



Pemrograman Web

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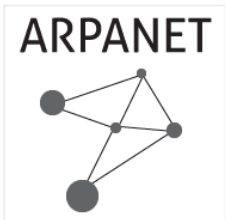
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Pengantar Web Programming

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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 : Collaborative Development
2009 – Node.js diperkenalkan

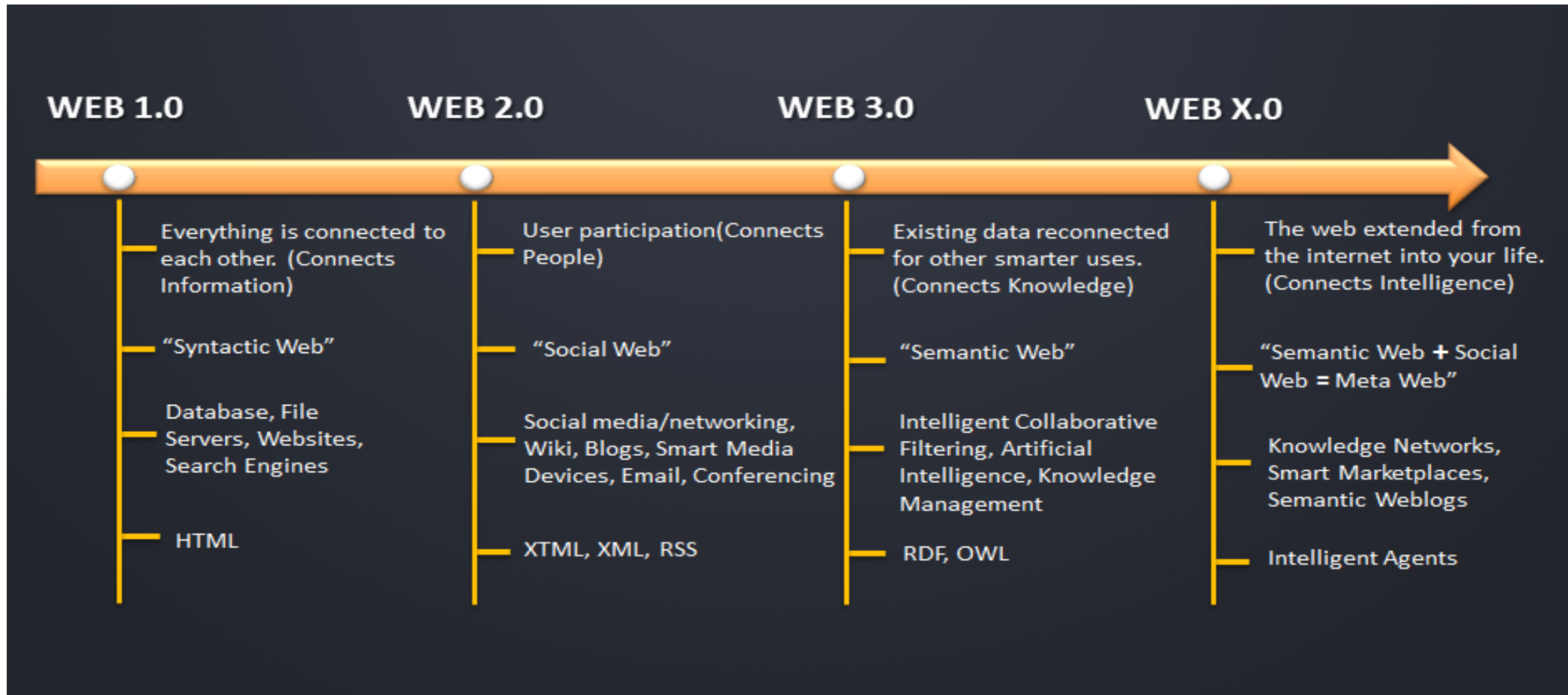


2007 : iphone 1 rilis ,
2008 : android &
google map rilis
mobile development



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

www : generasi world wide web

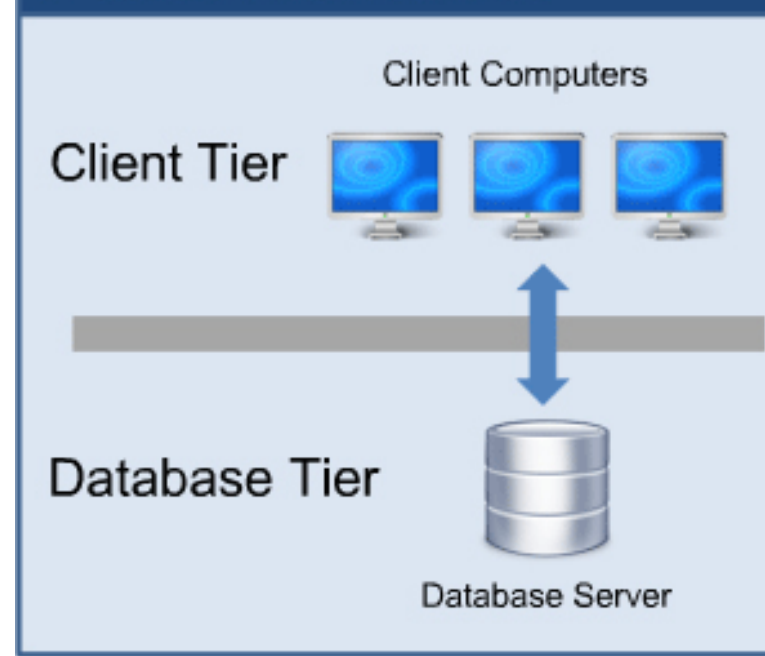


