Pengembangan Aplikasi WEB

Telkom University

Fakultas
Rekayasa Industri
School of Industrial Engineering
Telkom University

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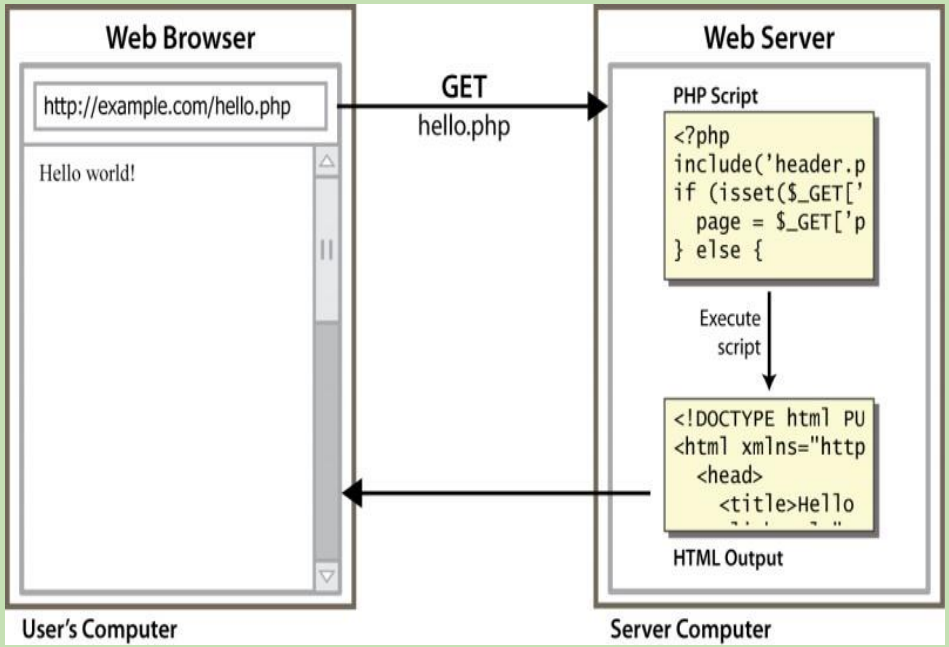
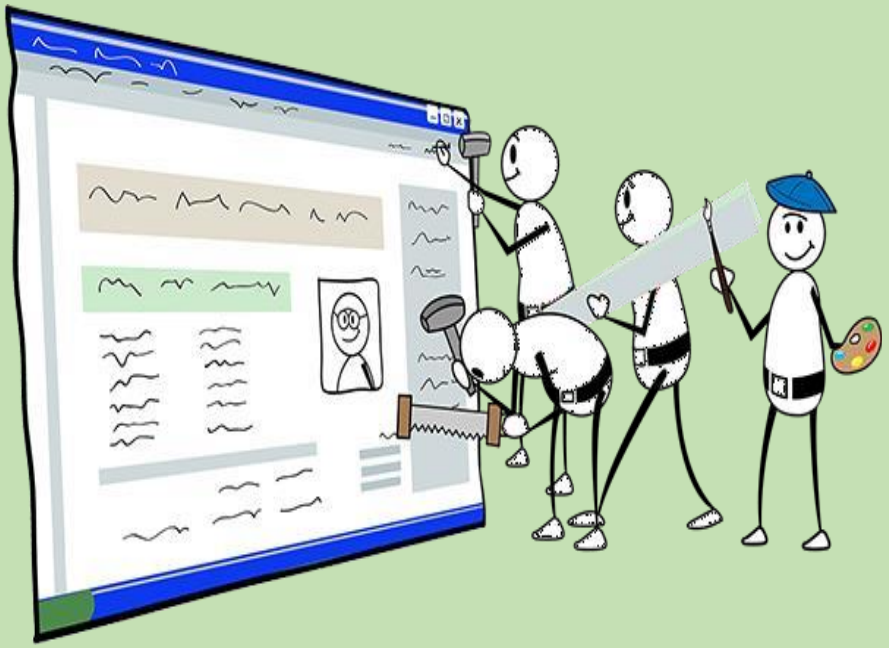
Apa yang terlintas didalam Fikiran Kalian.. ???





Script PHP disimpan sebagai plain text dalam format ASCII (American Standard Code For Information Interchange), yang memungkinkan script PHP dapat ditulis di hampir semua text editor seperti : Notepad, Wordpad, adobe Dreamweaver dll

Script PHP adalah kode yang disertakan di sebuah halaman HTML & kode tersebut dijalankan oleh server yang akan dieksekusi sebelum dikirim ke browser

Perlu diingat kembali!

Bidang Pemrograman Web

MySQL
(DDL – DML)

1. Basis Data 1-3
2. Algoritma Pemrograman

MODEL
DATABASE

PHP
(Proccesing)

1. Algoritma
2. Pemrograman Web

CONTROLLER
SERVER SIDE

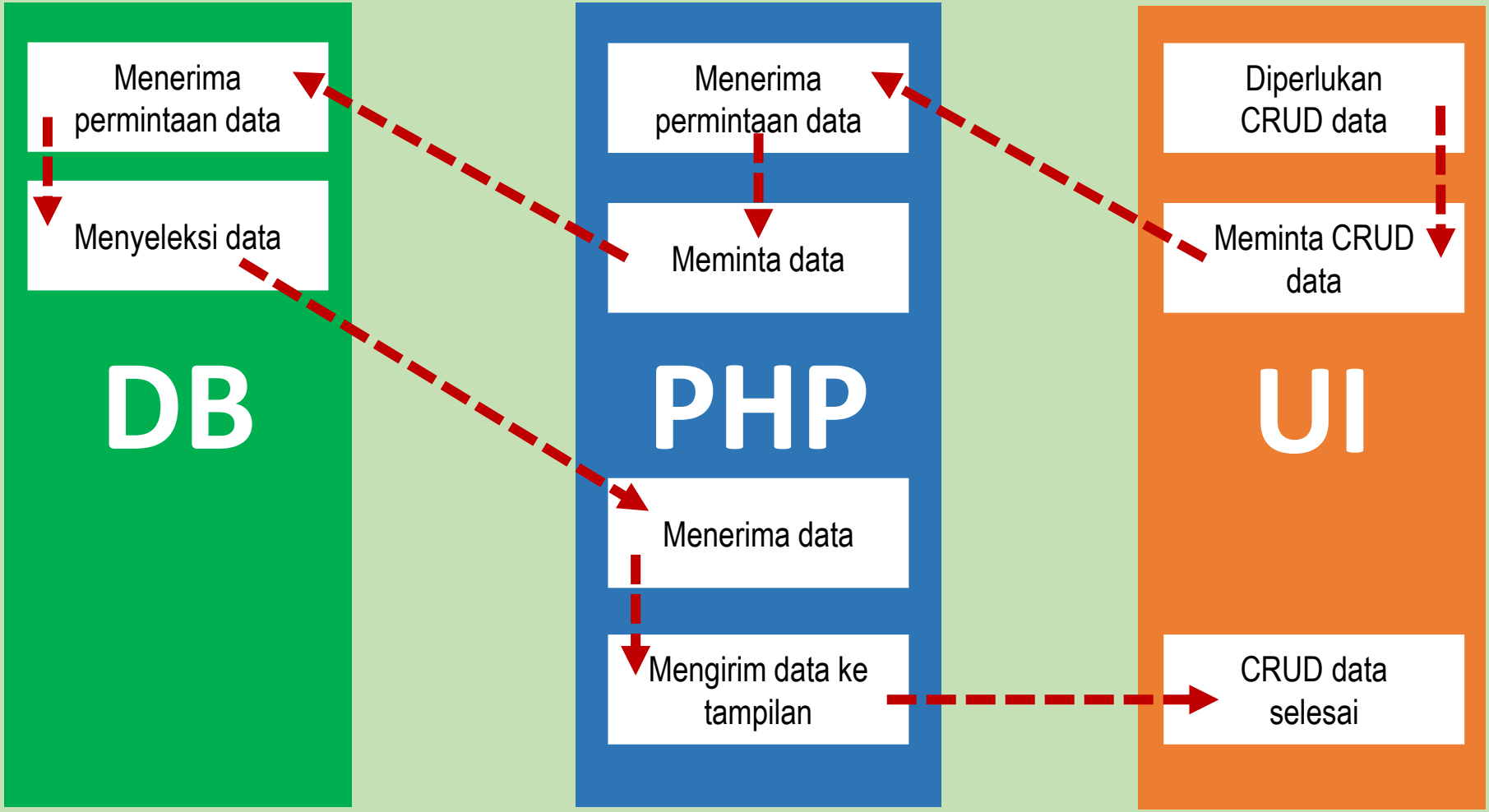
CSS	HTML	JavaScript

(User Interface)

1. IMK
2. Dasar Internet dan Desain Web

VIEW
CLIENT SIDE

ALUR LOGIKA PEMROGRAMAN WEB



Materi perkuliahan Dalam 1 Semester

Pertemuan	Materi	Tugas Teori	Praktek
1	Evolusi Web dan Teknologi Web	Quick Note	
2	Pengenalan Client Side & Dasar HTML	Quick Note	
3	CSS		Buat Halaman Web berdasarkan problem
4	Modul 1 : HTML dan CSS dengan Bootstrap		* Buat Landing Page dengan pilihan part
5	Pengenalan Server Side & Dasar PHP	Quick Note	Buat Halaman Web berdasarkan problem
6	Modul 2: Dasar PHP		kalkulator peminatan SI
7	Koneksi PHP, Database, dan proses CRUD dasar		Buat Halaman Web Dinamis berdasarkan problem
8	UTS		
9	Modul 3: Fungsi CRUD dengan PHP Native dan Database		aplikasi crud to do list
10	Modul 4: Login dan Registrasi		login & register + session + try catch
11	- Konsep MVC - Pengantar Laravel - Cara kerja Migration - Cara kerja Seed	Quick Note	Latihan Basic Laravel
12	Modul 5: CRUD Produk dengan Laravel tanpa authentication		aplikasi crud to do list (file migration,
13	- Routing, Penggunaan Github / Gitlab.		
14	Remedial Praktikum dan Laporan perkembangan Tubes		nilai progress
15	Laporan Perkembangan		
16	Presentasi TUBES		

Pengantar Server Side

1) Desain Web
2) Basis Data
3) Koneksi Basis Data MySQL
4) PHP – Algoritma Pemrograman
5) Basis Data (mysql) – PHP – Desain Web

Desain Web

a. Pendahuluan
b. HTML
c. CSS
d. Javascript

a. Desain Web

Bahasan Desain Web

CSS	HTML	JavaScript
(User Interface) 1. IMK 2. Dasar Internet dan Desain Web		

b. HTML

Pendahuluan

- Hypertext Markup Language (.HTML)
- Dokumen HTML untuk membuat tampilan utuh web dengan menggunakan tag-tag dengan fungsi masing-masing. (W3Schools, 2016 version)
- Popularitas HTML tidak menurun sejak kelahiran Web; Dengan demikian, menjadi akrab dengan versi dan varian bahasa itu penting. (LesLie)
- HTML5 memperkenalkan elemen penataan baru yang dapat digunakan untuk membuat struktur dokumen yang agak canggih. (LesLie)

b. HTML

Structure

```
<html>

  <head>

    <title>Page title</title>

  </head>

  <body>

    <h1>This is a heading</h1>

    <p>This is a paragraph.</p>

    <p>This is another paragraph.</p>

  </body>

</html>
```

b. HTML

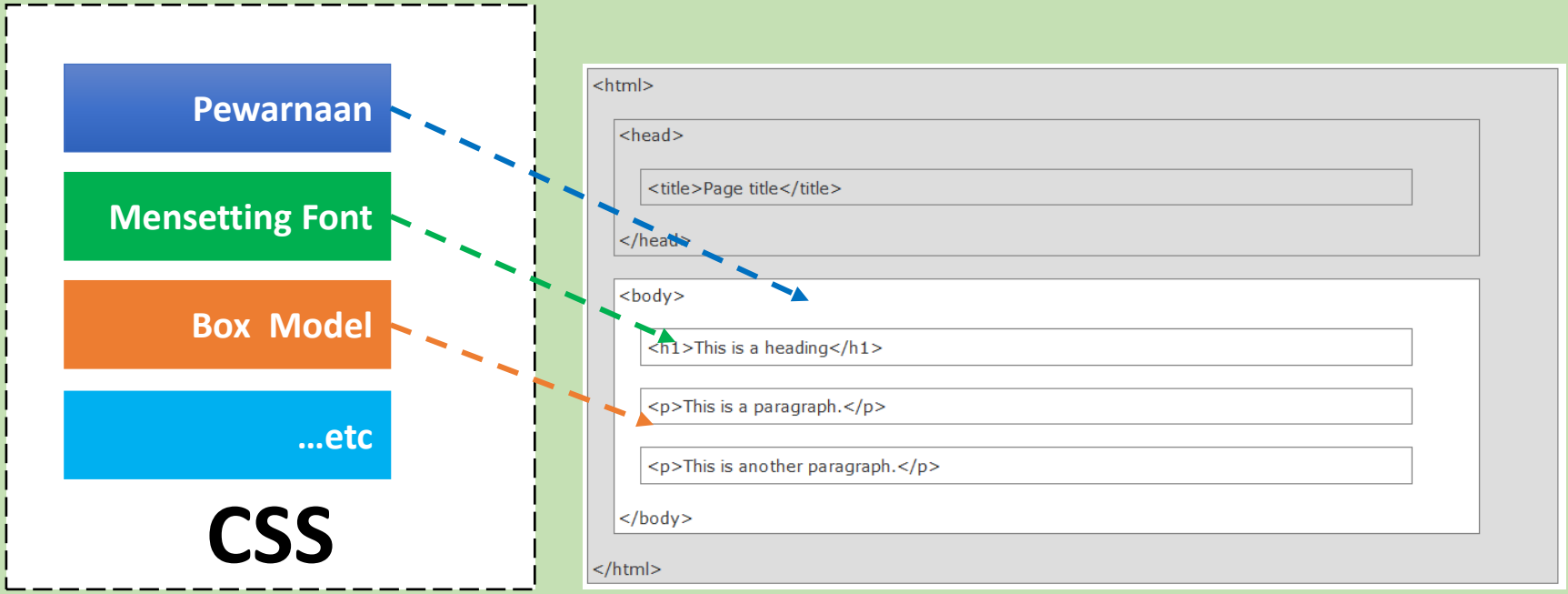
Script

```
<!DOCTYPE html>
<html>
   <head>
      <title>Page Title</title>
   </head>
   <body>
      <h1>My First Heading</h1>
      <p>My first paragraph.</p>
   </body>
</html>
```

c. CSS

Pendahuluan

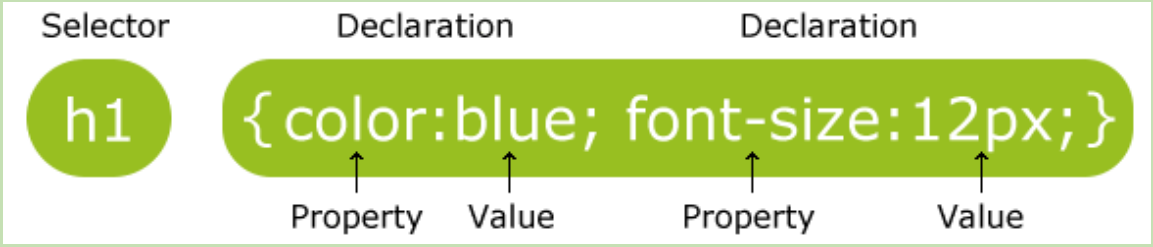
- **C**ascading **S**tyle **S**heets (.CSS)



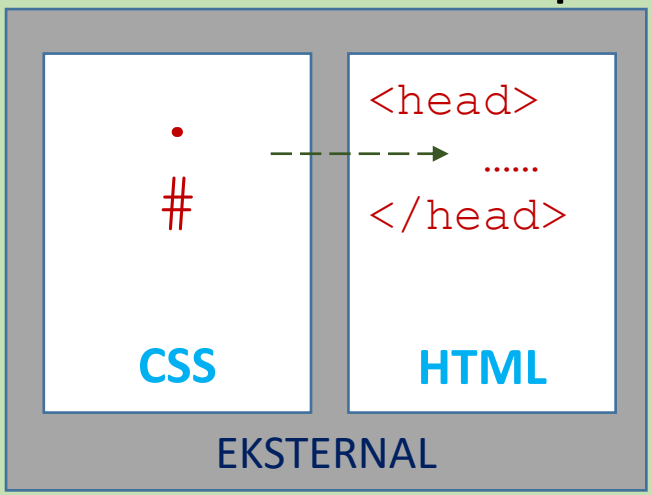
c. CSS

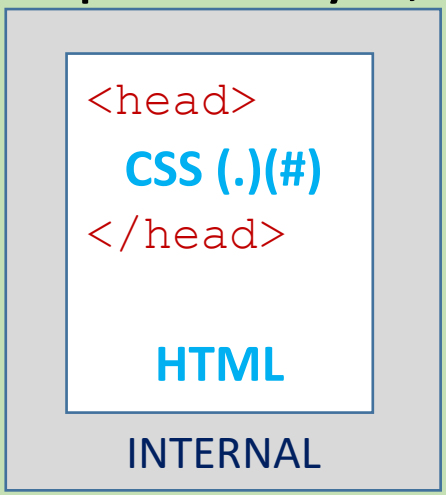
Sintaks

- Konsep:



- Selector id (#) dan class (.)
- Berdasarkan penempatan style, ada 3 cara:





