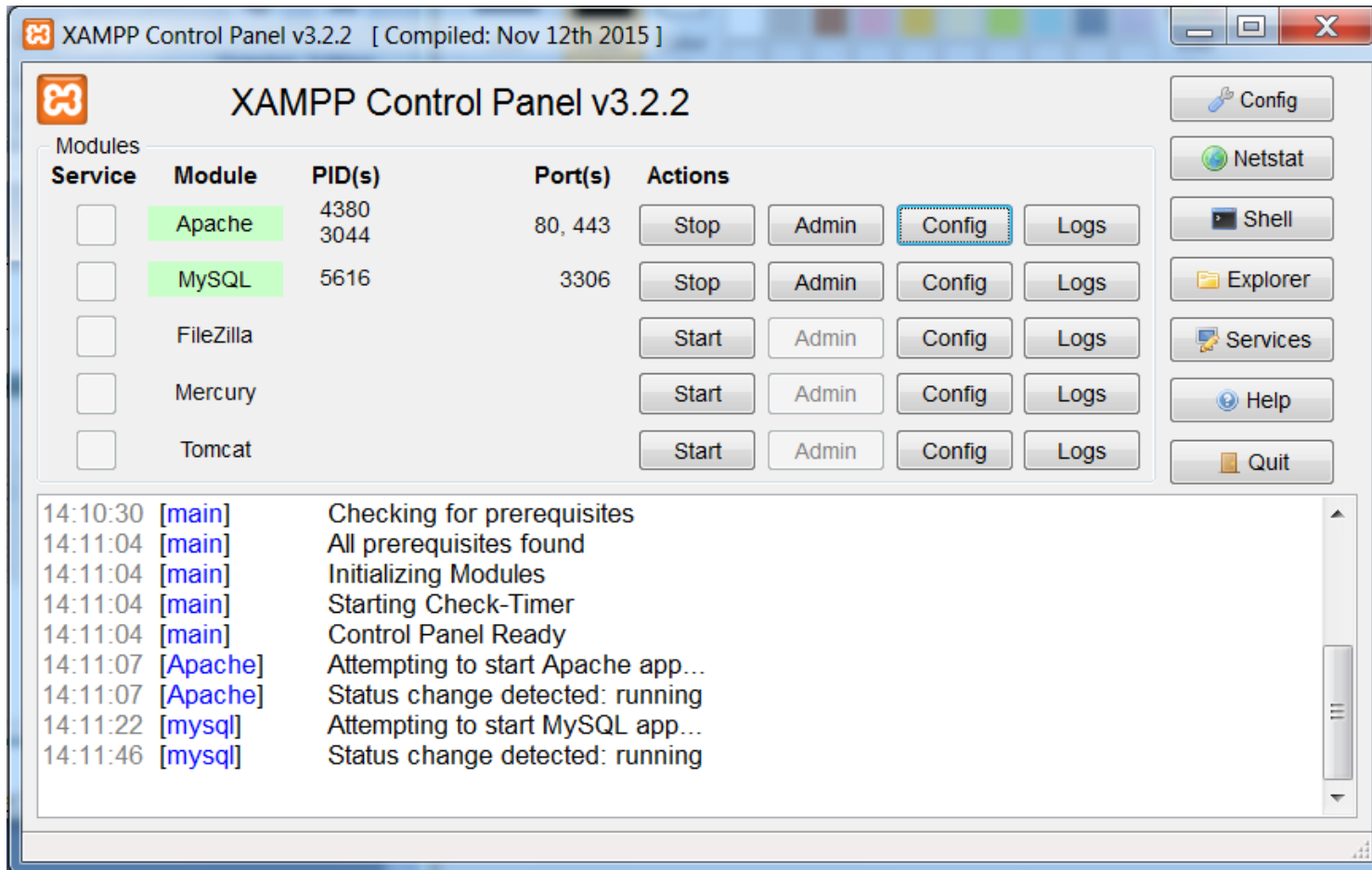
NOTE: Cek dokumen *workshop* Pertemuan 2 (Bagian I)



- XAMPP bukanlah satu-satunya (paket) *software* untuk pengembangan aplikasi *web*. Contoh alternatif lain: LAMPP, WAMP
- PHPMyAdmin bukanlah satu-satunya aplikasi untuk mengelola MySQL. Contoh alternatif lain: MySQL Workbench, SQLyog