Arsitektur Lapisan Aplikasi

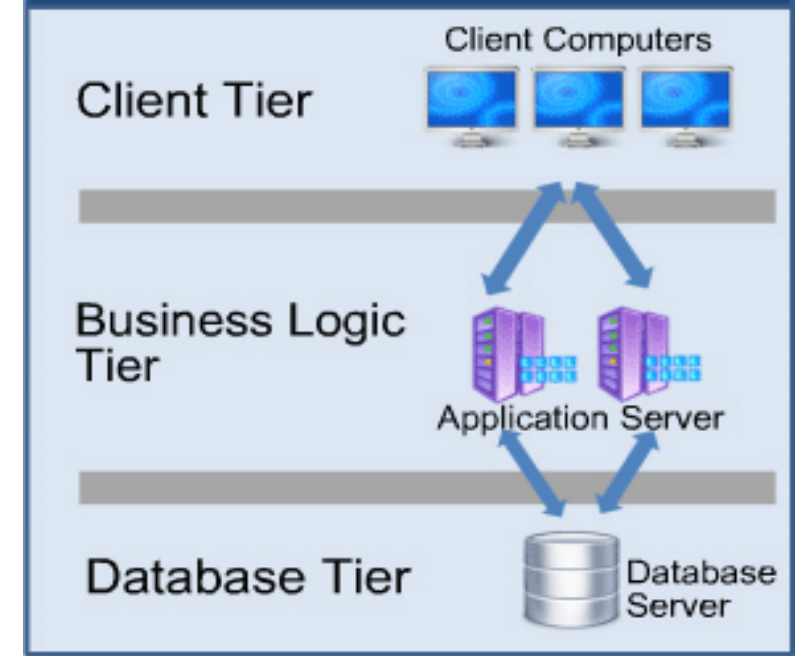
1-Tier Architecture



2-Tier Architecture

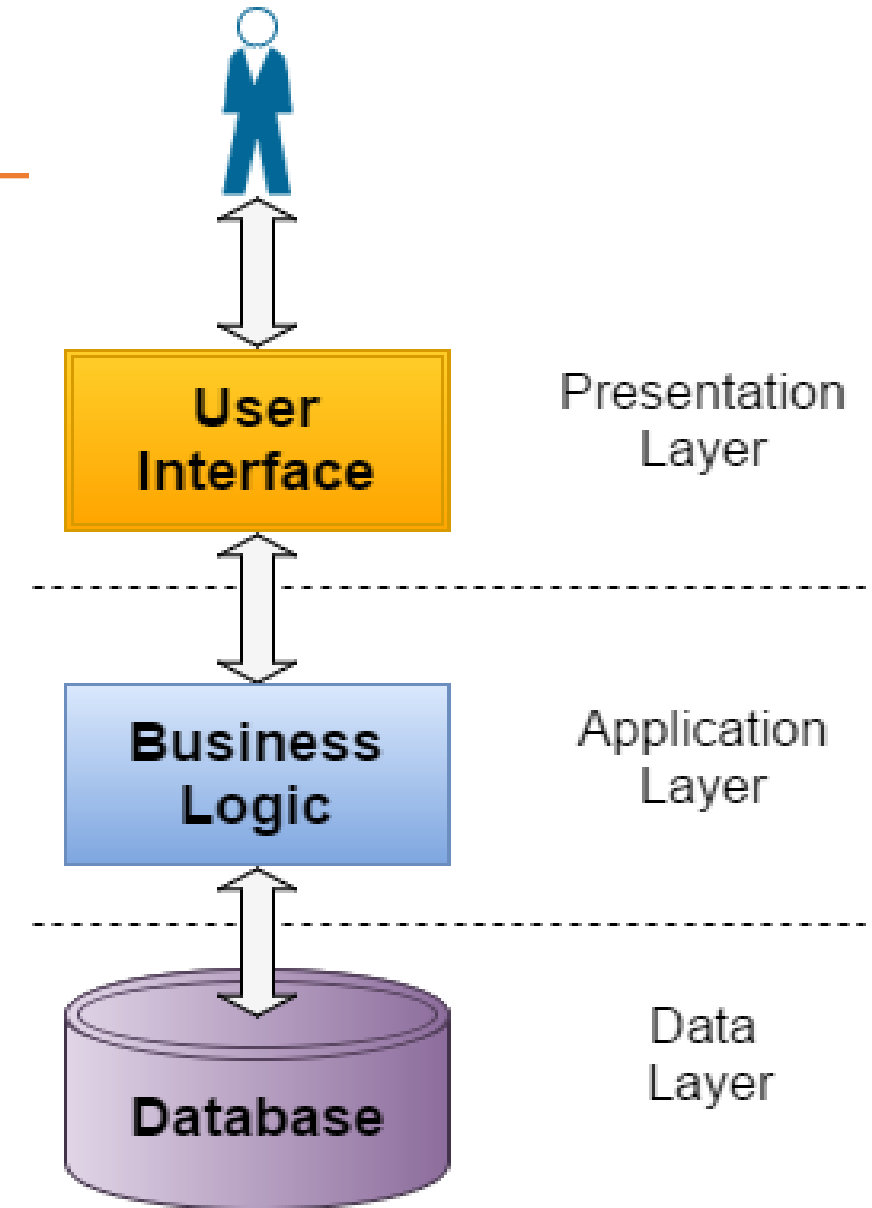


3-Tier Architecture

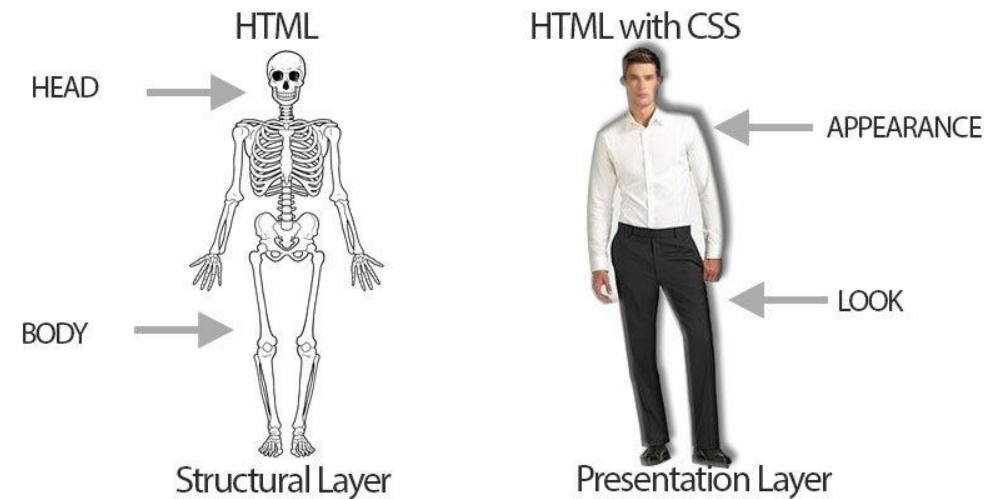


3-Tier Architecture

- ✚ 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)

