



# Pemrograman Web

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# Pemrograman Web : 3 SKS

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**Kehadiran 5%**

**UTS : 25%**

**Tugas & Quiz : 40%**

**UAS : 30%**

## Prerequisite:

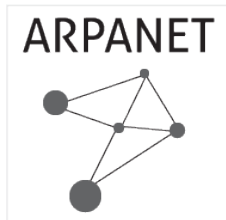
- DDP
- Basis Data 1

# Pengantar Web Programming

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# web & technology milestone

1969 – Internet Lahir  
ARPANET Project



1989 – 20 thn kemudian  
mulai hadirnya Website ,  
1991 linux hadir



1994 – Netscape,  
yahoo, amazon, w3c diluncurkan,  
tanda “at” @ mulai dikenal,  
1995 java hadir



1997 – Menurut Majalah Time  
Domain name mencapai 1juta,  
1998 google didirikan



2000 – PHP 4.0 rilis,  
Bahasa pemrograman  
u/ pengembangan Web,  
2001 : Wikipedia, drupal : diluncurkan  
2002 : wifi mulai dikenal



Today : sekitar 1 milyar lebih  
website live di internet

2012 – booming social media  
& Big Data

2014 – Material Design diperkenalkan,  
2015 – PHP 7 release



2009 – RWD diperkenalkan,  
2009 – cloud computing take off,  
Github.com dirilis,  
DevOps : Colloborative Development  
2009 – Node.js diperkenalkan