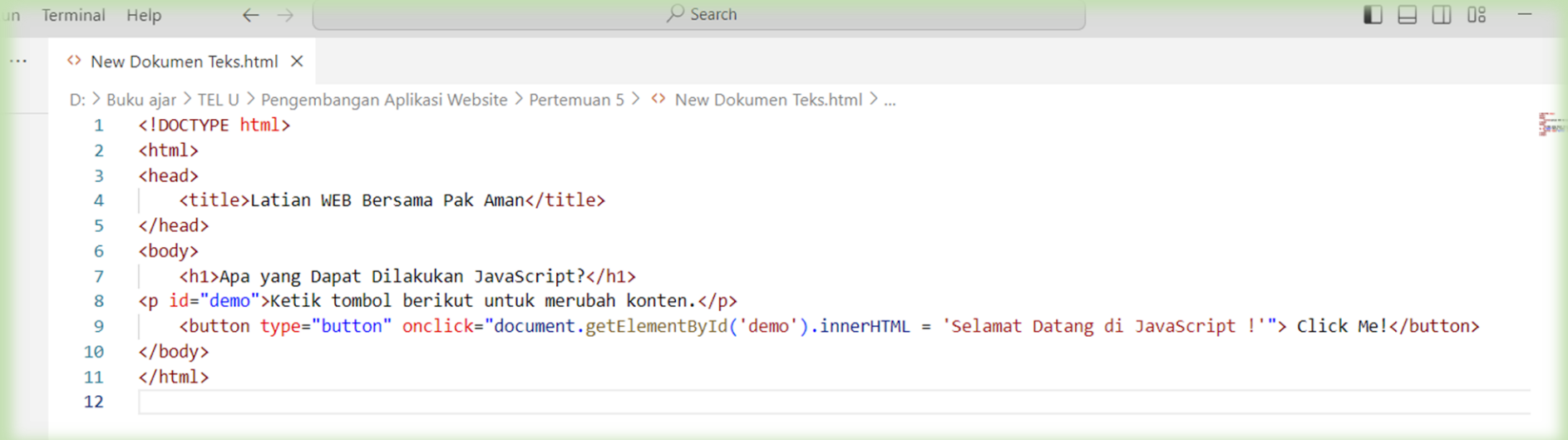
d. Javascript

Pendahuluan

- Supporting HTML and CSS:
  1) JavaScript Can Change HTML Content
  2) JavaScript Can Change HTML Attributes
  3) JavaScript Can Change HTML Styles (CSS)
  4) JavaScript Can Validate Data

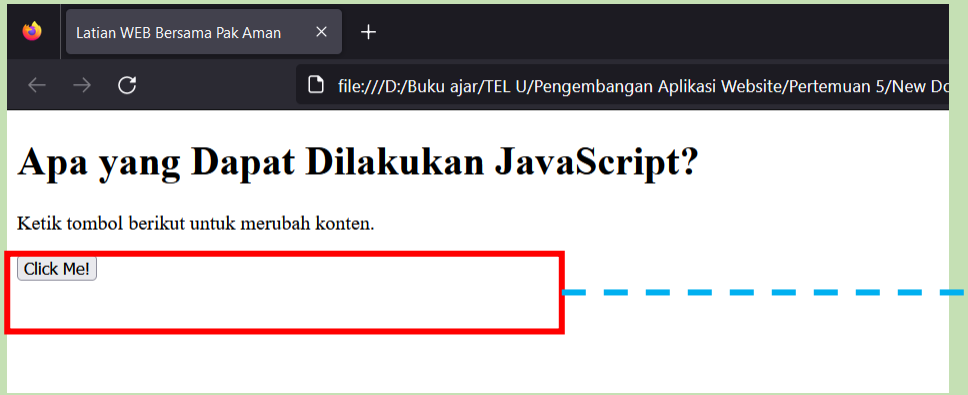
d. Javascript

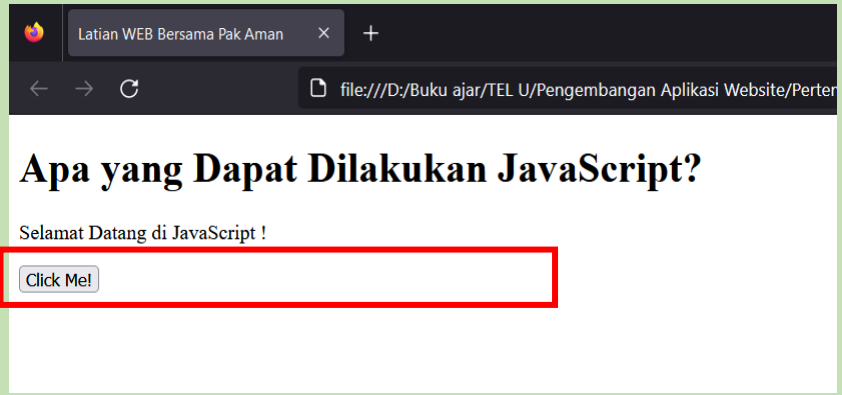
Sintaks - Change HTML Content (1)



d. Javascript

Sintaks - Change HTML Content (2)





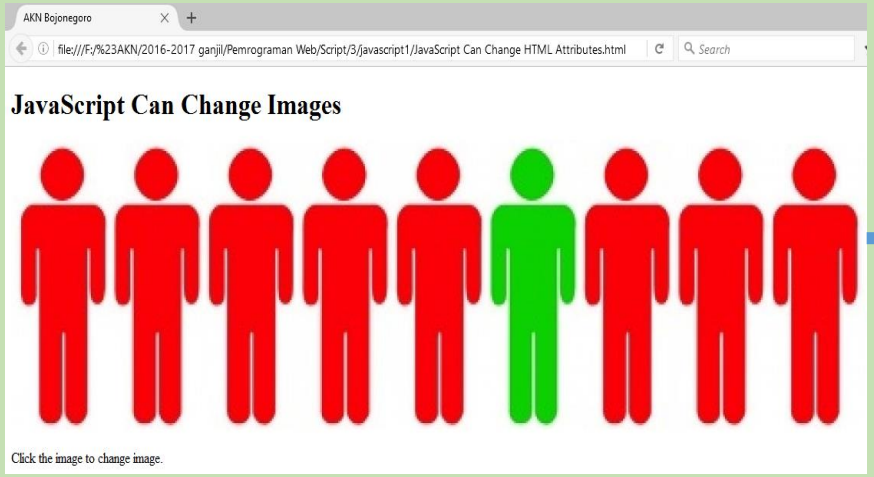
d. Javascript

Sintaks - Change HTML Attributes (1)

```
<!DOCTYPE html>
<html>
<head>
    <title>AKN Bojonegoro</title>
</head>
<body>
    <h1>JavaScript Can Change Images</h1>
    <img id="myImage" onclick="changeImage()" src="pic_bulboff.gif" width="100" height="180">
    <p>Click the image to change image.</p>
    <script>
        function changeImage() {
            var image = document.getElementById('myImage');
            if (image.src.match("bulbon")) {
                image.src = "pic_bulboff.gif";
            } else {
                image.src = "pic_bulbon.gif";
            }
        }
    </script>
</body>
</html>
```

d. Javascript

Sintaks - Change HTML Attributes (2)



d. Javascript

Sintaks - Change HTML Styles (CSS) (1)

```
<!DOCTYPE html>
<html>
<head>
    <title>AKN Bojonegoro</title>
</head>
<body>
    <h1>What Can JavaScript Do?</h1>
    <p id="demo">JavaScript can change the style of an HTML element.</p>
    <script>
    function myFunction() {
        var x = document.getElementById("demo");
        x.style.fontSize = "25px";
        x.style.color = "red";
    }
    </script>
    <button type="button" onclick="myFunction()">Click Me!</button>
</body>
</html>
```

d. Javascript

Sintaks - Change HTML Styles (CSS) (2)

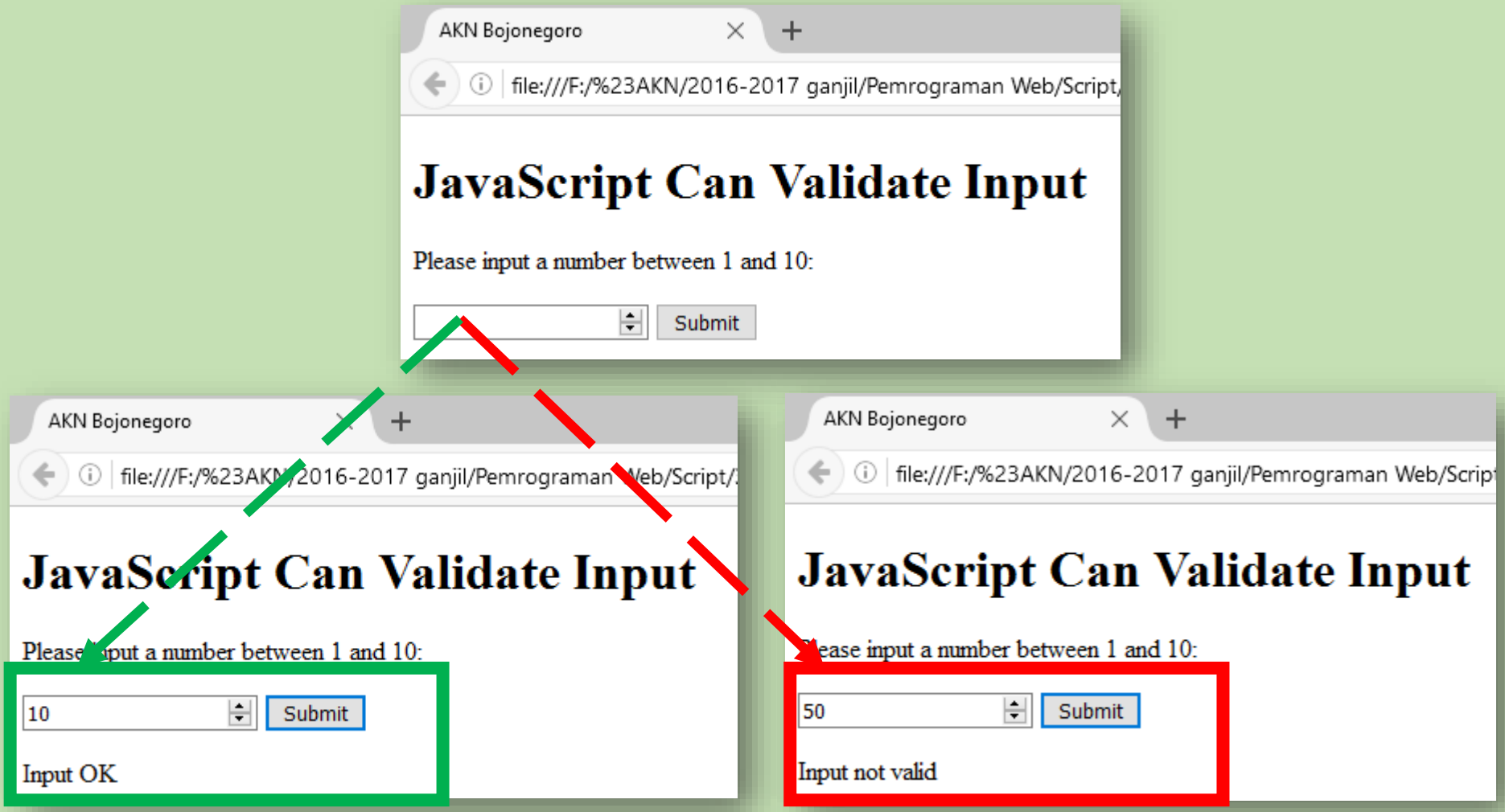
d. Javascript

Sintaks - Validate Data (1)

```
<!DOCTYPE html>
<html>
<head>
    <title>AKN Bojonegoro</title>
</head>
<body>
    <h1>JavaScript Can Validate Input</h1>
    <p>Please input a number between 1 and 10:</p>
    <input id="numb" type="number">
    <button type="button" onclick="myFunction()">Submit</button>
    <p id="demo"></p>
    <script>
    function myFunction() {
        var x, text;

        // Get the value of the input field with id="numb"
        x = document.getElementById("numb").value;

        // If x is Not a Number or less than one or greater than 10
        if (isNaN(x) || x < 1 || x > 10) {
            text = "Input not valid";
        } else {
            text = "Input OK";
        }
        document.getElementById("demo").innerHTML = text;
    }
    </script>
</body>
</html>
```

d. Javascript

Sintaks - Validate Data (2)



Basis Data

a. **Pendahuluan Basis Data**
b. **ERD**
c. **DDL**
d. **DML**

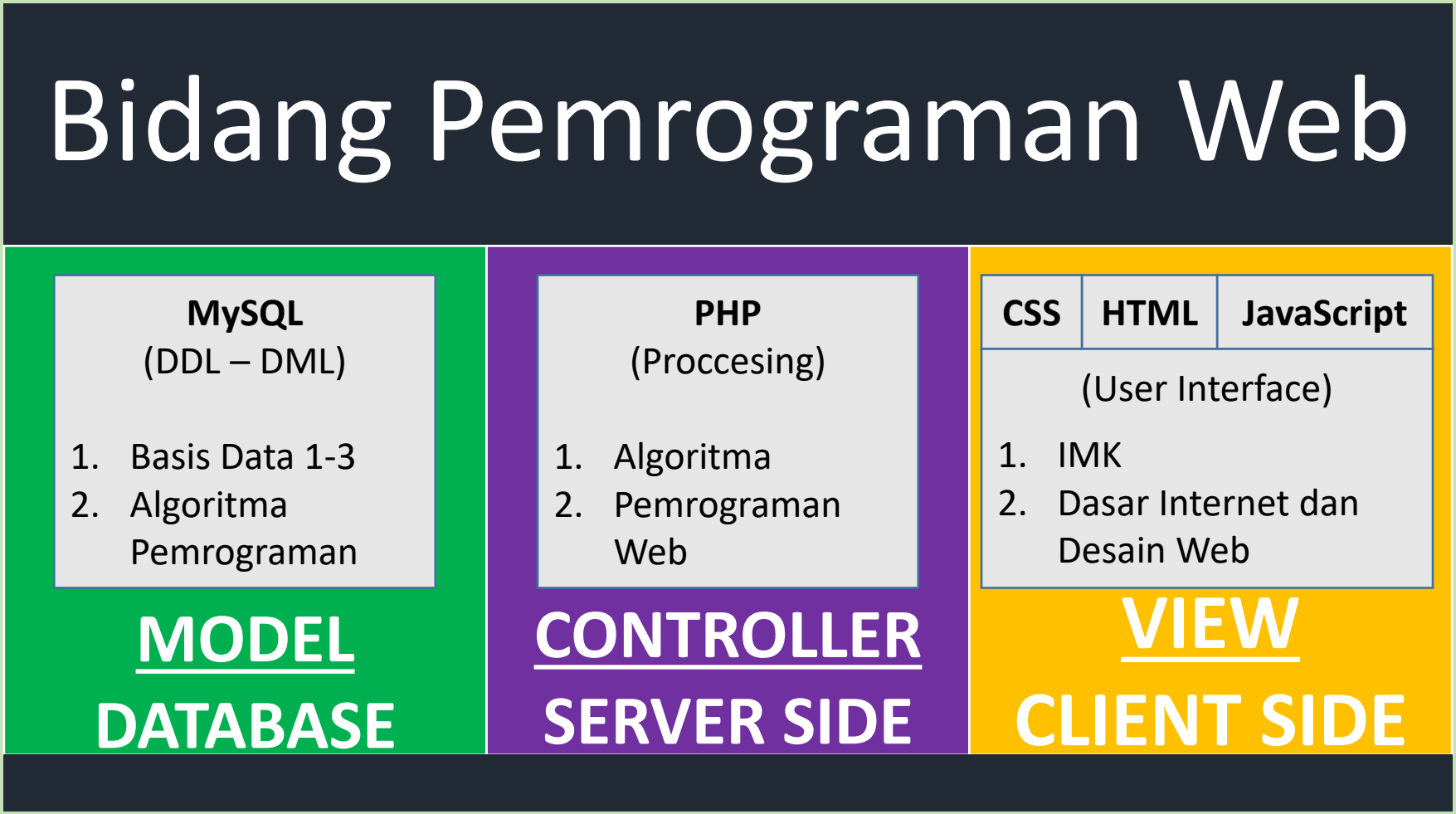
a. Pendahuluan Basis Data

Pengertian

- Database adalah kumpulan data yang terorganisir. Di MySQL Anda sering membuat database terpisah untuk setiap proyek Anda. (Andrea Tar, 2012)
- Tujuan dari database adalah untuk membantu orang melacak hal-hal, dan jenis database yang paling umum digunakan adalah database relasional. Data adalah fakta dan angka yang tercatat. (Kroenke David, 2013)
- Database adalah kumpulan data. Istilah database biasanya menunjukkan bahwa pengumpulan data disimpan di komputer. (Suehering steve, 2009)
- Basis atau **kumpulan data lengkap yang terelasi**.

a. Pendahuluan Basis Data

Posisi basis data pada pemrograman web



b. ERD

Entity Relationship Database

- Apa itu ERD?
- Mengapa butuh ERD?
- Penerapan ERD!

b. ERD

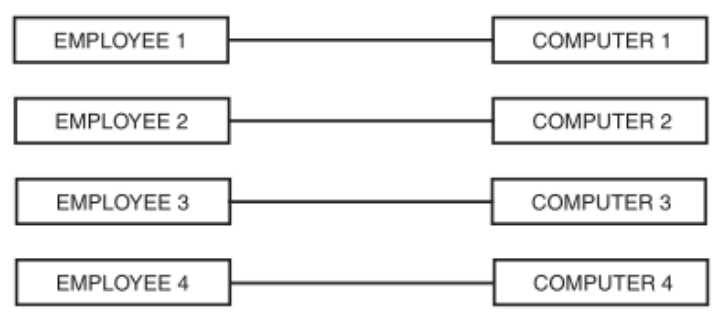
Apa itu ERD?