Aktivasi Modul

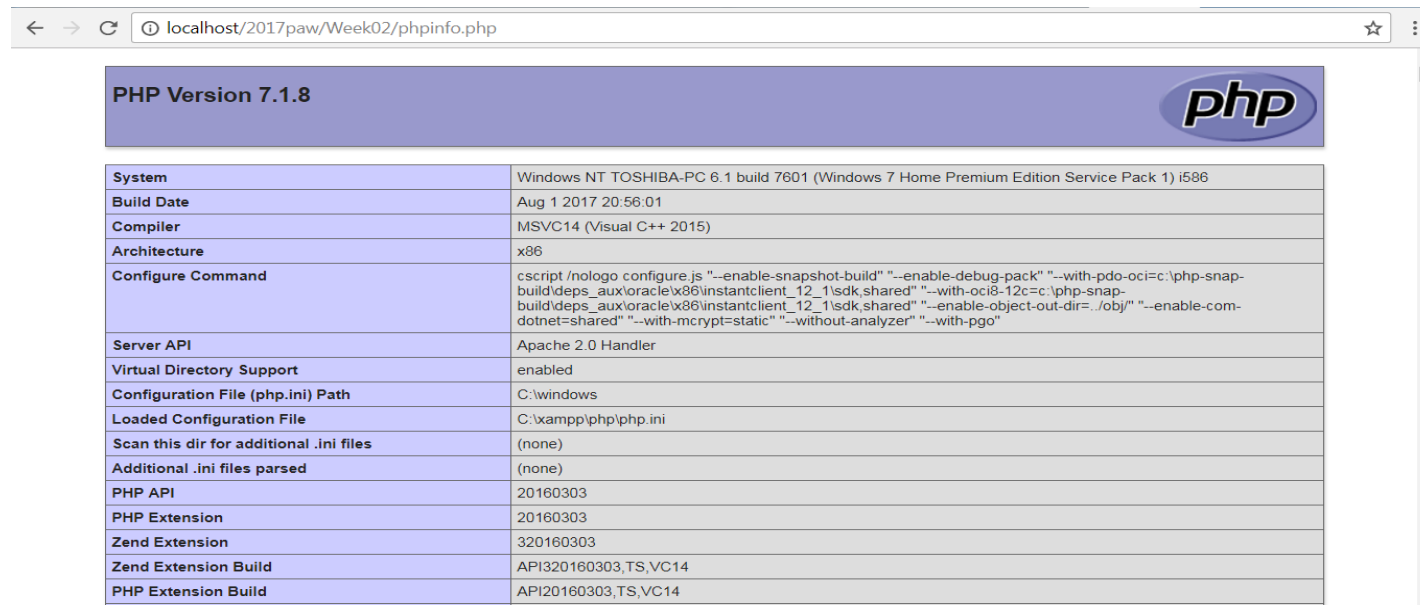
- Contoh hasil instalasi menggunakan “XAMPP for Windows 7.3.8”



Pengujian Instalasi

- Web server:
 - ❑ Melalui web browser buka URL: <http://localhost>
 - ❑ Penyimpanan data di *local drive*: <C:\xampp\htdocs\>
- PHP:

```
1 <?php
2     phpinfo ()
3 ?>
```



PHP Version 7.1.8	
System	Windows NT TOSHIBA-PC 6.1 build 7601 (Windows 7 Home Premium Edition Service Pack 1) i586
Build Date	Aug 1 2017 20:56:01
Compiler	MSVC14 (Visual C++ 2015)
Architecture	x86
Configure Command	cscript /nologo configure.js "--enable-snapshot-build" "--enable-debug-pack" "--with-pdo-oci=c:\php-snap-build\deps_aux\oracle\x86\instantclient_12_1\sdk,shared" "--with-oci8-12c=c:\php-snap-build\deps_aux\oracle\x86\instantclient_12_1\sdk,shared" "--enable-object-out-dir=.\obj" "--enable-com-dotnet=shared" "--with-mcrypt=static" "--without-analyzer" "--with-pgo"
Server API	Apache 2.0 Handler
Virtual Directory Support	enabled
Configuration File (php.ini) Path	C:\windows
Loaded Configuration File	C:\xampp\php\php.ini
Scan this dir for additional .ini files	(none)
Additional .ini files parsed	(none)
PHP API	20160303
PHP Extension	20160303
Zend Extension	320160303
Zend Extension Build	API320160303,TS,VC14
PHP Extension Build	API20160303,TS,VC14

Challenge #1

Demonstrasikan/eksekusi skrip pada *Slide #9* untuk membuktikan bahwa instalasi PHP dan Web Server telah berhasil!