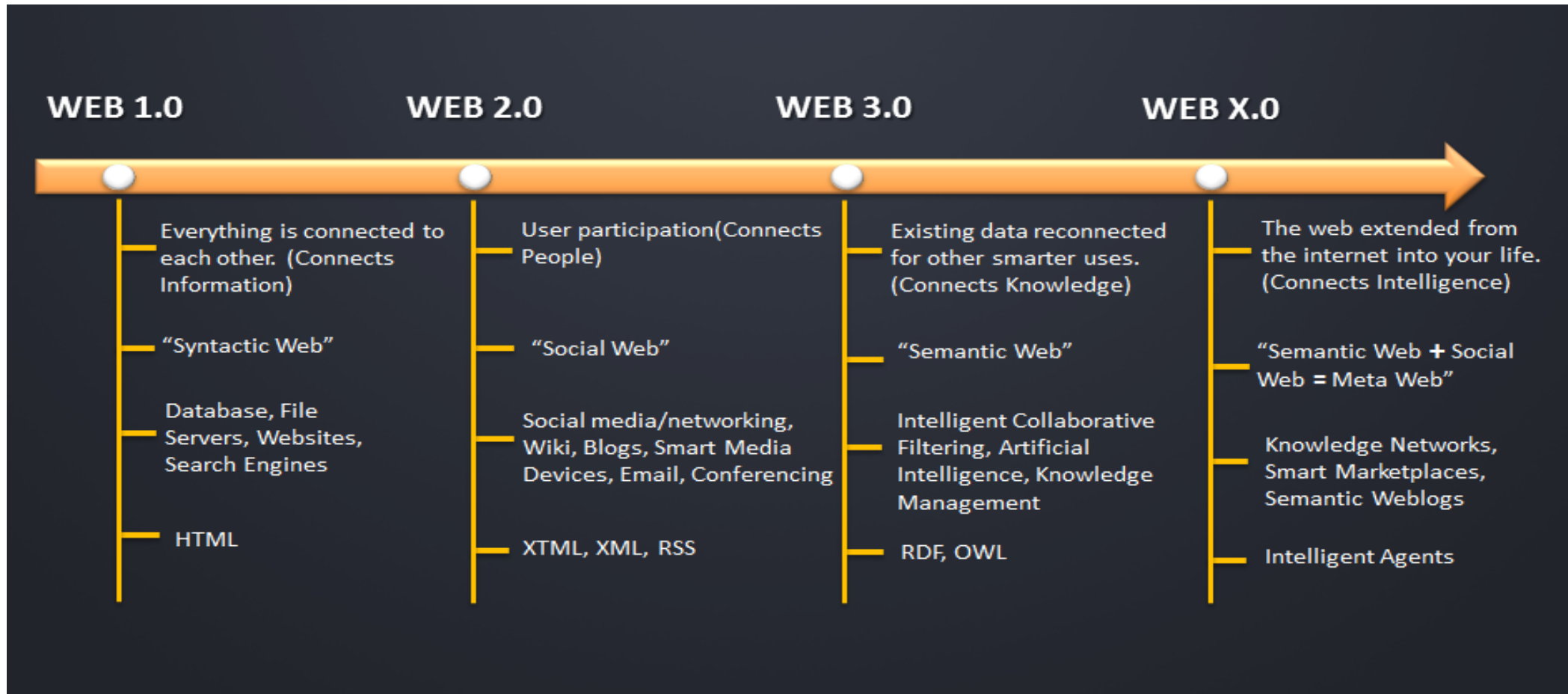


2007 : iphone 1 rilis ,  
2008 : android &  
google map rilis  
mobile development