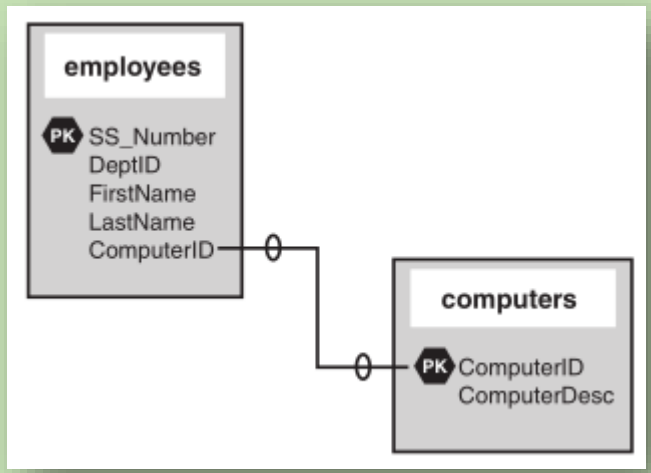
- Adalah hubungan antar tabel dalam database yang menciptakan keutuhan data.
- Ada 3 hubungan antar table: (Melani Julie C., 2004)
  1. One to many
  2. Many to one
  3. Many to many

b. ERD

Apa itu ERD? – one to one

- A key appears only once in a related table. (Melani Julie C., 2004)

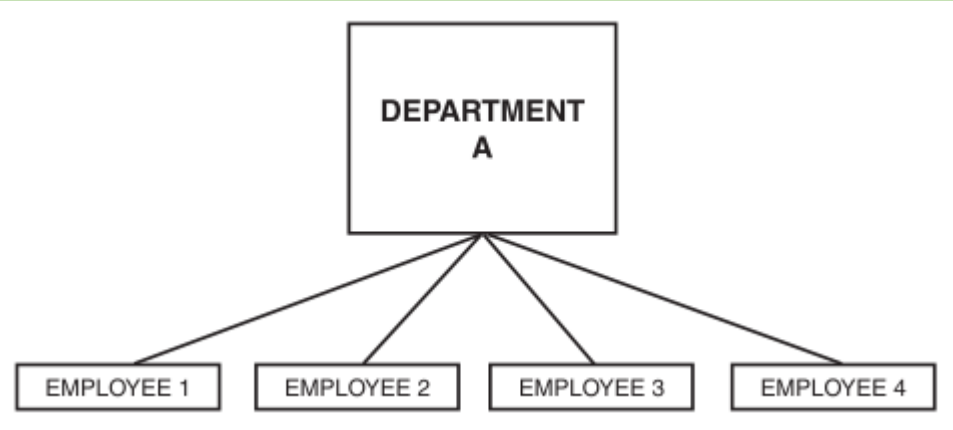




b. ERD

Apa itu ERD? – one to many

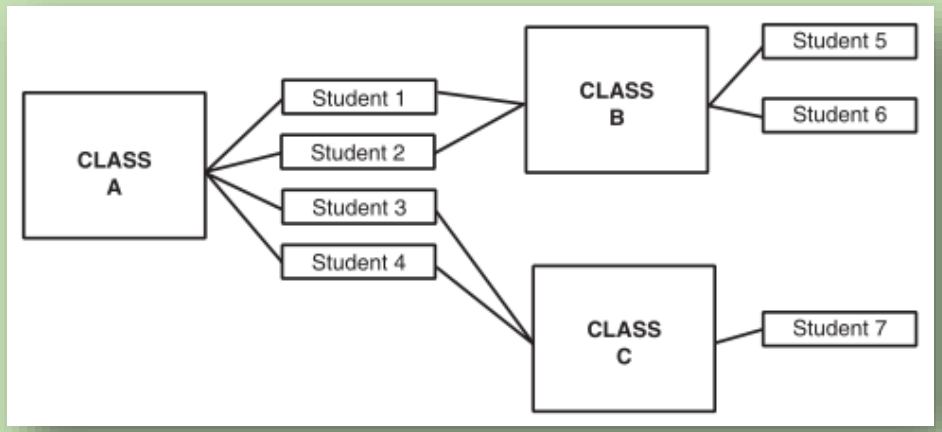
- Keys from one table appear multiple times in a related table. (Melani Julie C., 2004)

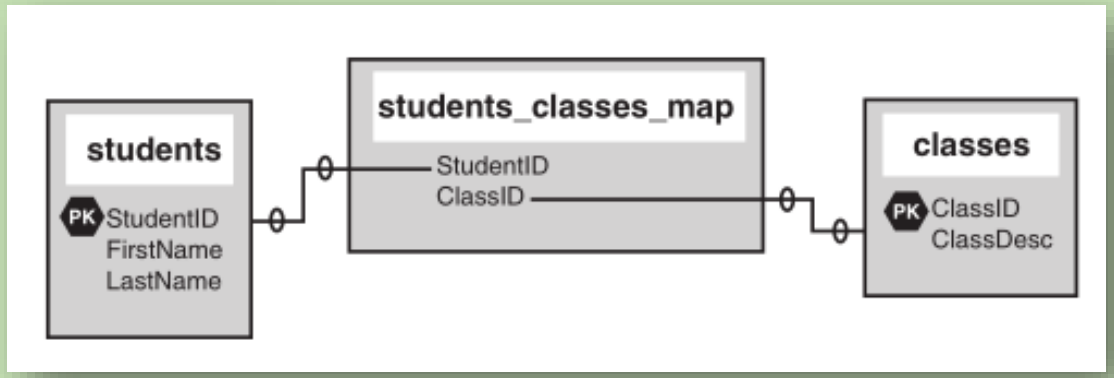


b. ERD

Apa itu ERD? – many to many

- Keys from one table appear multiple times in a related table. (Melani Julie C., 2004)

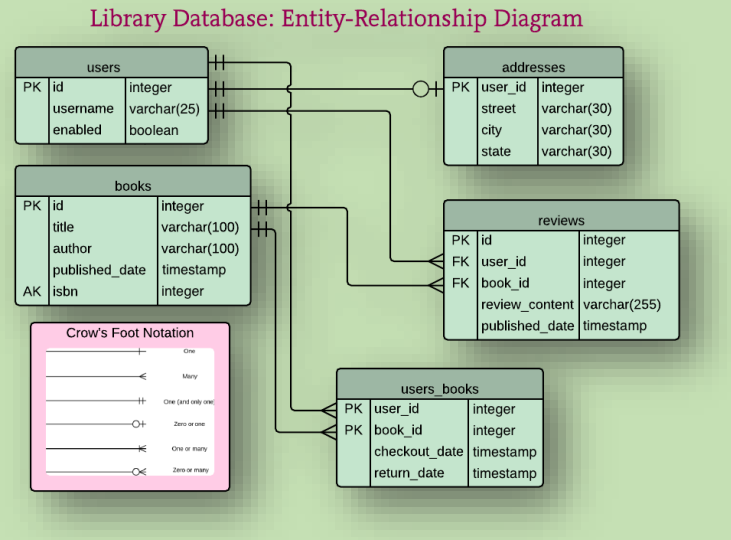




b. ERD

Mengapa butuh ERD? – logical 1

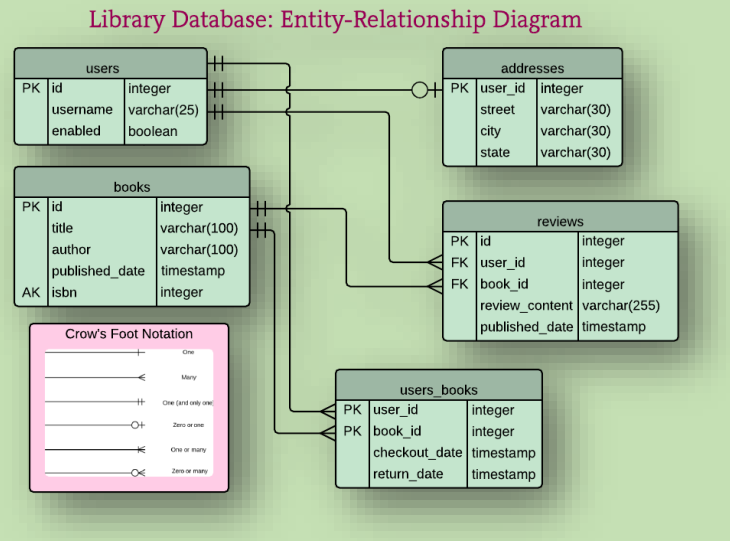
Desain database yang baik sangat penting untuk aplikasi berkinerja tinggi, seperti halnya bodi aerodinamis penting untuk mobil balap. Jika mobil tidak memiliki garis halus, maka akan menghasilkan drag and go lebih lambat. Hal yang sama berlaku untuk database. Jika database tidak memiliki hubungan yang dioptimalkan (normalisasi), database tidak akan dapat bekerja seefisien mungkin. (Melani Julie C., 2004)



b. ERD

Mengapa butuh ERD? – logical 2

Di luar kinerja adalah masalah pemeliharaan. Database Anda harus mudah dipelihara. Ini termasuk menyimpan data berulang dalam jumlah terbatas (jika ada). Jika Anda memiliki banyak data berulang dan satu contoh data tersebut mengalami perubahan (seperti perubahan nama), perubahan tersebut harus dilakukan untuk semua kemunculan data. (Melani Julie C., 2004)

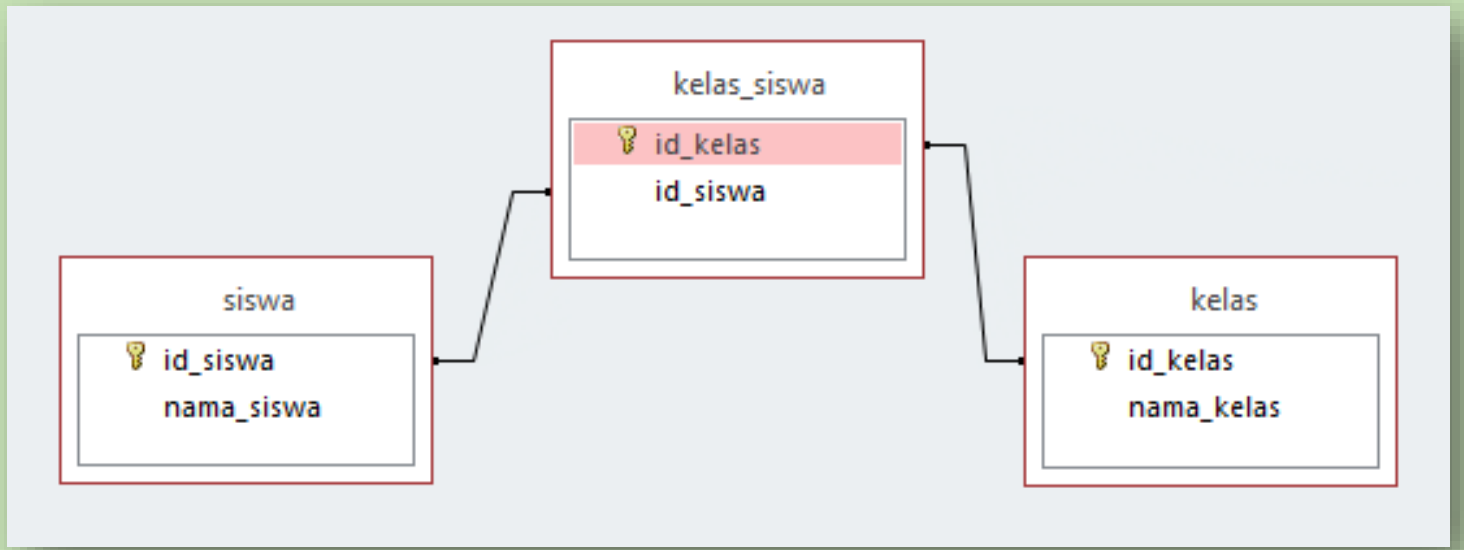


b. ERD

Penerapan ERD! – Studi Kasus 1 (1)

Sebuah sekolah dengan ketentuan:

1. Setiap siswa akan masuk dalam sebuah kelas berjenjang.

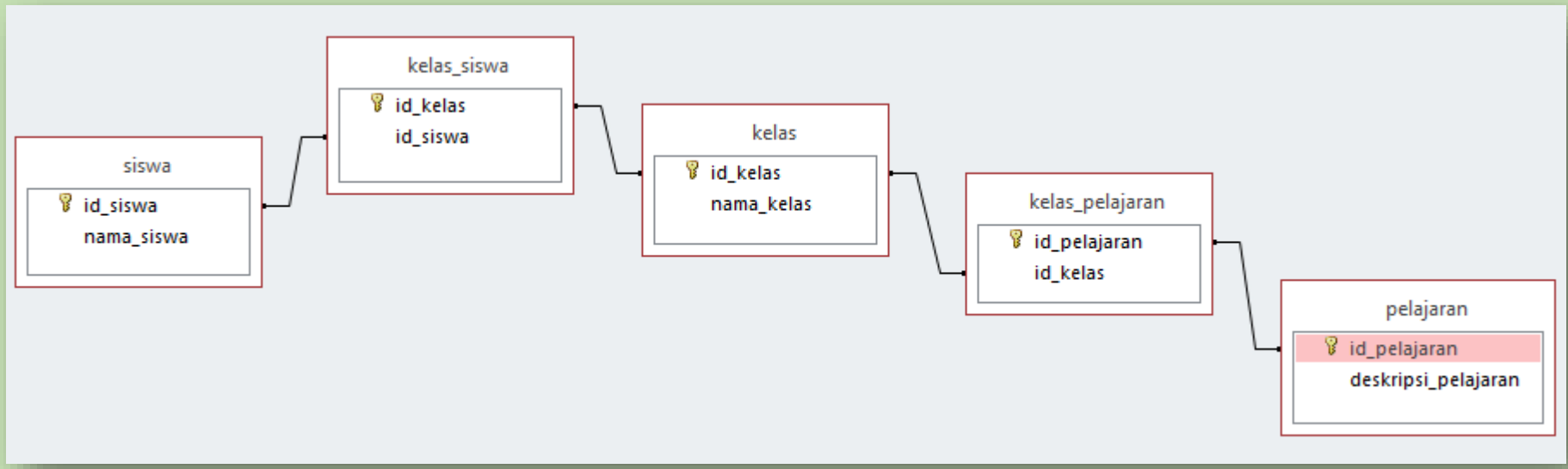


b. ERD

Penerapan ERD! – Studi Kasus 1 (2)

Sebuah sekolah dengan ketentuan:

1. Setiap siswa akan masuk dalam sebuah kelas berjenjang.
2. Setiap kelas akan memiliki pelajaran yang telah ditetapkan.

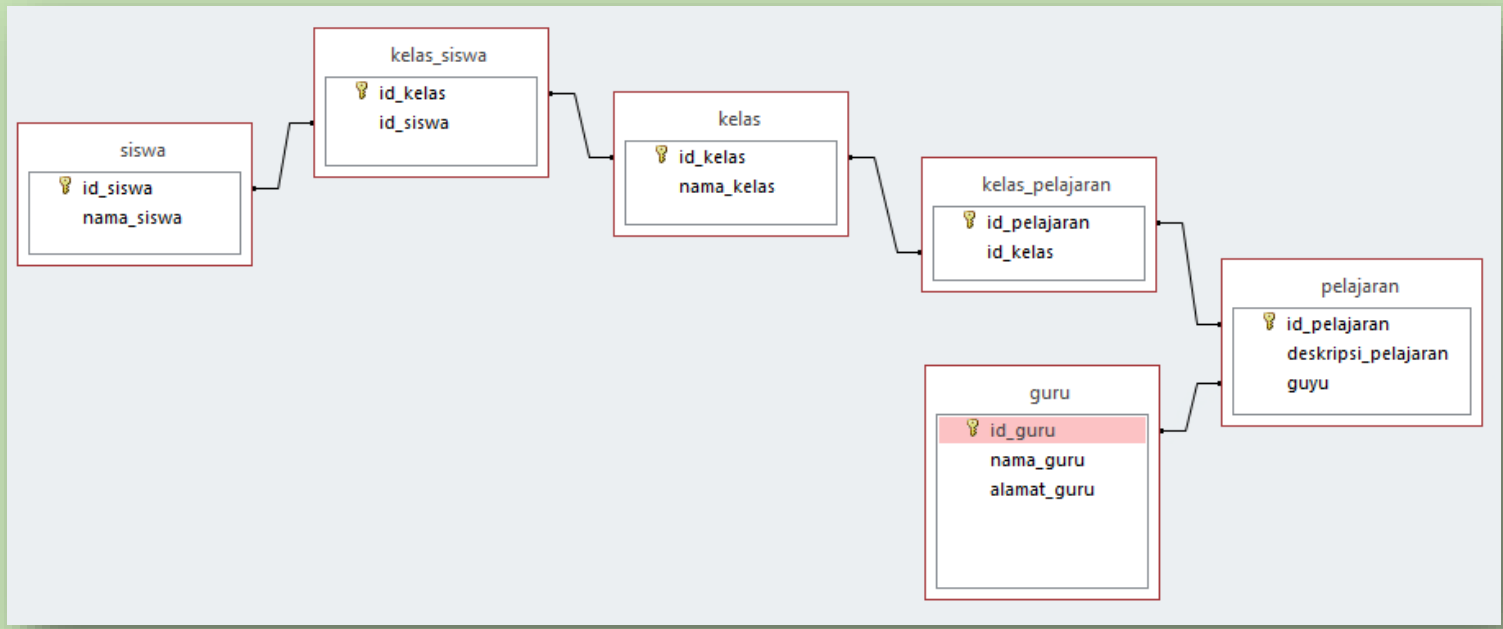


b. ERD

Penerapan ERD! – Studi Kasus 1 (3)

Sebuah sekolah dengan ketentuan:

1. Setiap siswa akan masuk dalam sebuah kelas berjenjang.
2. Setiap kelas akan memiliki pelajaran yang telah ditetapkan.
3. Setiap pelajaran diajar oleh seorang guru.