Dasar PHP: Struktur dan Sintaks

Start tag: `<?php`

End tag: `?>`

- Tag lain (*not recommended*):

`<? ?>`

`<% %>`

- Sebuah file PHP umumnya berisi kombinasi skrip HTML dan PHP → bahkan skrip HTML saja juga merupakan skrip PHP yang valid

Dasar PHP: Contoh Sederhana

```
<!DOCTYPE html>
<html>
  <head>
    <title>PHP Sederhana</title>
  </head>
  <body>
    <?php
      echo "Kami sedang mulai belajar PHP";
    ?>
  </body>
</html>
```

Dasar PHP: Penggunaan Komentar

<http://php.net/manual/en/language.basic-syntax.comments.php>

```
echo 'Line #1'; // membuat komentar per baris
/* Membuat komentar
   sebanyak beberapa baris
 */
echo 'Line #2';
echo 'Line #3'; # ini juga membuat komentar per baris
```

Penulisan Kombinasi HTML dan PHP

Ekivalen

```
1 <?php
2     if ($expression)
3     {
4     ?>
5         <strong>This is true.</strong>
6     <?php
7     }
8     else
9     {
10    ?>
11        <strong>This is false.</strong>
12    <?php
13    }
14    ?>
```

Memerlukan
lebih banyak
tag PHP

```
1 <?php
2     if ($expression)
3     {
4         echo '<strong>This is true.</strong>';
5     }
6     else
7     {
8         echo '<strong>This is false.</strong>';
9     }
10    ?>
```

Memerlukan
penggunaan
fungsi `echo`
dan tanda *quote*
sebagai
penanda
karakter *string*

Penggunaan *Echo*

<http://php.net/manual/en/function.echo.php>

- Untuk mencetak/menampilkan hasil di *web browser*

```
echo 'hello world';
```

→ hello world

```
echo 42;
```

→ 42

```
echo('hello world');
```

→ hello world

```
echo 'hello', 42, 'world';
```

→ hello42world

```
$value = 19;
```

```
echo sqrt($value * 64);
```

→ 34.871191548325

Challenge #2

Buatlah agar kelima teks (pada contoh penggunaan `echo`) dapat ditampilkan pada baris yang berbeda!

Penggunaan *Concatenation*

- Untuk menggabungkan data teks atau *string* dengan menggunakan tanda titik (“.”):

```
<?php  
    echo "Hello " . " World! ";  
?>
```

Challenge #3

Modifikasi skrip hasil dari Challenge #2 agar kelima teks (pada contoh penggunaan `echo`) tetap dapat ditampilkan pada baris yang berbeda dengan menggunakan operasi *concatenation*!

Challenge #4

Buatlah **tabel perkalian** seperti gambar berikut dengan menggunakan kombinasi HTML & PHP:

Tabel Perkalian 12x12

	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Hint: Dokumen Workshop Pertemuan 2 (Bagian II.A)

Challenge #5

Modifikasi skrip hasil dari Challenge #4 agar dapat menampilkan tabel perkalian secara dinamis

Hint: Dokumen Workshop Pertemuan 2 (Bagian II.B)

Penggunaan Tanda Petik (Quote)

	Tanda petik tunggal	Tanda petik ganda
Tanda petik tunggal	<code>echo 'Today is Paul\'s birthday';</code>	<code>echo "Today is Paul's birthday";</code>
Tanda petik ganda	<code>echo '<p class="heading">Hello</p>';</code>	<code>echo "<p class=\"heading\">Hello</p>";</code>

NOTE: Karakter string di dalam *Single quote* tidak diproses

```
$x = 3;
```

```
$y = 7;
```

```
echo 'Multiply: ($x * $y)';
```