2004, web 2.0 summit,  
Facebook diluncurkan, 2005: youtube  
2006: twitter

# www : generasi world wide web

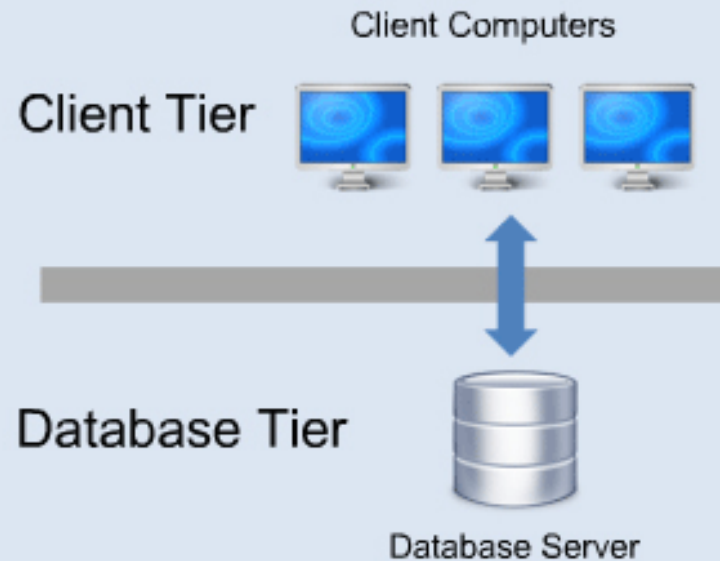


# Arsitektur Lapisan Aplikasi

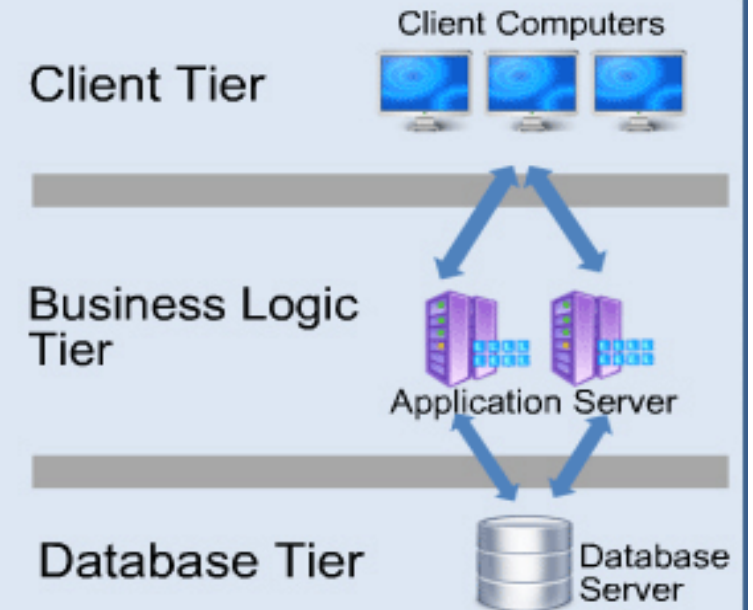
## 1-Tier Architecture



## 2-Tier Architecture

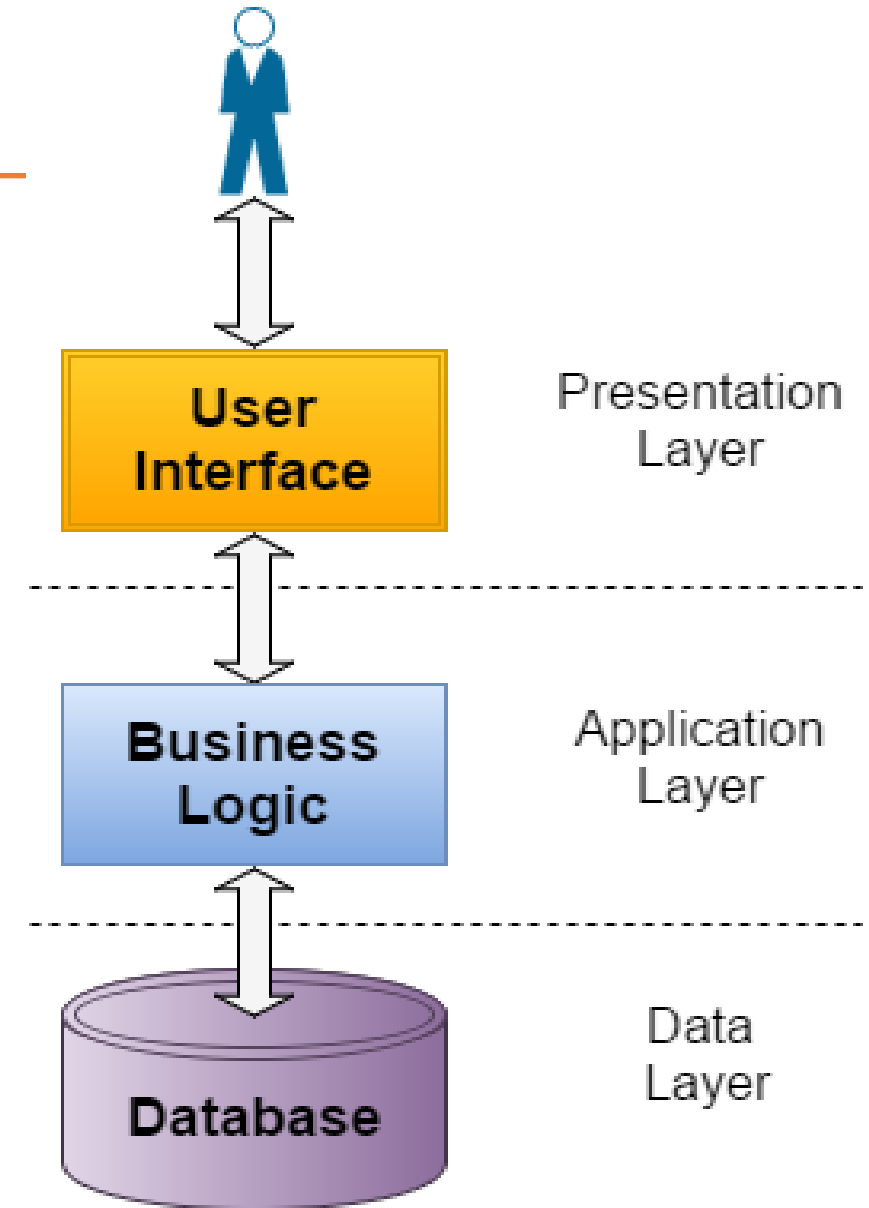


## 3-Tier Architecture

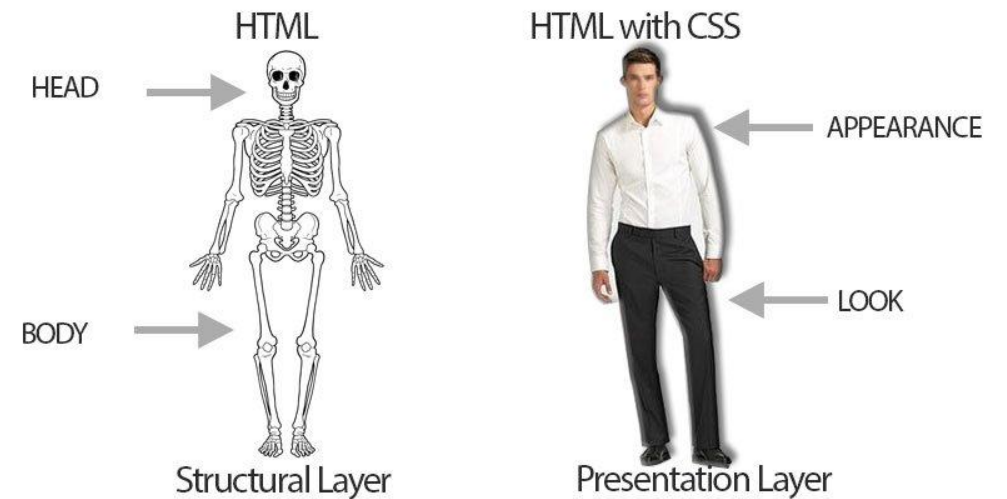


# 3-Tier Architecture

- ✚ Presentation Layer :  
UI/UX (User Interface/User Experience) :  
Antar muka aplikasi
- ✚ Application Layer :  
BL ( Business Logic ) : Logika bisnis aplikasi
- ✚ Data Layer :  
DB ( Database ) : Penyimpanan data aplikasi



- Hal pertama yang harus dipelajari untuk pengembangan web
- Mempelajari struktur bangun blok dari dokumen web
- Apakah ada alternative lain ? Tidak ada (harus dipelajari)
- Seiring waktu harus menguasai (become master)
- Mudah dipelajari (banyak resources)





- Text Editor : Sublime Text / Notepad 2 / Atom.io / IDE
- Image Editing : Gimp, Photoshop, Illustrator & tools lainnya
- FTP/SSH Tool : Filezilla, Putty
- Good Browser : Chrome, Firefox , Opera