b. ERD

Penerapan ERD! – Studi Kasus 2

Sekolah Telkom akan membuat sebuah aplikasi dengan ketentuan:

- Anggota perpustakaan adalah mahasiswa, dosen, dan staff Telkom Surabaya.
- Lama waktu peminjaman buku untuk setiap anggota adalah 1 minggu.
- Jumlah maksimal peminjaman buku dalam satu waktu adalah 3 buah.
- Peminjaman dilayani oleh staff perpustakaan.
- Denda akan dikenakan jika peminjam melewati waktu pengembalian.
- Gambarkan relasi tabelnya!

b. ERD

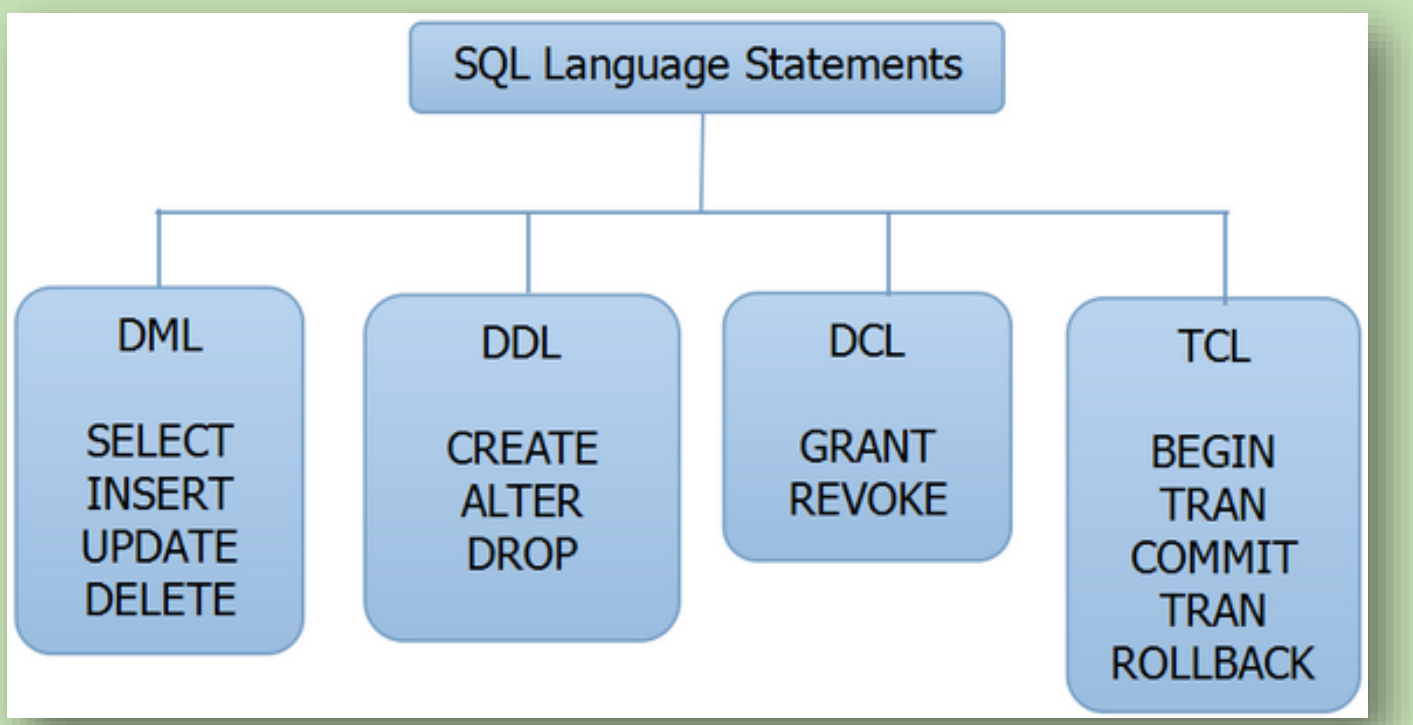
Penerapan ERD! – Studi Kasus 3

Seorang dosen akan membuatkan aplikasi bagi seluruh dosen di Telkom Surabaya untuk mengorganisir pengumpulan tugas dari kelas mahasiswanya, dimana ketentuannya adalah sbb:

- Dibutuhkan akses login untuk memasuki aplikasi tersebut, dengan menginputkan username dan password.
- Tugas harus dikumpulkan tepat waktu.
- Pengumpulan tugas dapat dalam bentuk pdf, teks, atau gambar.
- Gambarkan relasi tabelnya!

DDL-DML

Penggambaran bahasa basis data

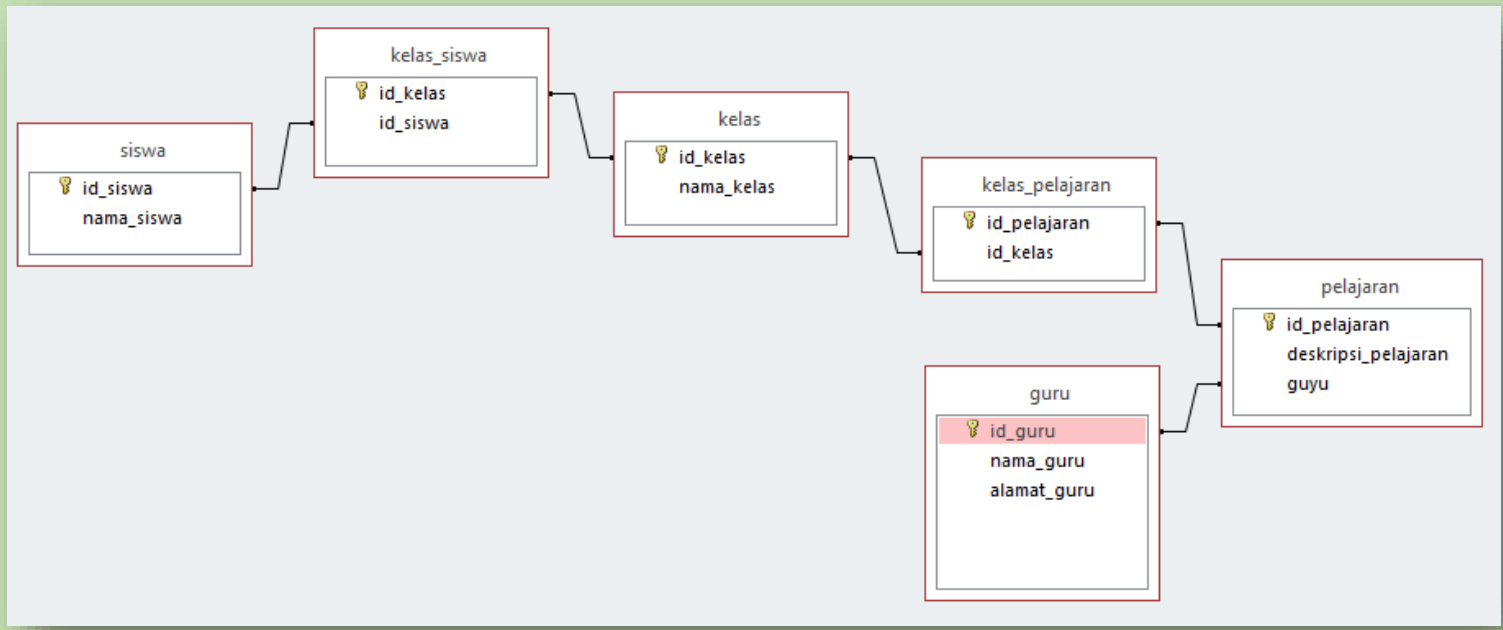


- Data Definition Language (DDL)
- Data Manipulation Language (DML)

c. DDL

Konsep

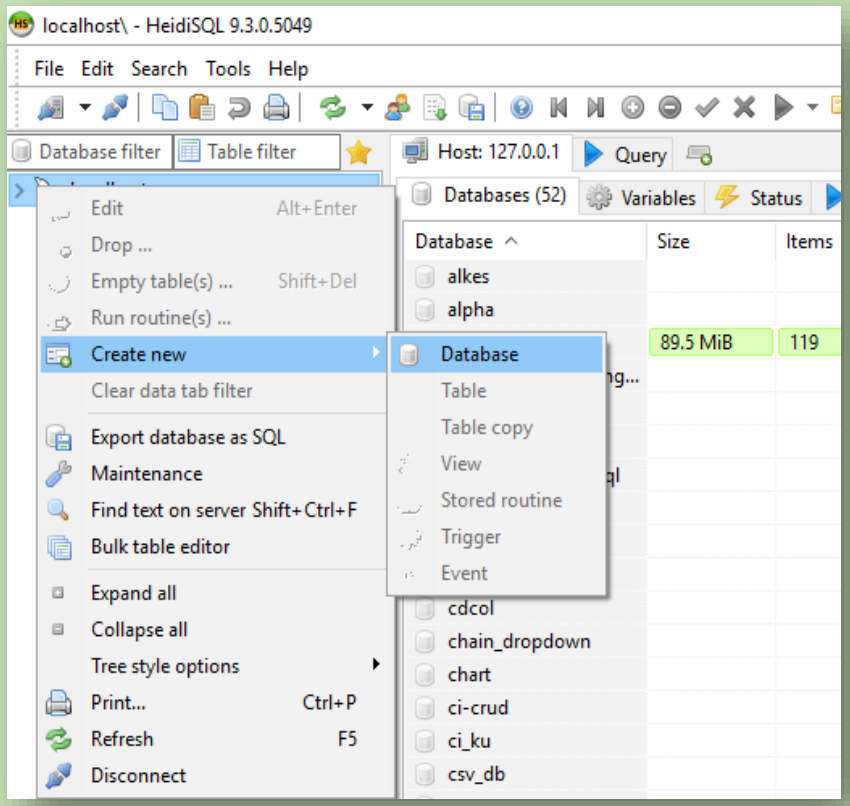
- Pengelolaan pembuatan database dan tabel.
- Dengan berdasar pada relasi table seperti gambar berikut, (nama database = sekolah)



c. DDL

Script – buat database

GUI



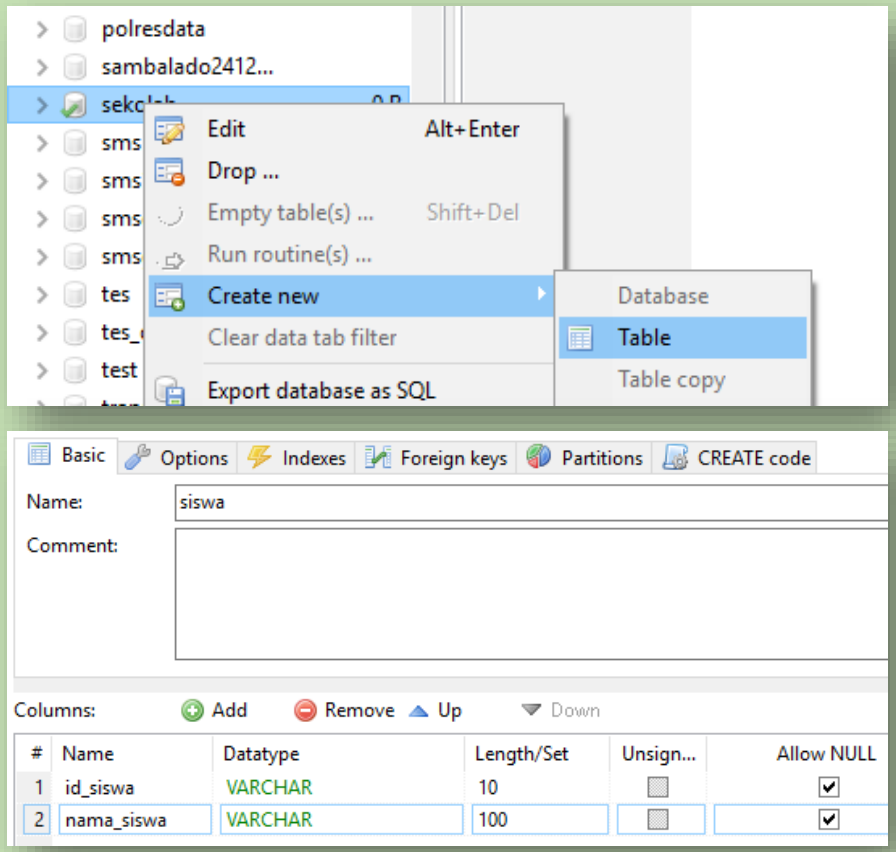
CLI

```
CREATE DATABASE
`sekolah`;

USE `sekolah`;

SHOW TABLES;
```

c. DDL

Script – buat tabel

GUI



CLI

```
CREATE TABLE `siswa` (
`id_siswa` VARCHAR(10) NULL,
`nama_siswa` VARCHAR(100) NULL
);

SHOW TABLES;
```

d. DML

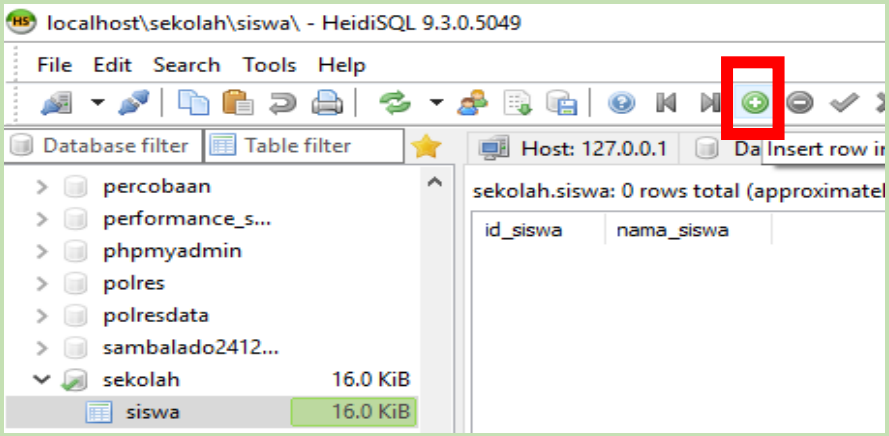
Konsep

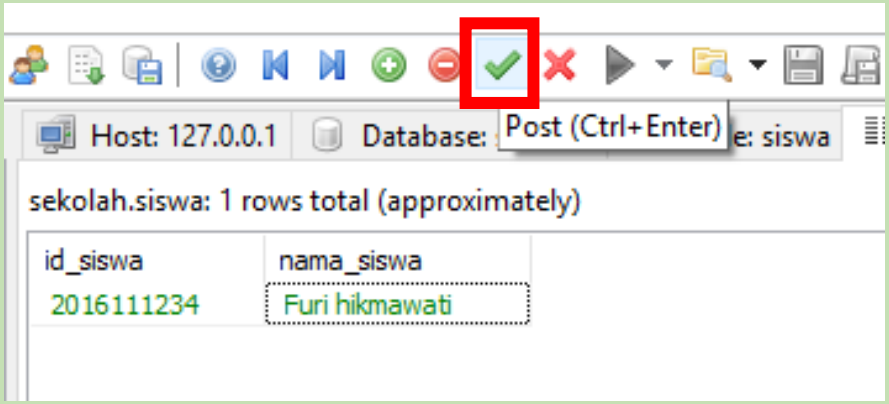
- Pengelolaan data dalam tabel.
- Bentuk CRUD:
  1. Create
  2. Read (Max, Min, Sum, dll)
  3. Update
  4. Delete

d. DML

Script – Create

GUI





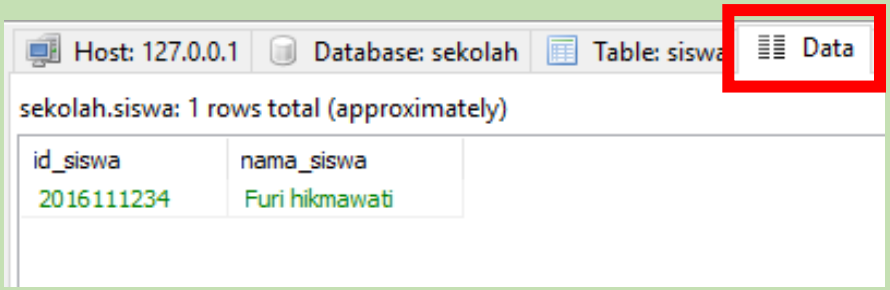
CLI

```
INSERT INTO
`sekolah`.`siswa`
(`id_siswa`,
`nama_siswa`) VALUES
('2016111234', 'Furi
Hikmawati');
```

d. DML

Script – Read

GUI



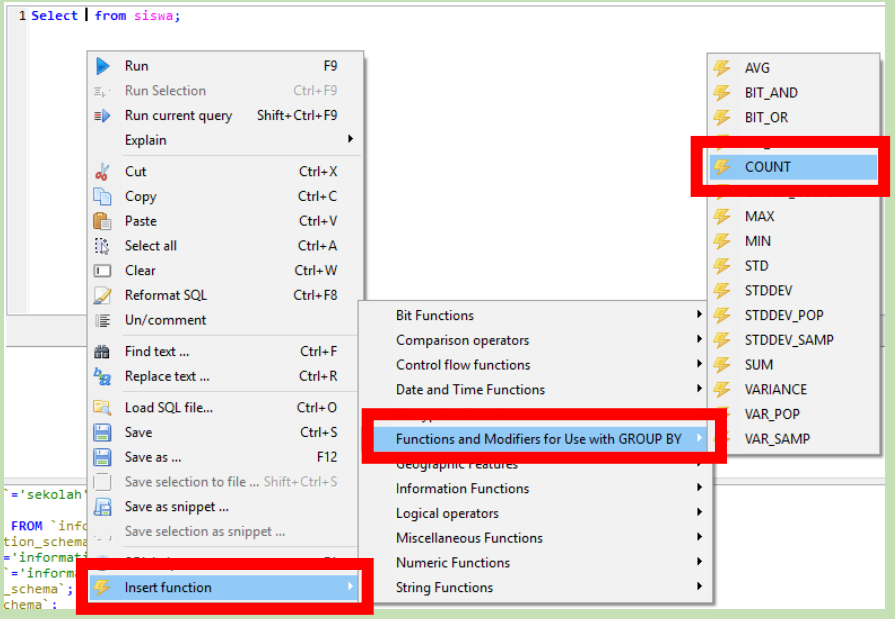
CLI

```
SELECT * FROM
`sekolah`.`siswa`;
```

d. DML

Script – Read (count)