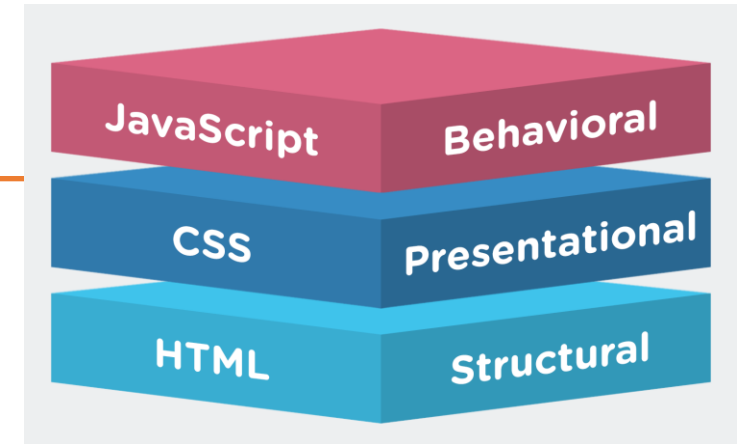


- Buat account hosting (hostgator, inMotion, etc)
- Belajar Basic Cpanel (Email, Setup FTP)
- Upload project web anda ke hosting (FTP)
- Daftar Nama domain dan link-kan dengan account hosting anda
- Akses domain anda via browser

- Buat website sederhana namun bernilai profesional
 - 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..

Frontend HTML/CSS Framework

✚ RWD Framework (pilih satu)

- ✚ Twitter Bootstrap
- ✚ Tailwind CSS
- ✚ Zurb Foundation
- ✚ Skeleton
- ✚ MUI

✚ Material Design (Google)

✚ Fluent Design (Microsoft)

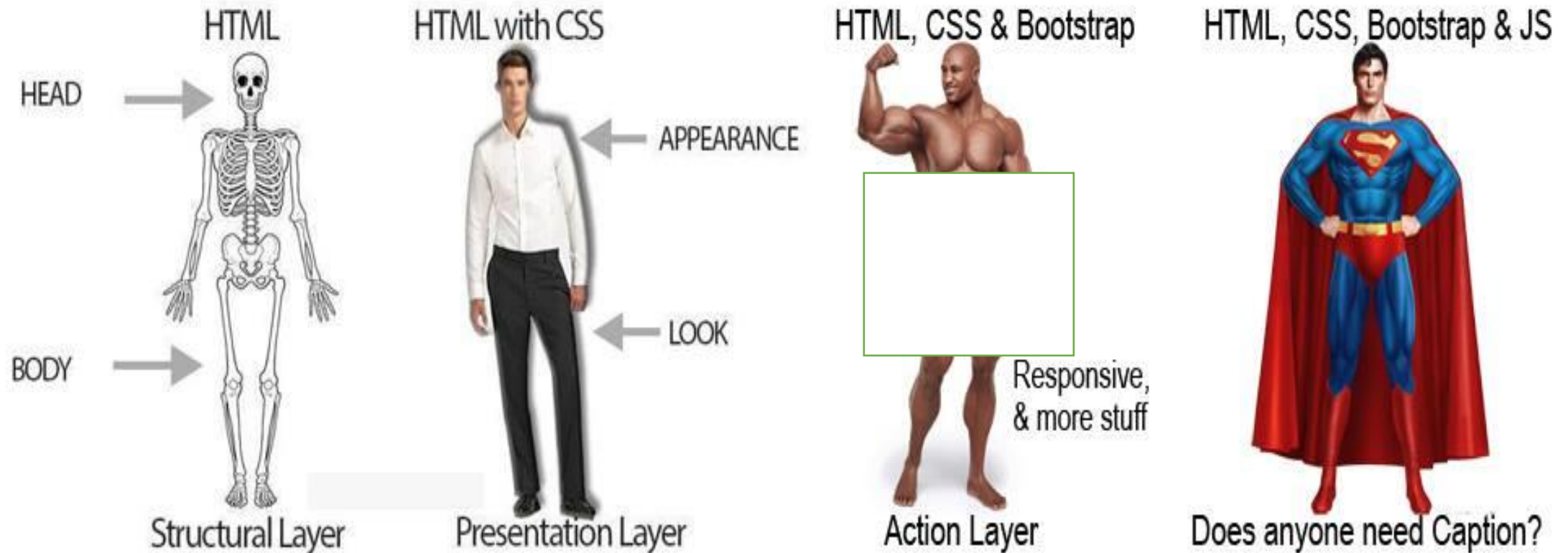
✚ SwiftUI (Apple)