- Cloud Storage (optional) : DropBox, Google Drive



- Basic JavaScript ( Sebagai pemula lupakan dulu: node.js & framework js)
- Data Types : String , Number , Arrays, Objects ... etc
- Functions, Conditionals, Loops, Operators ... etc
- Event Handling
- JSON
- JQuery ( telah mulai terbiasa dengan koding JavaScript )



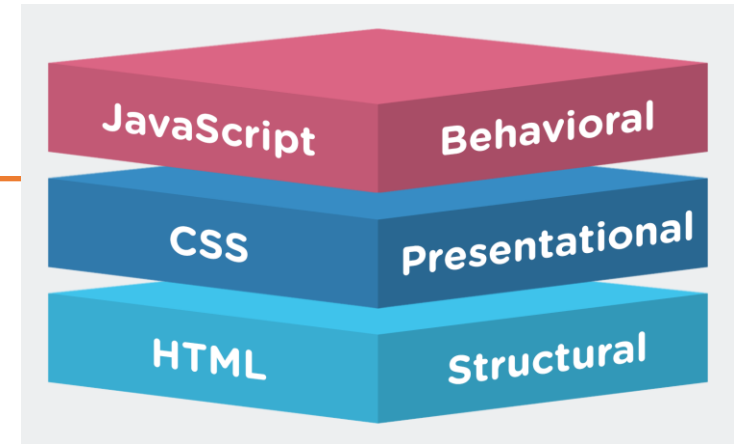
- Buat account hosting (hostgator, inMotion, etc)
- Belajar Basic Cpanel (Email, Setup FTP)
- Upload project web anda ke hosting (FTP)
- Daftar Nama domain dan link-kan dengan account hosting anda
- Akses domain anda via browser

# road map belajar pengembangan web : Web Designer

- Buat website sederhana namun bernilai professional
- Buat antar muka UI (mockup web /page statis/template) untuk aplikasi web
- PSD to HTML/CSS Conversion
- Bekerja di perusahaan atau sebagai freelancer



# HTML , CSS & JavaScript



# What Next ?



- ✚ Frontend HTML/CSS Framework:  
bootstrap, foundation, ..
- ✚ Server Side Language :  
PHP, Ruby , JSP (Java), ASP.NET (C#), python ..
- ✚ JavaScript Framework:  
React, Angular, Vue.js, ..
- ✚ Database  
MySQL, PostgreSQL, MongoDB..