GUI



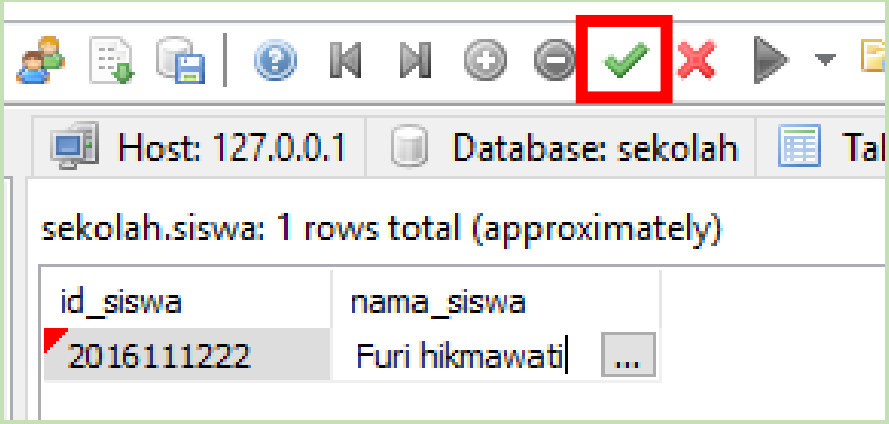
CLI

```
Select COUNT(*) from
siswa;
```

d. DML

Script – Update

GUI



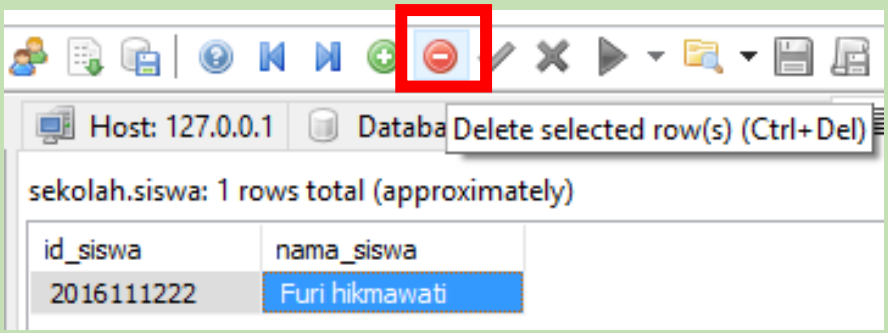
CLI

```
UPDATE `sekolah`.`siswa`
SET
`id_siswa`='2016111222'
WHERE
`id_siswa`='2016111234'
AND `nama_siswa`='Furi
hikmawati' LIMIT 1;
```

d. DML

Script – Delete

GUI



CLI

```
DELETE FROM
`sekolah`.`siswa` WHERE
`id_siswa`='2016111222'
AND `nama_siswa`='Furi
hikmawati' LIMIT 1;
```

Koneksi Basis Data MySQL

a. Logika koneksi
b. Script Koneksi

a. Logika Koneksi

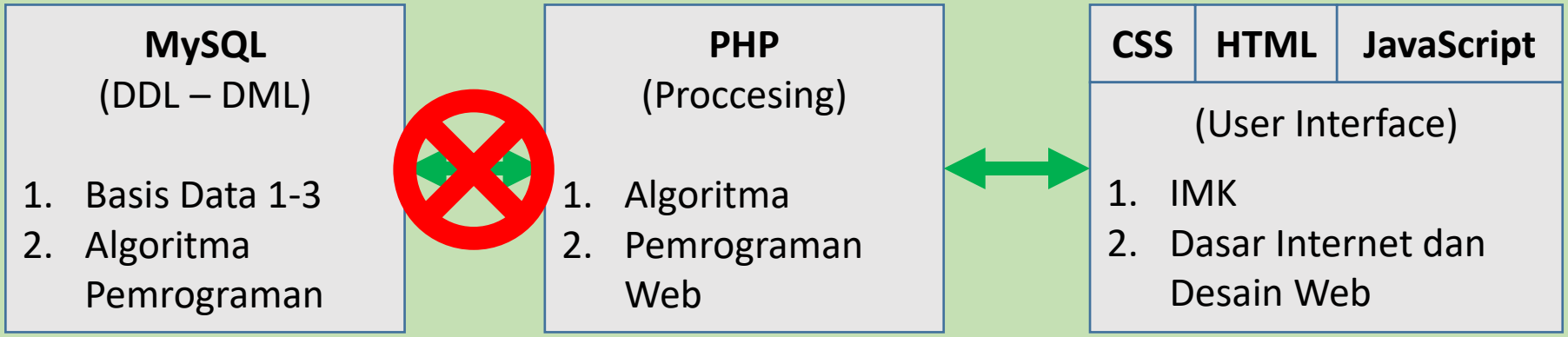
Perlu diingat kembali!

Bidang Pemrograman Web

MODEL	CONTROLLER	VIEW
DATABASE	**SERVER SIDE**	**CLIENT SIDE**
MySQL (DDL – DML) 1. Basis Data 1-3 2. Algoritma Pemrograman	**PHP** (Proccesing) 1. Algoritma 2. Pemrograman Web	**CSS** | **HTML** | **JavaScript** (User Interface) 1. IMK 2. Dasar Internet dan Desain Web

a. Logika Koneksi

- ❑ Ada Koneksi
- ❑ Tidak Ada Koneksi



b. Script Koneksi

```
// CARA 1
<?php
  $hostName     = "localhost";
  $userName     = "root";
  $passWord     = "";
  $dataBase     = "sekolah";
  mysql_connect($hostName,$userName,$passWord) or die('Koneksi
  Gagal');
  mysql_select_db($dataBase) or die('Database tidak ditemukan');
?>

// CARA 2
<?php
  mysql_connect(“localhost”,”root”,””) or die('Koneksi Gagal');
  mysql_select_db(“sekolah”) or die('Database tidak ditemukan');
?>
```

PHP – Algoritma Pemrograman

a. PHP
b. Script Dasar

a. PHP

Requirement?

Bahasa web yang harus dipahami sebelum belajar PHP:

- HTML
- CSS
- JavaScript

a. PHP

What is PHP?

- "PHP: Hypertext Preprocessor"
- Bahasa scripting open source yang banyak digunakan
- Dijalankan di server
- free to download and use

a. PHP

What is PHP file?

- Dapat berisi teks, HTML, CSS, JavaScript, dan kode PHP
- Dijalankan di server, dan hasilnya dikembalikan ke browser sebagai HTML biasa
- Extension ".php"

a. PHP

What is PHP file?

tes.php

```
<!DOCTYPE html>
<html>
<head>
	<title>Telkom Surabaya</title>
	<style>
		h1{backgroud-color:#F9A145}
	</style>
</head>
<body>
	<h1>My first PHP page</h1>
	<?php
		echo "Hello World!";
	?>
</body>
</html>
```

tes.php

a. PHP

How Can PHP Do?

- PHP can generate dynamic page content
- PHP can create, open, read, write, delete, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies
- PHP can add, delete, modify data in your database
- PHP can be used to control user-access
- PHP can encrypt data

a. PHP

How Can PHP Do?

- PHP runs on various platforms (Windows, Linux, Unix, Mac OS X, etc.)
- PHP is compatible with almost all servers used today (Apache, IIS, etc.)
- PHP supports a wide range of databases
- PHP is free. Download it from the official PHP resource: www.php.net
- PHP is easy to learn and runs efficiently on the server side

a. PHP

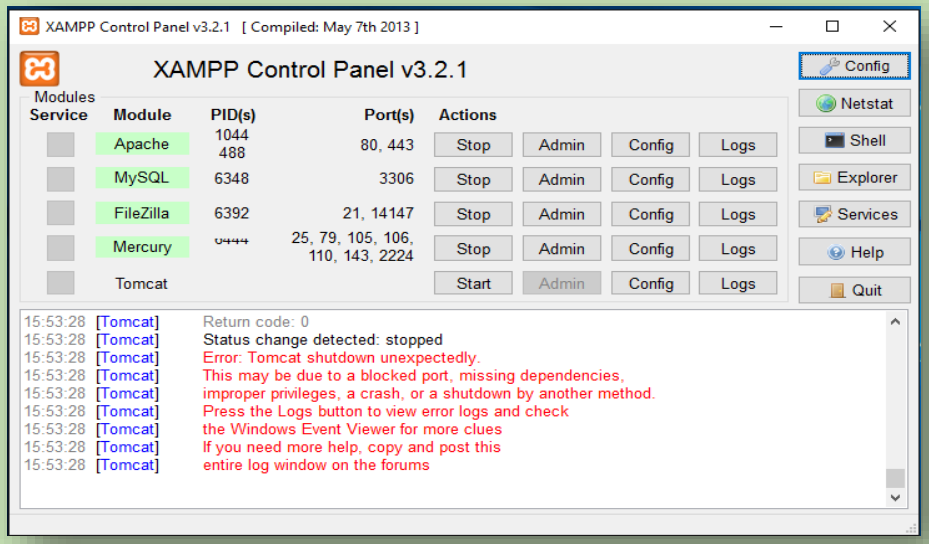
Application Ecosystem?

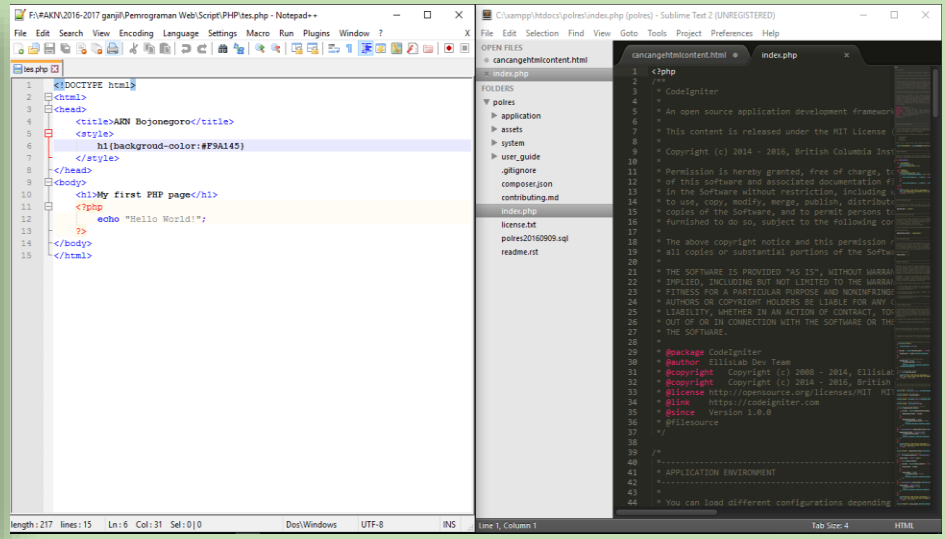
Facebook	Twitter	Joomla	Mambo	ATutor	Moodle
WA	Telegram	WordPress	cPanel	Drupal	Coppermine
WebCalendar	MyPHPNuke	PHPWebSite	TikiWiki	Wikipedia	Xaraya
b2Evolution	bBlog	Serendipity	VBPortal	TextPattern	OSCommerce
OSCNuke	Zen Cart	eGroupWare	phpGroupWare	Site@School	SugarCRM

a. PHP

Apa yang harus saya lakukan untuk mempelajari lebih lanjut?

- Install-Active-Open localserver (wamp/xampp) and Program Editor application.





b. Script Dasar

- Getting started (Simple HTML page with PHP)
- Tipe data
- Variabel
- Konstanta
- Operator
- Sequence *(Basic Logic Structure of Program)*
- Condition *(Basic Logic Structure of Program)*
- Looping *(Basic Logic Structure of Program)*

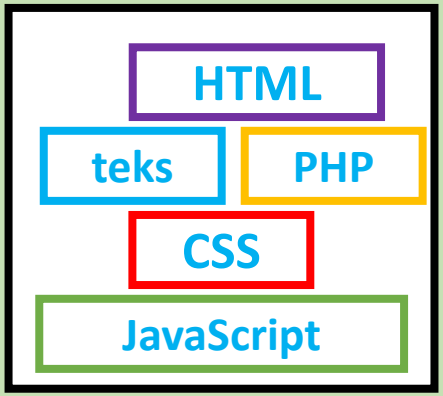
b. Script Dasar

Getting started (Simple HTML page with PHP)

1 Getting Started.php

```
<!DOCTYPE html>
<html>
<head>
            <title>AKN Bojonegoro</title>
            <style>
                        h1{backgroud-color:#F9A145}
            </style>
            <script>
            function myFunction() {
                        var x = document.getElementById("demo");
                        x.style.fontSize = "25px";
                        x.style.color = "red";
            }
            </script>
</head>
<body>
            Percobaan
            <h1>My first PHP page</h1>
            <?php
                        $hello="Hello World";
                        echo "<p id='demo'>".$hello."</p>";
            ?>
            <button type="button" onclick="myFunction()">Click Me!</button>
</body>
</html>
```

1 Getting Started.php



b. Script Dasar

Tipe data

- PHP mendukung Variabel:
  - String
  - Integer
  - Float (floating point numbers - also called double)
  - Boolean
  - Array
  - Object
  - NULL
  - Resource

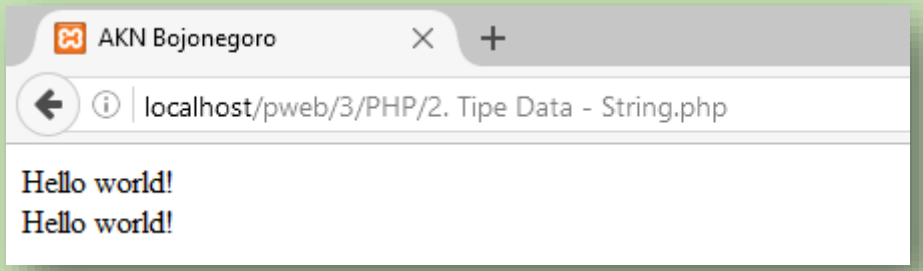
b. Script Dasar

Tipe data - String

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
        <title>AKN Bojonegoro</title>
</head>
<body>
        <?php
                $x = "Hello world!";
                $y = 'Hello world!';

                echo $x;
                echo "<br>";
                echo $y;
        ?>
</body>
</html>
```

OUTPUT



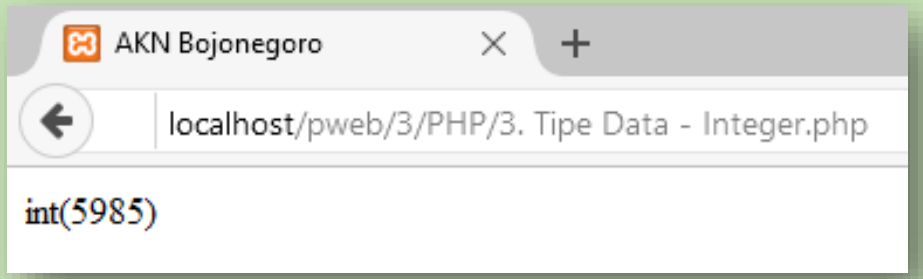
b. Script Dasar

Tipe data - Integer

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
        <title>AKN Bojonegoro</title>
</head>
<body>
        <?php
                $x = 5985;
                var_dump($x);
        ?>
</body>
</html>
```

OUTPUT



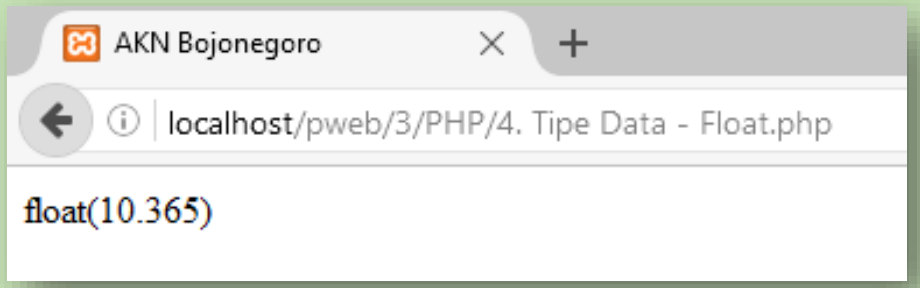
b. Script Dasar

Tipe data - Float

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
        <title>AKN Bojonegoro</title>
</head>
<body>
        <?php
                $x = 10.365;
                var_dump($x);
        ?>
</body>
</html>
```

OUTPUT



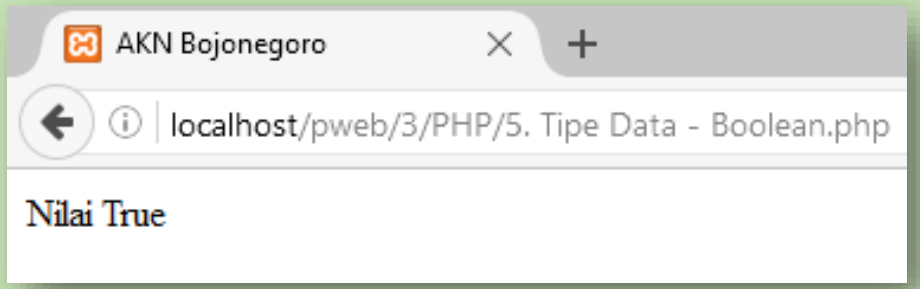
b. Script Dasar

Tipe data - Boolean

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
        <title>AKN Bojonegoro</title>
</head>
<body>
        <?php
                $x = true;
                $y = "Nilai True";
                if ($x==true){
                        echo $y;
                }
        ?>
</body>
</html>
```