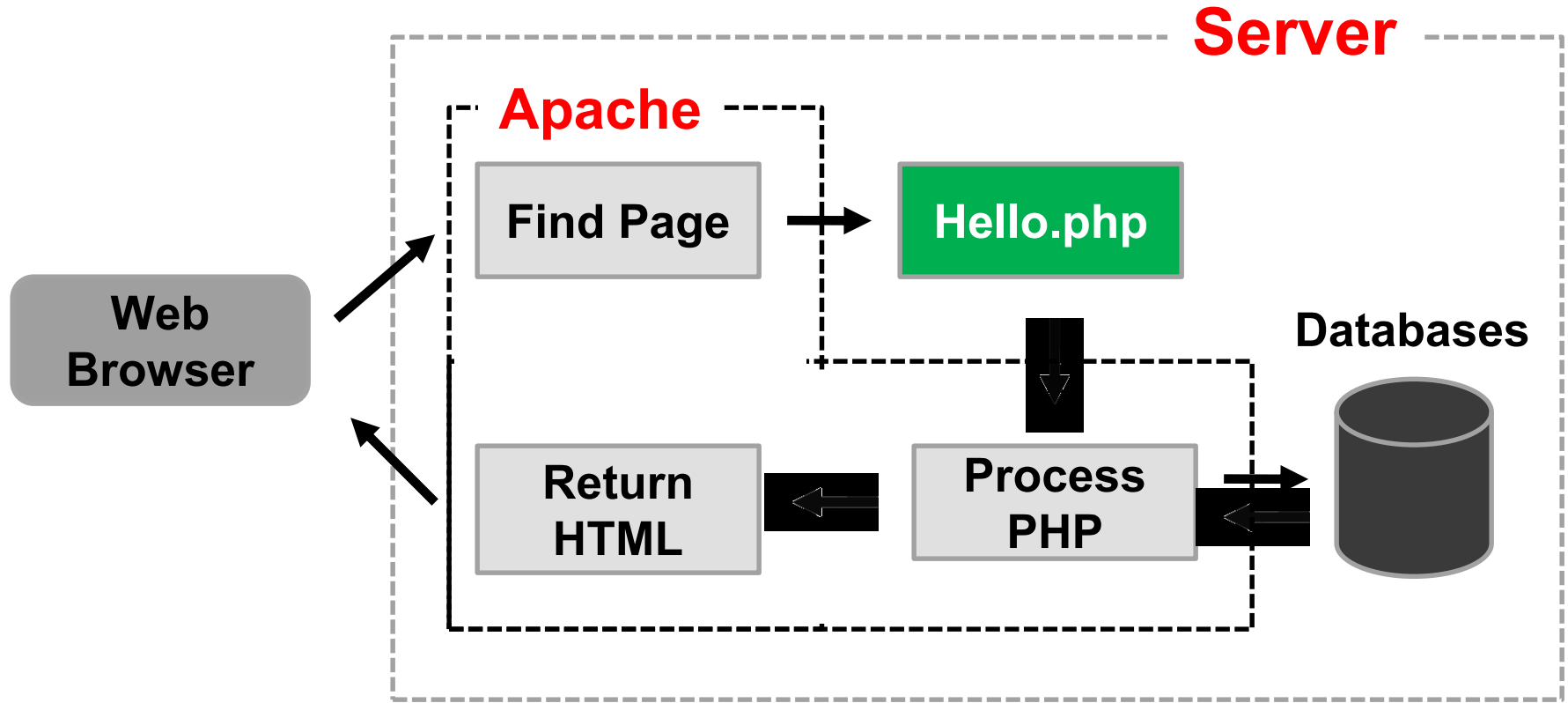
```
Multiply: ($x * $y)
```

```
echo "Multiply: ($x * $y)";
```



```
Multiply : (3 * 7)
```

Langkah Operasional



Source: <https://www.youtube.com/watch?v=dMxNzS51nAU>

Variabel dan Tipe Data

<http://php.net/manual/en/language.types.php>

<http://php.net/manual/en/language.variables.php>

● Aturan penamaan variabel:

- ☐ Variabel selalu diawali dengan simbol “\$” dan kemudian diikuti oleh nama variabel tersebut
- ☐ Nama variabel harus diawali dengan suatu huruf atau simbol “_”
- ☐ Nama variabel hanya boleh menggunakan karakter alfanumerik dan simbol “_”
- ☐ Nama variabel adalah *case-sensitive*

Type Data	Contoh
<i>Boolean</i>	<code>\$x = true;</code> <code>\$y = false;</code>
<i>String</i>	<code>\$name = 'eve';</code>
<i>Integer</i>	<code>\$age = 17;</code> <code>\$cost = \$age * 10;</code>
<i>Floating point</i>	<code>\$price = 1000.75;</code> <code>\$discount = \$price * 0.25;</code>
<i>Array</i>	<code>\$number = array(1, 3, 5, 7);</code>
<i>Null</i>	<code>\$initial = null;</code>
<i>Object</i>	<code>new stdClass;</code>

Video Perkuliahan

- Penjelasan materi kuliah dapat dilihat via YouTube (*recording* Semester Gasal 2021/2022):
<https://youtu.be/9resXHNyMmg>
- *Note: Kerjakan Challenge(s) berdasarkan slide Semester Gasal 2023/2024 (bukan berdasarkan slide yang ditampilkan dalam recording Semester Gasal 2021/2022)*



there is
ALWAYS
something to
BE GRATEFUL
for



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YOURSELF
WITH POSITIVE
PEOPLE WHO
ARE GOING TO
PUSH YOU
TOWARD
GREATNESS.**

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