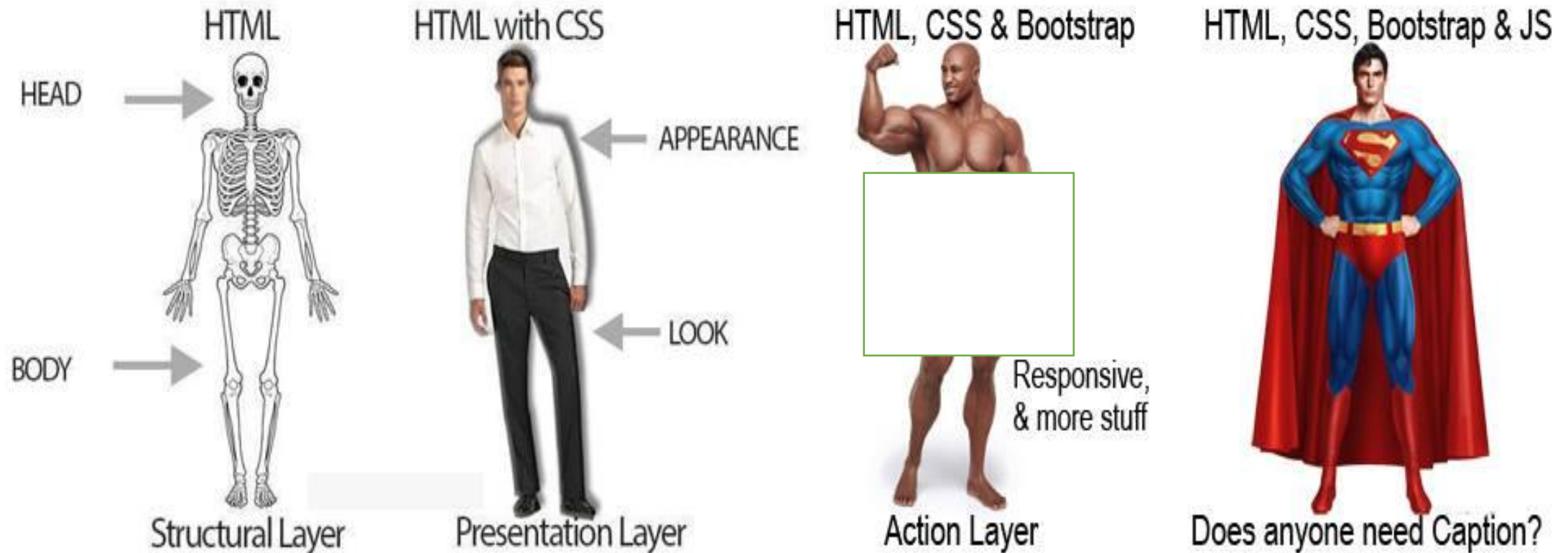
## ✚ RWD Framework (pilih satu)

- ✚ Twitter Bootstrap
- ✚ Zurb Foundation
- ✚ Skeleton
- ✚ MUI
- ✚ Pure

## ✚ Material Design

- ✓ CSS Component
  - ✓ Button
  - ✓ Lists
  - ✓ Forms/Inputs
- ✓ Helper Class
- ✓ Grid System
- ✓ Responsive Layout
- ✓ Javascript Widgets

# HTML + CSS + Bootstrap + JavaScript





# Server Side Programming (Pilih satu)

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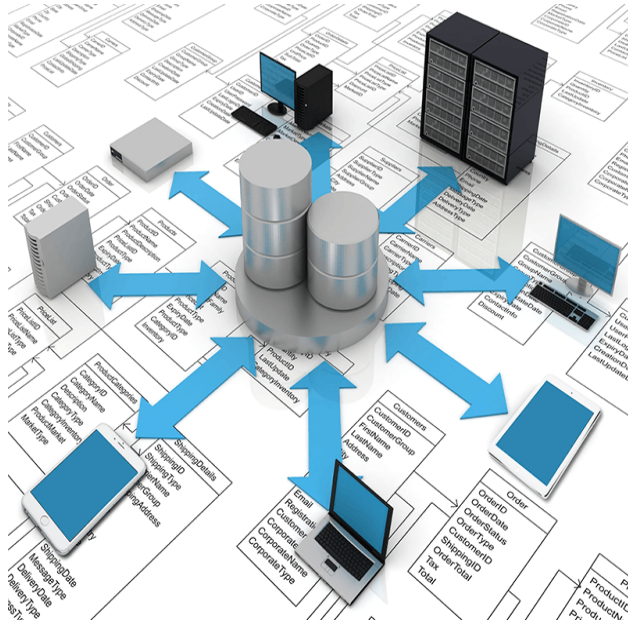
- ✚ PHP : bukan yang terbaik namun cukup solid
- ✚ Node.js : baru , powerful dan menarik untuk dipelajari
- ✚ Ruby On Rails : Framework bagus (sedang menurun)
- ✚ Python : Mudah dipelajari
- ✚ Servlet/JSP ( Java) : Konsep OOP harus kuat
- ✚ ASP.NET + C# : Konsep OOP harus kuat