OUTPUT



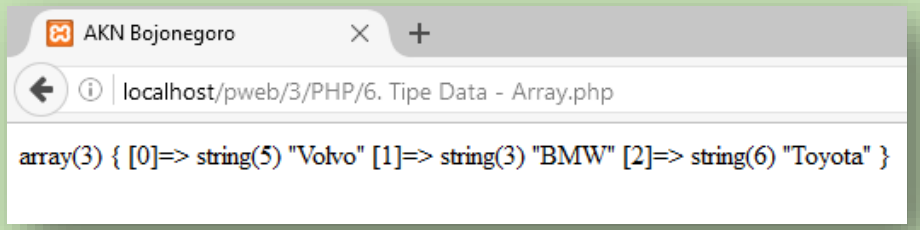
b. Script Dasar

Tipe data - Array

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
        <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
   $cars = array("Volvo","BMW","Toyota");
   var_dump($cars);
  ?>
</body>
</html>
```

OUTPUT



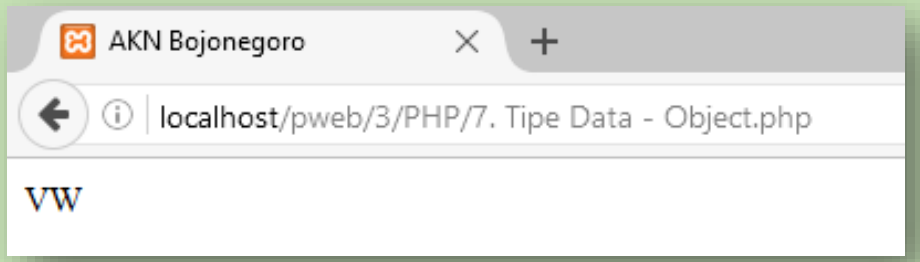
b. Script Dasar

Tipe data - Object

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
          <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
   class Car {
     function Car() {
       $this->model = "VW";
     }
   }
   // create an object
   $herbie = new Car();
   // show object properties
   echo $herbie->model;
 ?>
</body>
</html>
```

OUTPUT



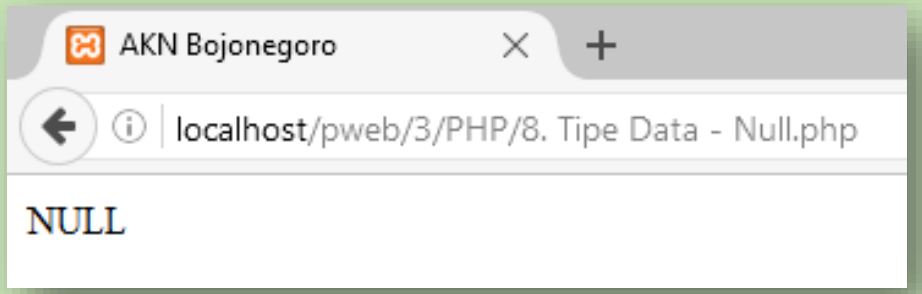
b. Script Dasar

Tipe data - Null

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
        <title>AKN Bojonegoro</title>
</head>
<body>
        <?php
                $x = "Hello world!";
                $x = null;
                var_dump($x);
        ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Tipe data - Resource

- Tipe data dengan mengambil data dari database. Hal ini dibahas di bab Basis Data – PHP – Desain Web.

b. Script Dasar

Variabel

- Nilai berubah-ubah dalam program.
- Ketentuan Penamaan:
  - Ditulis dengan awalan $ (dolar).
  - Huruf pertama nama harus huruf atau underscore.
  - Huruf pertama nama tidak boleh angka atau symbol.
  - Huruf kedua dst boleh A-z, 0-9, dan _.
  - Tidak boleh ada spasi.
  - Case sensitive ($age != $AGE)
- Contoh:

```
<?php
  $txt = "Hello world!";
  $x = 5;
  $y = 10.5;
?>
```

b. Script Dasar

Variabel

- Berdasarkan cakupan variabel bisa dikenali, ada 3 macam jenisnya:
  - Local
  - Global
  - Global Keyword
  - Static Keyword

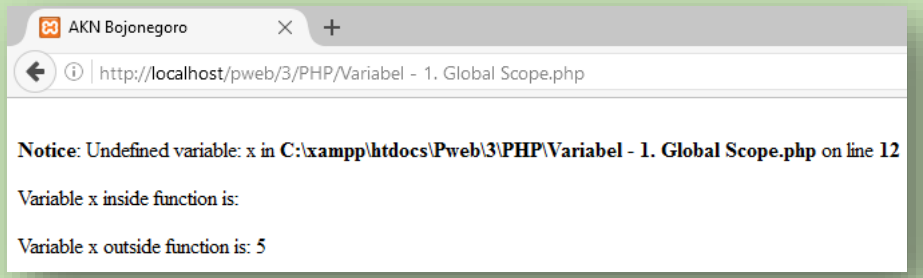
b. Script Dasar

Variabel - Global

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $x = 5; // global scope
    function myTest() {
      // using x inside this function will
generate an error
      echo "<p>Variable x inside function
is: $x</p>";
    }
    myTest();
    echo "<p>Variable x outside function is:
$x</p>";
  ?>
</body>
</html>
```

OUTPUT



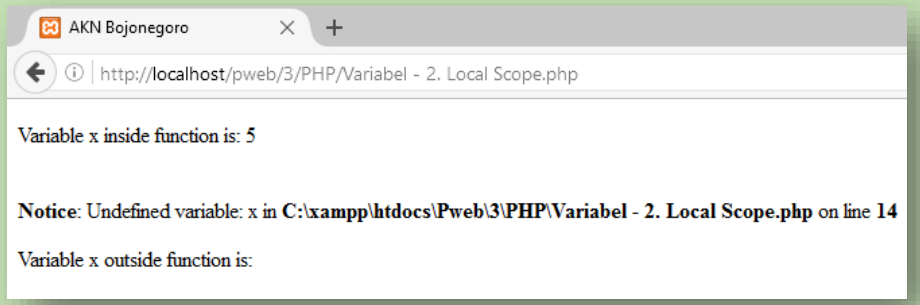
b. Script Dasar

Variabel - Local

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    function myTest() {
     $x = 5; // local scope
     echo "<p>Variable x inside function is:
$x</p>";
    }
    myTest();
    // using x outside the function will
generate an error
    echo "<p>Variable x outside function is:
$x</p>";
  ?>
</body>
</html>
```

OUTPUT



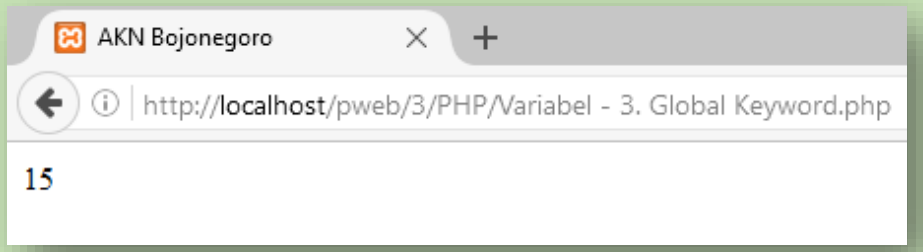
b. Script Dasar

Variabel – Global Keyword

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $x = 5;
    $y = 10;
    function myTest() {
      global $x, $y;
      $y = $x + $y;
    }
    myTest(); // run function
    echo $y; // output the new value for
variable $y
  ?>
</body>
</html>
```

OUTPUT



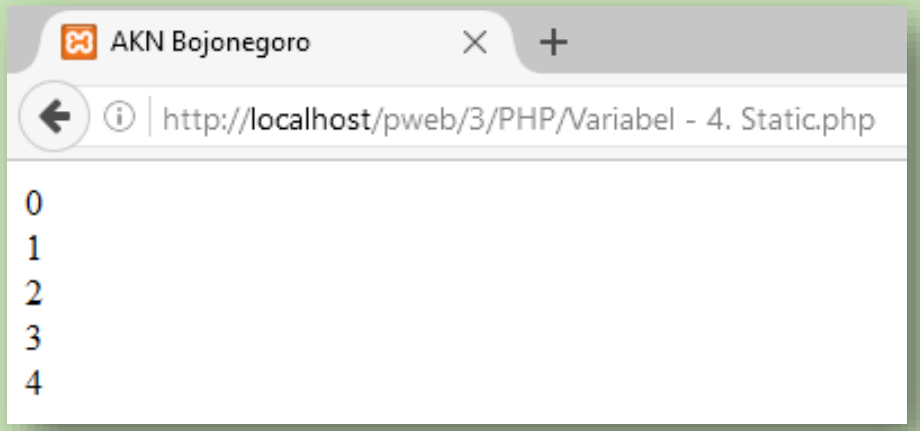
b. Script Dasar

Variabel – Static Keyword

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    function myTest() {
      static $x = 0;
      echo $x;
      $x++;
    }
    myTest();
    echo "<br>";
    myTest();
    echo "<br>";
    myTest();
    echo "<br>";
    myTest();
    echo "<br>";
    myTest();
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Konstanta

- Nilai tetap dalam program.
- Sintaks Dasarnya:

```
define(name, value, case-insensitive);
define("kampus", "AKN Bojonegoro", true);
```

- Keterangan:
  - name=nama variable
  - Value=isi variable
  - Case-insensitive=bernilai true atau false (default value:false)

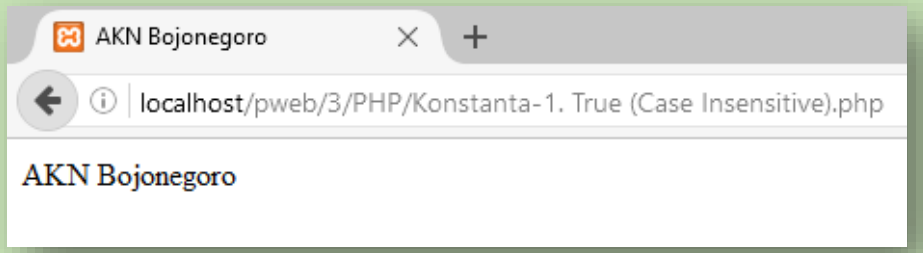
b. Script Dasar

Konstanta – true (case-insensitive)

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    // case-sensitive constant name
    define("KAMPUS", "AKN Bojonegoro", true);
    echo kampus;
  ?>
</body>
</html>
```

OUTPUT



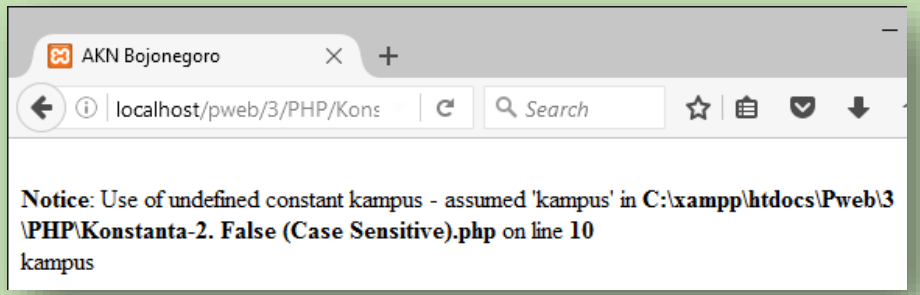
b. Script Dasar

Konstanta – false (case-sensitive)

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    // case-sensitive constant name
    define("KAMPUS", "AKN Bojonegoro", false);
    echo kampus;
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Operator

- Pengoperasi pada variable dan nilainya.
- Macam-macam operator di PHP:
  - Arithmetic operators
  - Assignment operators
  - Comparison operators
  - Increment/Decrement operators
  - Logical operators
  - String operators
  - Array operators

b. Script Dasar

Operator – Arithmetic/Aritmatika

Operator	Name	Example	Result
+	Addition	$x + $y	Sum of $x and $y
-	Subtraction	$x - $y	Difference of $x and $y
*	Multiplication	$x * $y	Product of $x and $y
/	Division	$x / $y	Quotient of $x and $y
%	Modulus	$x % $y	Remainder of $x divided by $y
**	Exponentiation	$x ** $y	Result of raising $x to the $y'th power (Introduced in PHP 5.6)

b. Script Dasar

Operator – Assignment/Penugasan

Assignment	Same as...	Description
x = y	x = y	The left operand gets set to the value of the expression on the right
x += y	x = x + y	Addition
x -= y	x = x - y	Subtraction
x *= y	x = x * y	Multiplication
x /= y	x = x / y	Division
x %= y	x = x % y	Modulus

b. Script Dasar

Operator – Comparison/Perbandingan

Operator	Name	Example	Result
==	Equal	$x == $y	Returns true if $x is equal to $y
===	Identical	$x === $y	Returns true if $x is equal to $y, and they are of the same type
!=	Not equal	$x != $y	Returns true if $x is not equal to $y
<>	Not equal	$x <> $y	Returns true if $x is not equal to $y
!==	Not identical	$x !== $y	Returns true if $x is not equal to $y, or they are not of the same type
>	Greater than	$x > $y	Returns true if $x is greater than $y
<	Less than	$x < $y	Returns true if $x is less than $y
>=	Greater than or equal to	$x >= $y	Returns true if $x is greater than or equal to $y
<=	Less than or equal to	$x <= $y	Returns true if $x is less than or equal to $y

b. Script Dasar

Operator – Increment/Decrement

Operator	Name	Description
++$x	Pre-increment	Increments $x by one, then returns $x
$x++	Post-increment	Returns $x, then increments $x by one
--$x	Pre-decrement	Decrements $x by one, then returns $x
$x--	Post-decrement	Returns $x, then decrements $x by one

b. Script Dasar

Operator – Logical/Logika

Operator	Name	Example	Result
and	And	$x and $y	True if both $x and $y are true
or	Or	$x or $y	True if either $x or $y is true
xor	Xor	$x xor $y	True if either $x or $y is true, but not both
&&	And	$x && $y	True if both $x and $y are true
||	Or	$x || $y	True if either $x or $y is true
!	Not	!$x	True if $x is not true

b. Script Dasar

Operator - String

Operator	Name	Example	Result
.	Concatenation	$txt1 . $txt2	Concatenation of $txt1 and $txt2
.=	Concatenation assignment	$txt1 .= $txt2	Appends $txt2 to $txt1

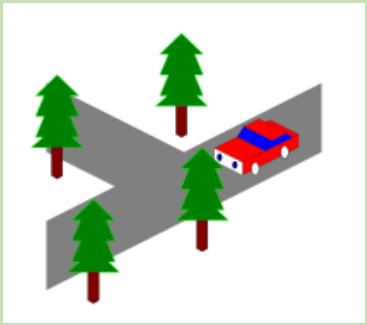
b. Script Dasar

Operator - Array

Operator	Name	Example	Result
+	Union	$x + $y	Union of $x and $y
==	Equality	$x == $y	Returns true if $x and $y have the same key/value pairs
===	Identity	$x === $y	Returns true if $x and $y have the same key/value pairs in the same order and of the same types
!=	Inequality	$x != $y	Returns true if $x is not equal to $y
<>	Inequality	$x <> $y	Returns true if $x is not equal to $y
!==	Non-identity	$x !== $y	Returns true if $x is not identical to $y

b. Script Dasar

Sequence/Berurutan

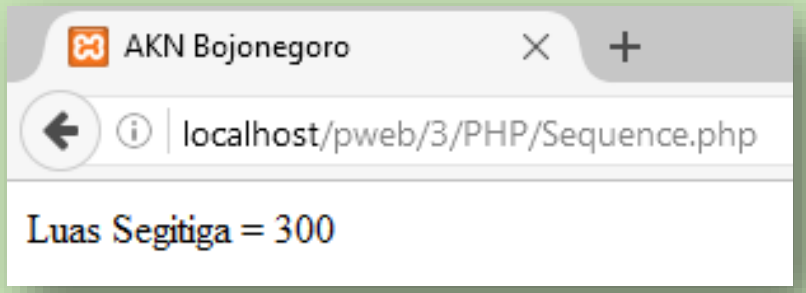


- Jalannya program secara berurutan.