# Top2017 Programming Language

Language Rank	Types	Spectrum Ranking
1. Python	 	100.0
2. C	  	99.7
3. Java	  	99.5
4. C++	  	97.1
5. C#	  	87.7
6. R		87.7
7. JavaScript	 	85.6
8. PHP		81.2
9. Go	 	75.1
10. Swift	 	73.7

Sumber: <http://spectrum.ieee.org/computing/software/the-2017-top-programming-languages>

# Database (Pilih satu)



## Relational Database

- MySQL
- PostgreSQL
- Oracle
- SQL Server

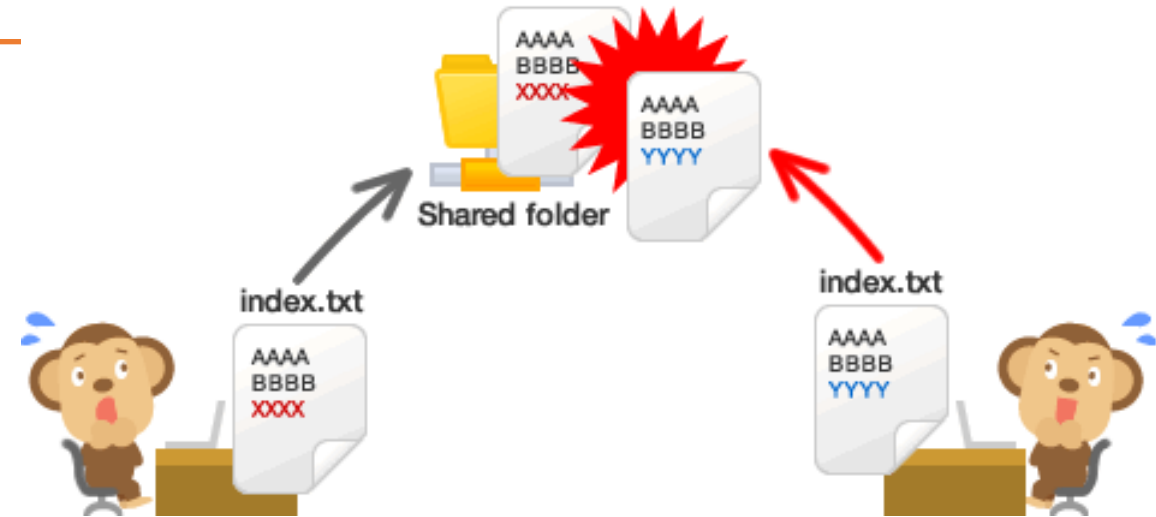
## NoSQL

- MongoDB
- CouchDB

- ✓ Pilih satu dan focus:
  - ✓ PHP | MySQL
  - ✓ Node.js | MongoDB

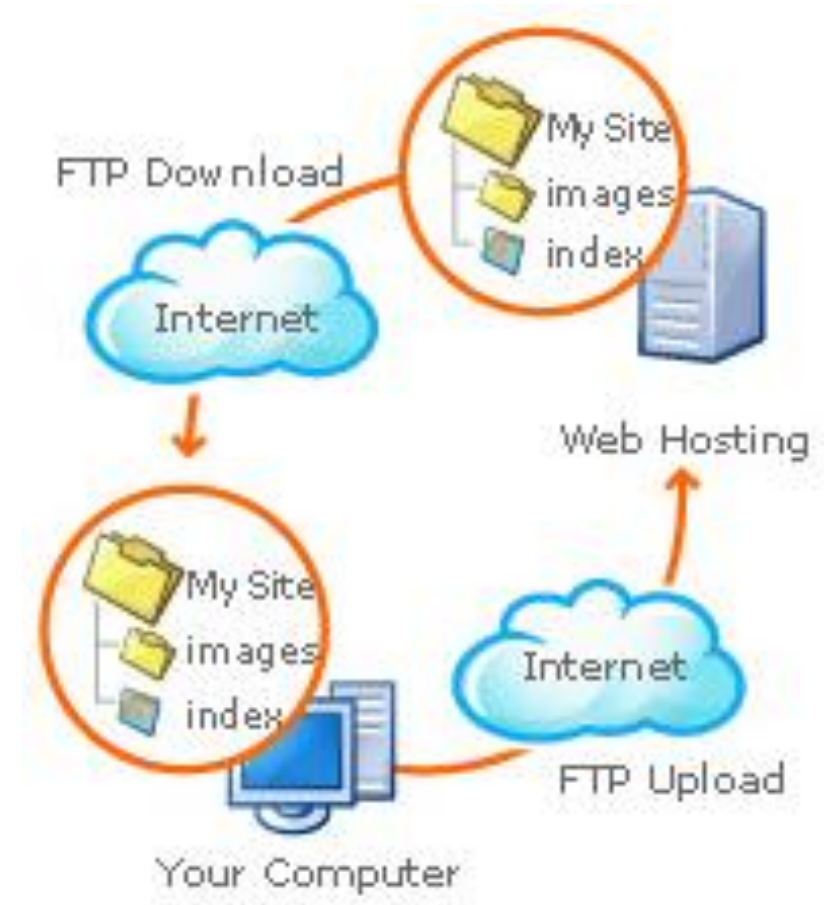
# Teknologi lain yang perlu dipelajari

- 🎯 GIT : Versioning Control & github
- 🎯 SSH & Basic Command Line
- 🎯 CSS PreCompilers – Sass / Less
- 🎯 APIS / REST Web Services
- 🎯 Apache Configuration : htaccess, https, ssl,



# Deploying Apps

- Dedicated Server / VPS
- App Hosting – Heroku, DigitalOcean, AWS,
- SSH & Basic Command Line
- CSS PreCompilers – Sass / Less
- APIS / REST Web Services
- Apache Configuration : htaccess, HTTPS, SSL



# Anda bisa disebut Web Developer

- ✚ Mampu buat aplikasi web : dari simple ke advanced
- ✚ Mampu buat APIs Backend (Server Side)
- ✚ Mampu bekerja dengan server
- ✚ Admin database
- ✚ Get a great job / Keep freelancer / Start a business



Bermula dari programmer - technopreneur



## JavaScript Framework

- ❏ React [Flux, Redux]
- ❏ Angular 2
- ❏ Vue.js
- ❏ Express (backend)

## PHP Framework

- ❏ Laravel
- ❏ Yii2
- ❏ CodeIgniter

## Ruby On Rails

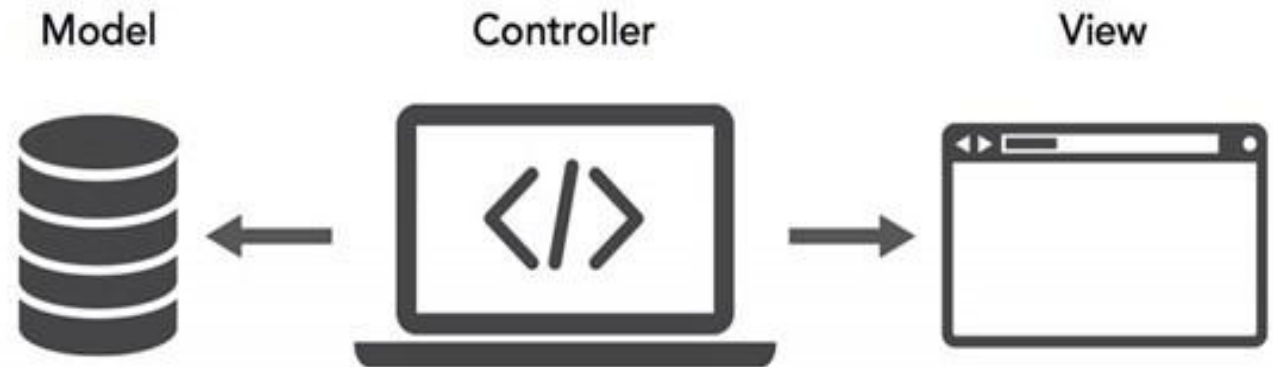
## Java Web Framework

- ❏ Spring MVC
- ❏ JSF
- ❏ Vaadin

## Python

- ❏ Django
- ❏ CubicWeb
- ❏ Zope2

- Memahami Object Oriented Programming
- Model - View - Controller
  - Routing
  - Database Mapping
  - Helpers
  - Data Binding
  - Template & UI