SCRIPT

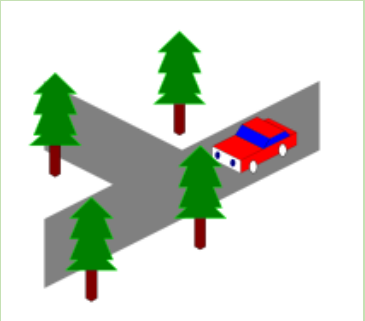
```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $a=20;
    $t=30;
    $luassegitiga=0.5*$a*$t;
    echo "Luas Segitiga = ".$luassegitiga;
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

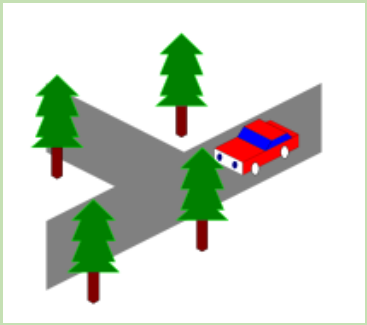
Condition/Kontrol



- Jalannya program terdapat *option*/pilihan/keputusan
- Beberapa pernyataan condition:
  - If
  - If – else (if tunggal → 1 kondisi)
  - If – else if – else if – else (if majemuk → kondisi lebih dari 1)
  - Nested if
  - Switch – Case
  - ?:

b. Script Dasar

Condition/Kontrol - if



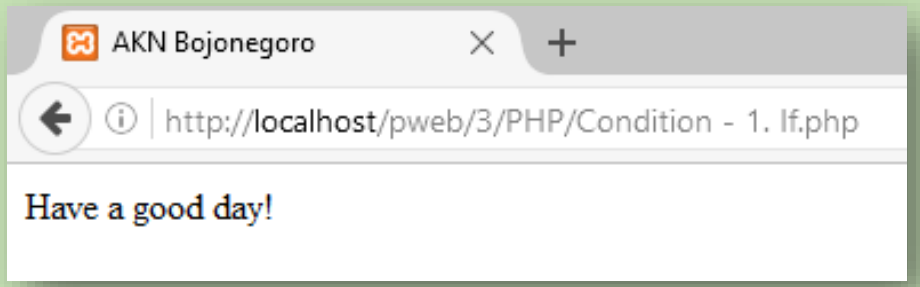
- Sintak:

```
if (condition) {
    code to be executed if condition is true;
}
```

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $t = date("H");
    if ($t <  "20") {
      echo "Have a good day!";
    }
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Condition/Kontrol – if else (tunggal)

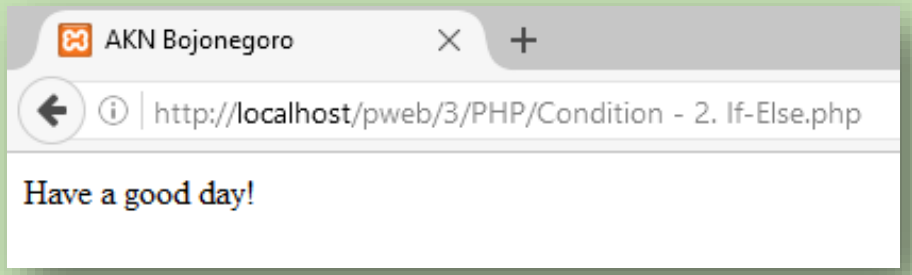
- Sintak:

```
if (condition) {
    code to be executed if condition is true;
} else {
    code to be executed if condition is false;
}
```

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $t = date("H");
    if ($t <  "20") {
      echo "Have a good day!";
    } else {
      echo "Have a good night!";
    }
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Condition/Kontrol – if - else if (majemuk)

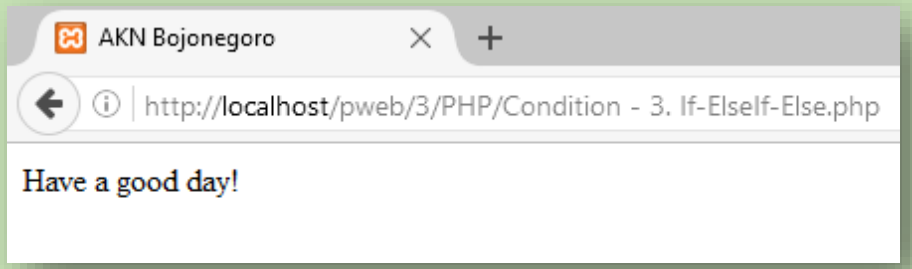
- Sintak:

```
if (condition1) {
    code to be executed if condition is true;
} elseif (condition2) {
    code to be executed if condition is true;
} else {
    code to be executed if condition is false;
}
```

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $t = date("H");
    if ($t <  "10") {
      echo "Have a good morning!";
    } elseif ($t <  "20") {
      echo "Have a good day!";
    } else {
      echo "Have a good night!";
    }
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Condition/Kontrol – Nested if

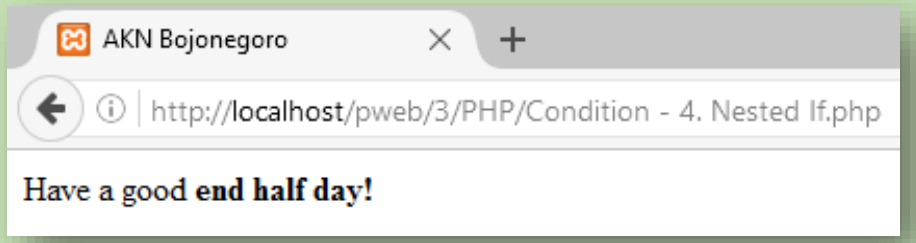
- Sintak:

```
if (condition1) {
    if (condition12){
          code to be executed if condition is false;
    } else {
           code to be executed if condition is false;
    }
} else {
    code to be executed if condition is false;
}
```

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $t = date("H");
    if ($t <  "20") {
     if (($t > "1")&&($t <= "10")){
       echo "Have a good <b>start half day!</b>";
     } else if (($t > "10")&&($t <= "19")){
       echo "Have a good <b>end half day!</b>";
     }
    }
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Condition/Kontrol – Switch Case

- Sintak:

```
switch (n) {
    case label1:
        code to be executed if n=label1;
        break;
    case label2:
        code to be executed if n=label2;
        break;
    case label3:
        code to be executed if n=label3;
        break;
    ...
    default:
        code to be executed if n is different
from all labels;
}
```

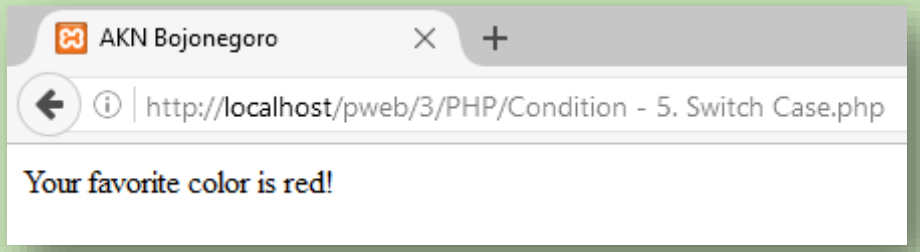
b. Script Dasar

Condition/Kontrol – Switch Case

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $favcolor = "red";
    switch ($favcolor) {
      case "red":
        echo "Your favorite color is red!";
        break;
      case "blue":
        echo "Your favorite color is blue!";
        break;
      case "green":
        echo "Your favorite color is green!";
        break;
      default:
        echo "Your favorite color is neither red,
blue, or green!";
    }
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Condition/Kontrol – ?:

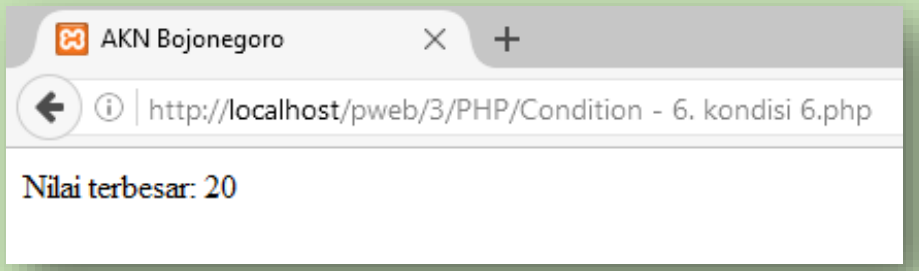
- Sintak:

```
ekspresiberkondisi?  nilai1: nilai2
```

SCRIPT

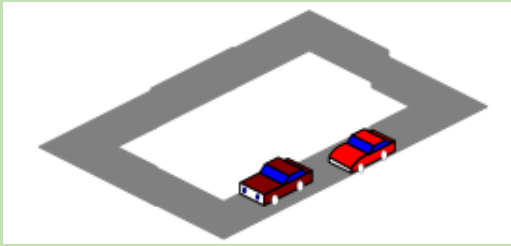
```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $a=10;
    $b=20;
    $c=$a > $b? $a : $b;
    echo "Nilai terbesar: ".$c;
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

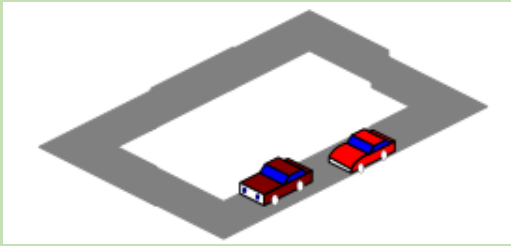
Looping/Perulangan



- Jalannya program terdapat perulangan.
- Diantara pernyataan perulangan:
  - While
  - Do-while
  - For
  - Foreach

b. Script Dasar

Looping/Perulangan - While



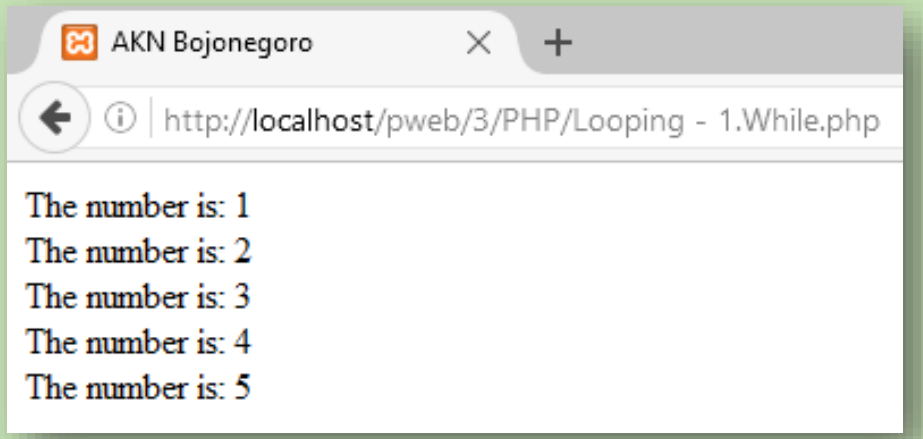
- Sintak:

```
while (condition is true) {
    code to be executed;
}
```

SCRIPT

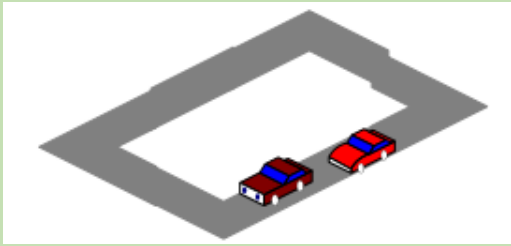
```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $x = 1;
    while($x <= 5) {
      echo "The number is: $x <br>";
      $x++;
    }
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Looping/Perulangan – Do While



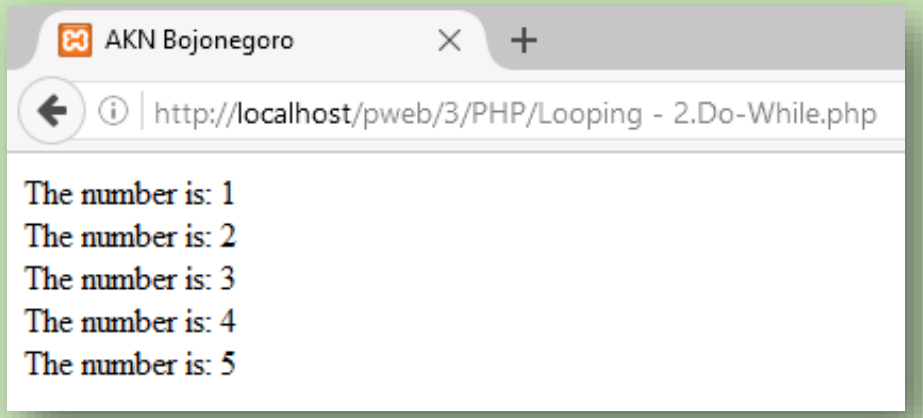
- Sintak:

```
do {
    code to be executed;
} while (condition is true);
```

SCRIPT

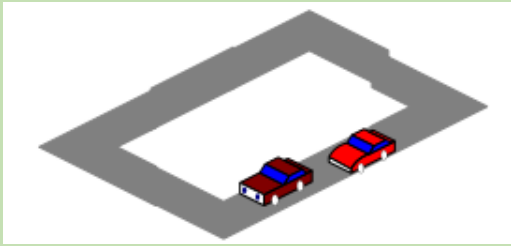
```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $x = 1;
    do {
      echo "The number is: $x <br>";
      $x++;
    } while ($x <= 5);
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Looping/Perulangan – For



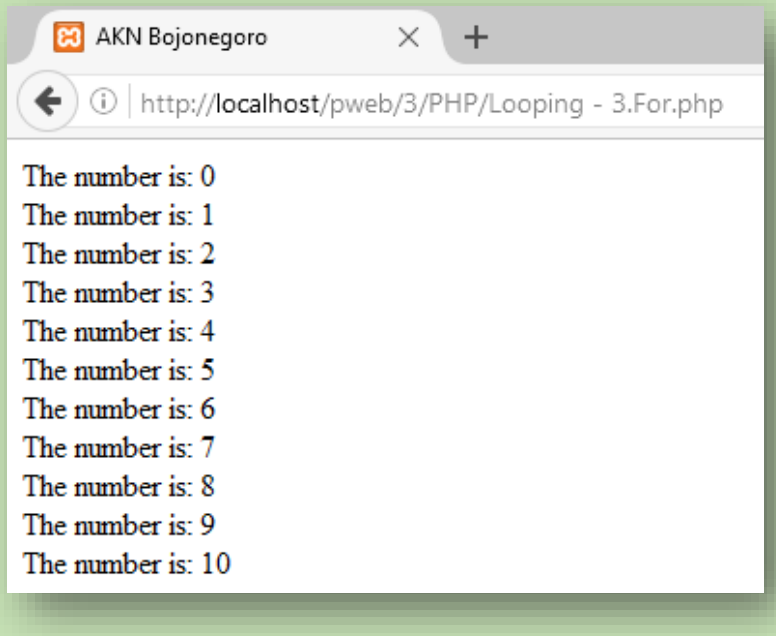
- Sintak:

```
for (init counter; test counter; increment counter) {
    code to be executed;
}
```

SCRIPT

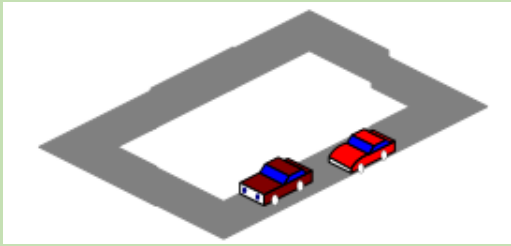
```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    for ($x = 0; $x <= 10; $x++) {
      echo "The number is: $x <br>";
    }
  ?>
</body>
</html>
```

OUTPUT



b. Script Dasar

Looping/Perulangan – Foreach



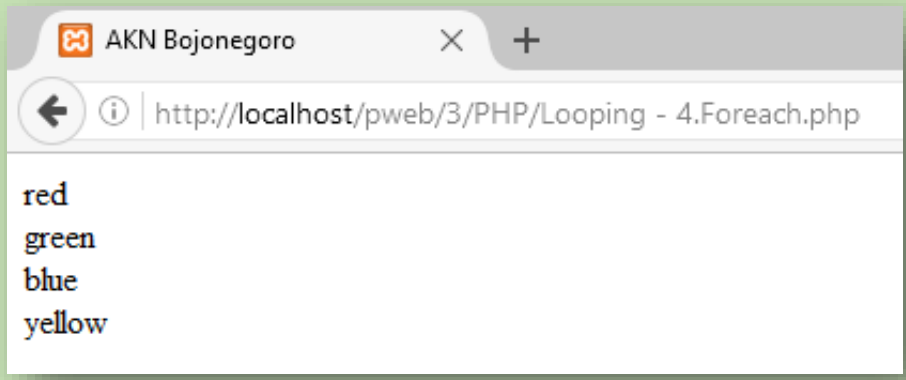
- Sintak:

```
foreach ($array as $value) {
    code to be executed;
}
```

SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <?php
    $colors = array("red", "green", "blue",
"yellow");
    foreach ($colors as $value) {
      echo "$value <br>";
    }
  ?>
</body>
</html>
```

OUTPUT

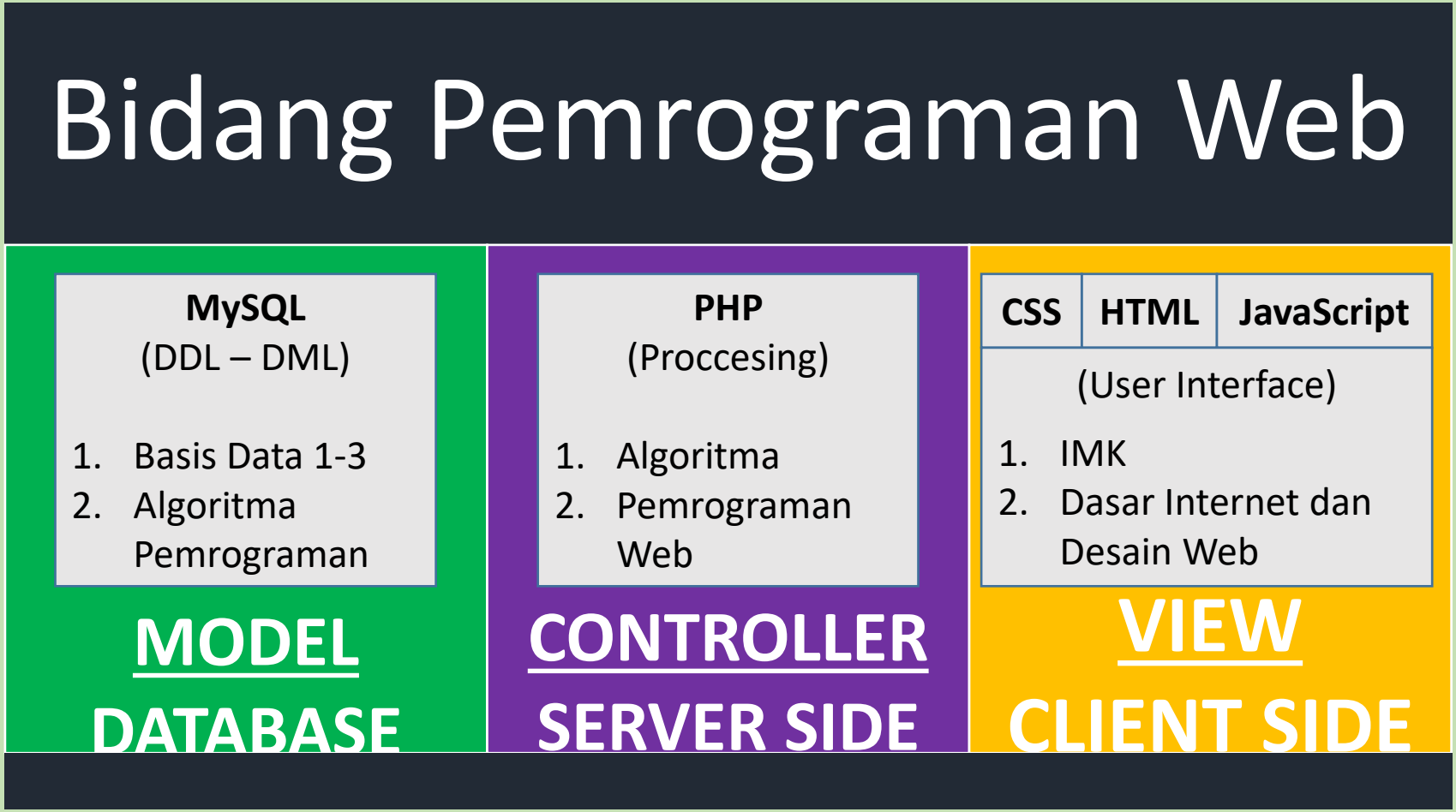


Basis Data – PHP – Desain Web

a. Logika
b. Script

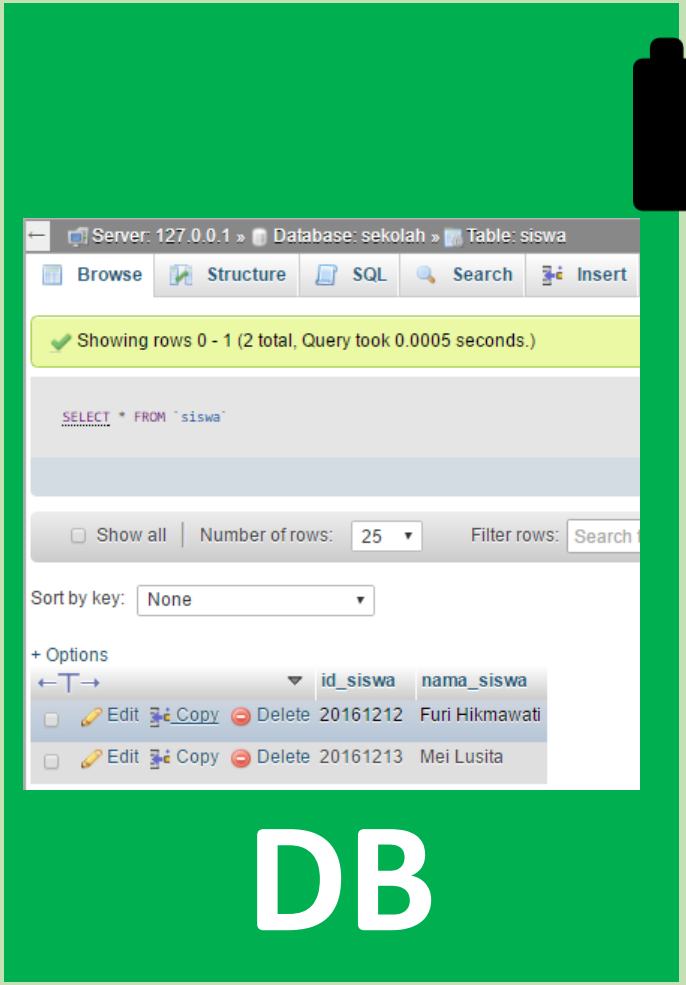
a. Logika (perlu diingat kembali!)

Basis Data – PHP – UI (1)

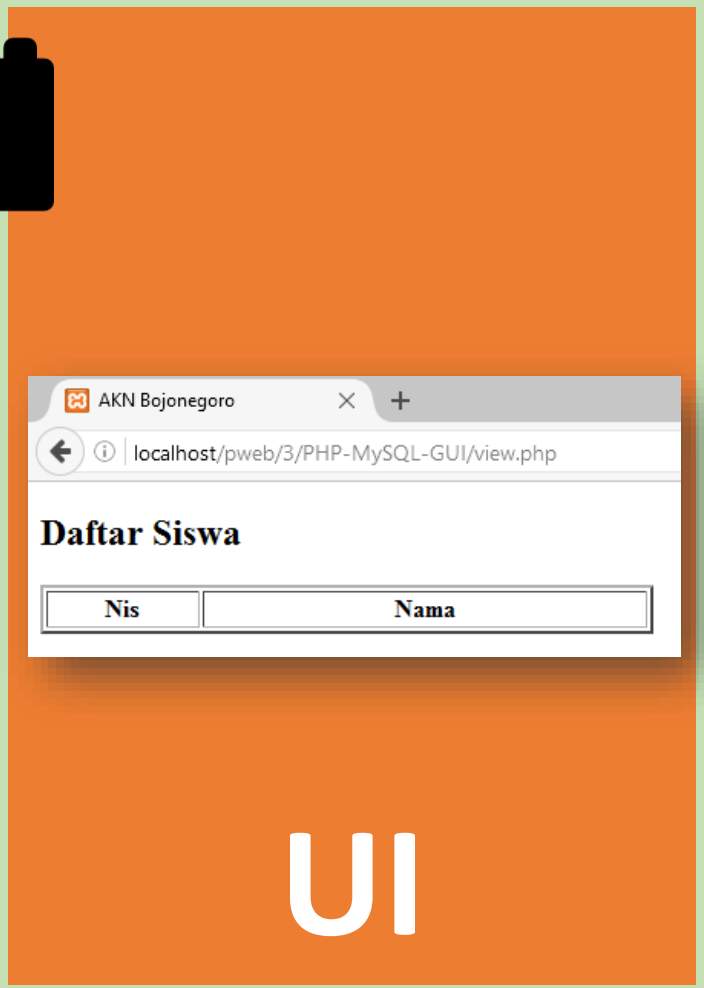


a. Logika

Basis Data – PHP – UI (2)

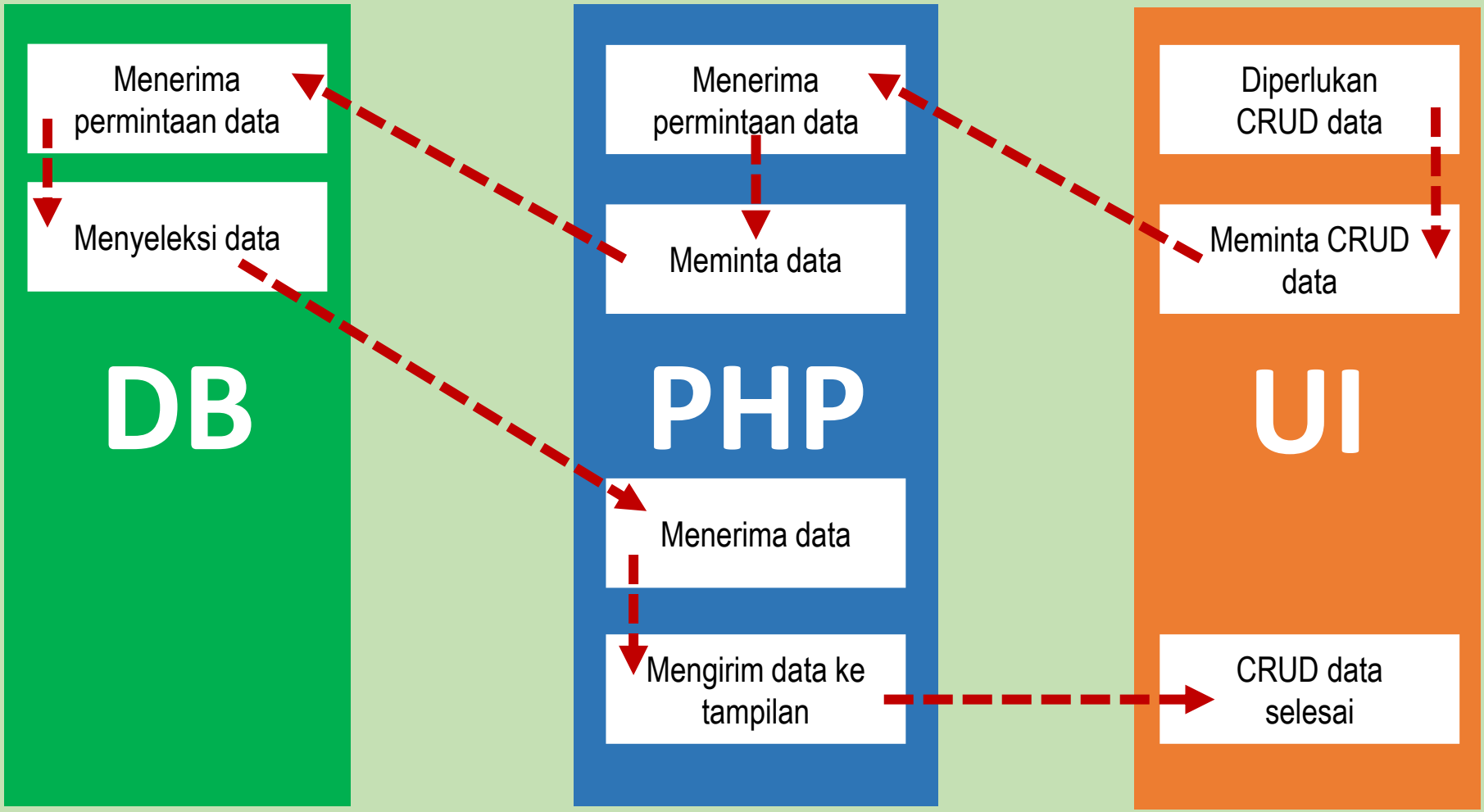


PHP



a. Logika

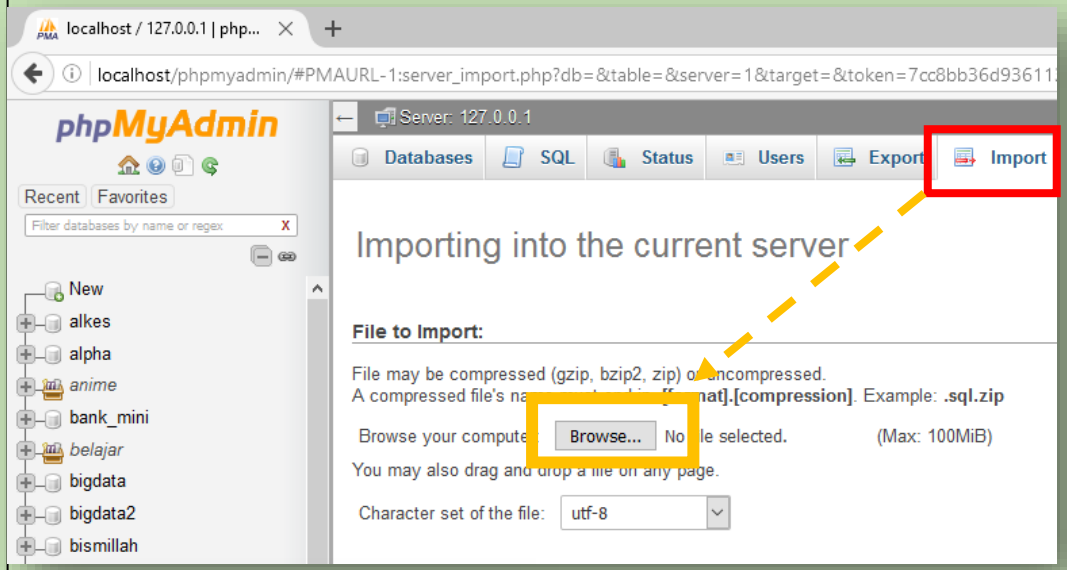
Basis Data – PHP – UI (3)

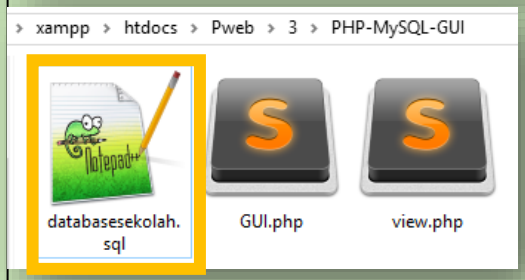


b. Script

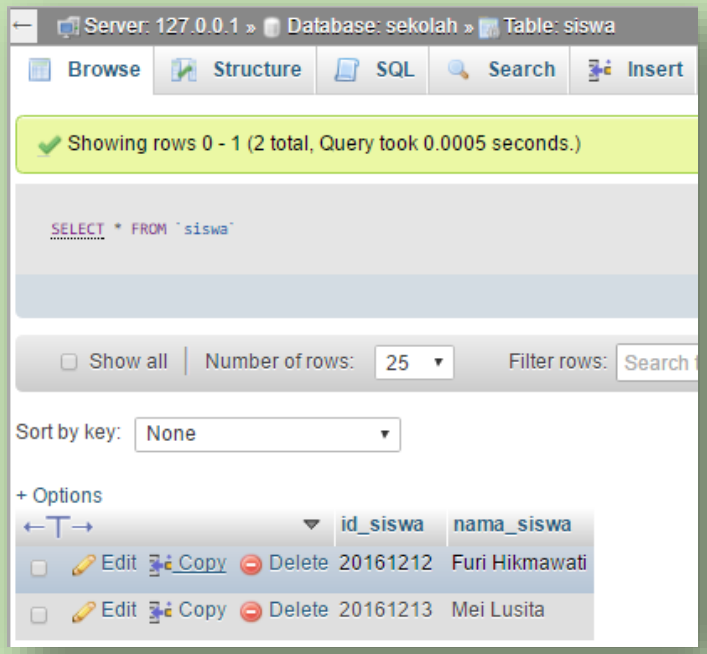
Basis Data – PHP – UI – Persiapan – import database

import databasesekolah.sql





Hasil import



b. Script

Basis Data – PHP – UI – Persiapan – Koneksi

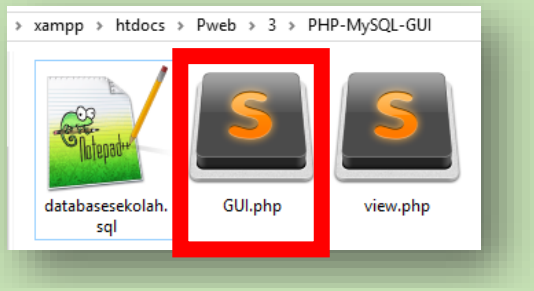
Koneksi.php

```
<?php
  $hostName     = "localhost";
  $userName     = "root";
  $passWord     = "";
  $dataBase     = "sekolah";
  mysql_connect($hostName,$userName,$passWord) or die('Koneksi
  Gagal');
  mysql_select_db($dataBase) or die('Database tidak ditemukan');
?>
```

b. Script

Basis Data – PHP – UI – Persiapan – GUI

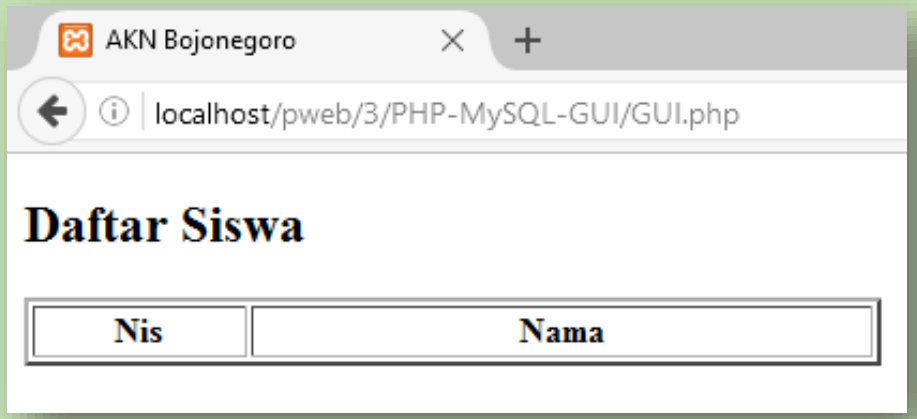
- Menyiapkan file GUI.php



SCRIPT

```
<!DOCTYPE html>
<html>
<head>
  <title>AKN Bojonegoro</title>
</head>
<body>
  <h2> Daftar Siswa </h2>
  <table border='2' width='400'>
    <tr>
      <th width=100>Nis</th>
      <th width=300>Nama</th>
    </tr>
  </table>
</body>
</html>
```

OUTPUT



b. Script

Basis Data – PHP – UI – DONE

SCRIPT

```
<?php include 'koneksi.php'; ?>
<?php
 $kueri  = 'SELECT * FROM siswa';
 $hasil  = MySQL_query($kueri);
 if (mysql_num_rows($hasil) > 0) {
  while($data = mysql_fetch_array($hasil)) {
   echo "<tr>";
   echo "<td
width=100>".$data['id_siswa']."</td>";
   echo "<td
width=300>".$data['nama_siswa']."</td>";
   echo "</tr>";
  }
 } else {
  echo "<tr>";
  echo "<td> Data Masih Kosong</td>";
  echo "</tr>";
 }
?>
```

OUTPUT

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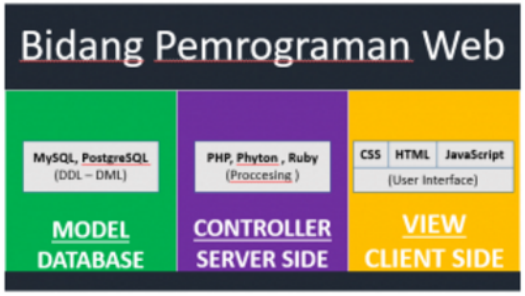
Secara umum, web programming terbagi menjadi 3 bagian dan beberapa contoh bahasa yang ada didalamnya adalah sebagai berikut,



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- WA : 081312757345

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