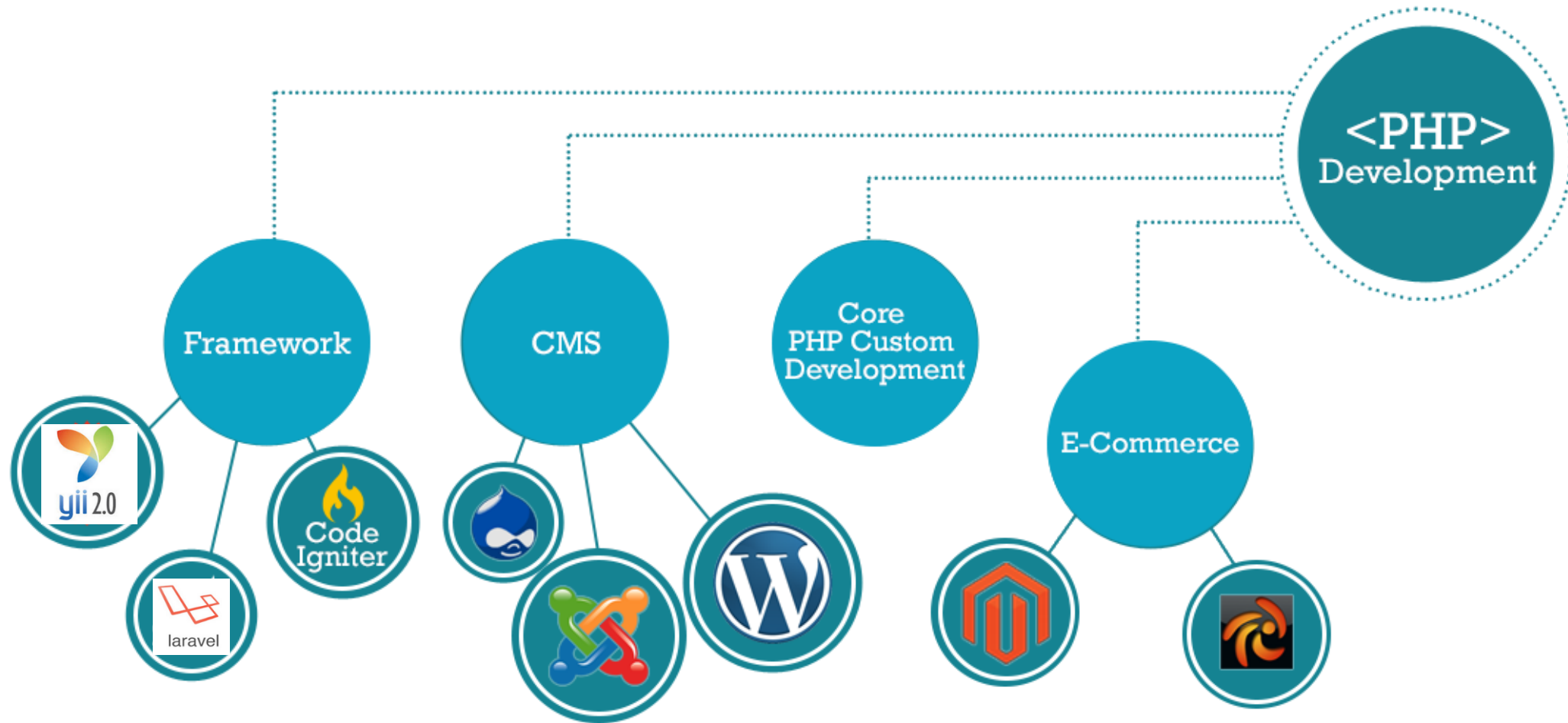


# Content Management Systems (PHP)

- ⊕ Wordpress, Joomla, Drupal
- ⊕ Great for client work & maintenance
- ⊕ Thousand of plugins / addons
- ⊕ Fast Development
- ⊕ Can be very limiting



# PHP Development



# Mobile App Development

- ✿ It's the future
- ✿ You don't need to learn Java / Objective-C
- ✿ Just JavaScript! ... React Native, Ionic , Cordova



- Focus on your career
- Go back and learn another stack
- Keep up to date with new technologies
- Learn a high level language (Java, C#)



Sumber:

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- Web Development 2017 : channel youtube:  
<https://www.youtube.com/watch?v=9hDKfBKuXjI>