✚ Carbon Design (IBM)

✓ CSS Component

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

HTML + CSS + Bootstrap + JavaScript



Server Side Programming (Pilih satu)

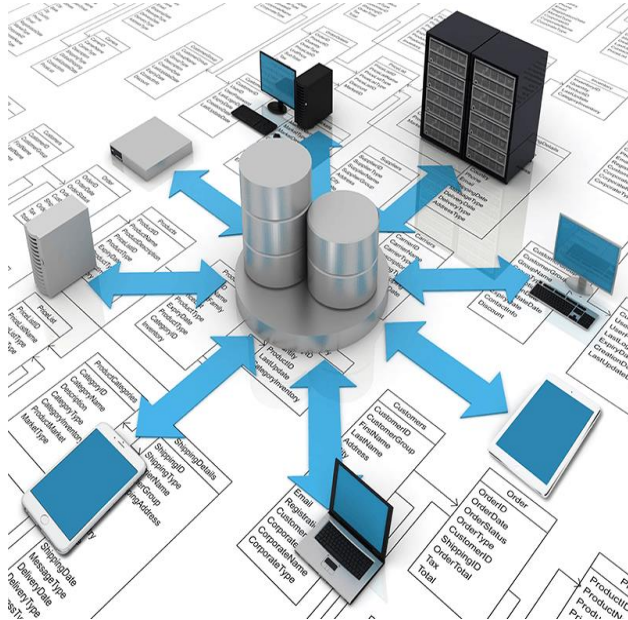
- ✚ PHP : bukan yang terbaik namun cukup solid
- ✚ Node.js : baru , powerful dan menarik untuk dipelajari
- ✚ Ruby On Rails : Framework bagus (sedang menurun)
- ✚ Python : Mudah dipelajari
- ✚ Servlet/JSP (Java) : Konsep OOP harus kuat
- ✚ ASP.NET + C# : Konsep OOP harus kuat

Top2018 Programming Language



Sumber: <https://spectrum.ieee.org/at-work/innovation/the-2018-top-programming-languages>

Database (Pilih satu)



Relational Database

- MySQL
- PostgreSQL
- Oracle
- SQL Server

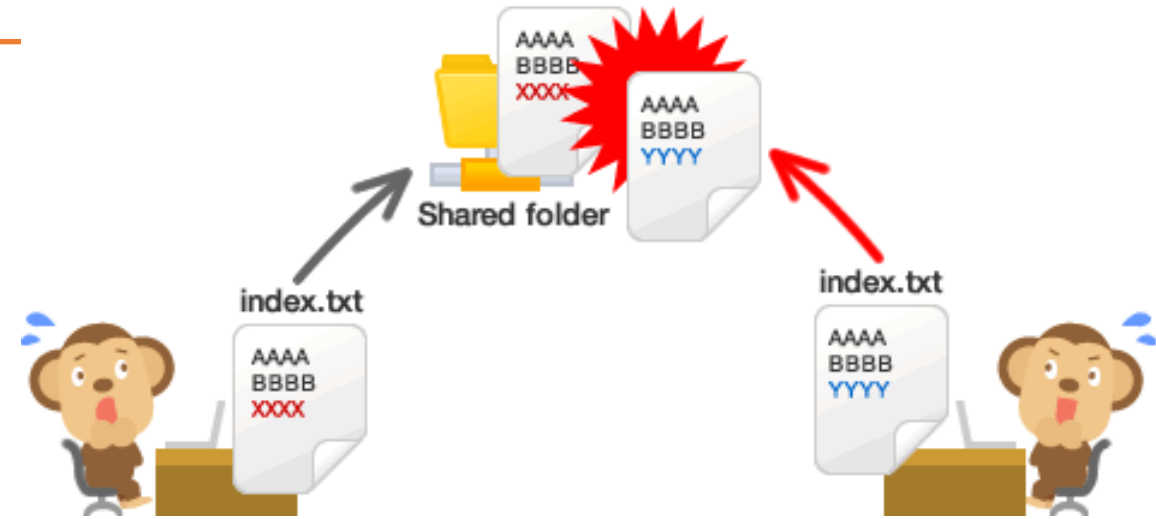
NoSQL

- MongoDB
- CouchDB

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

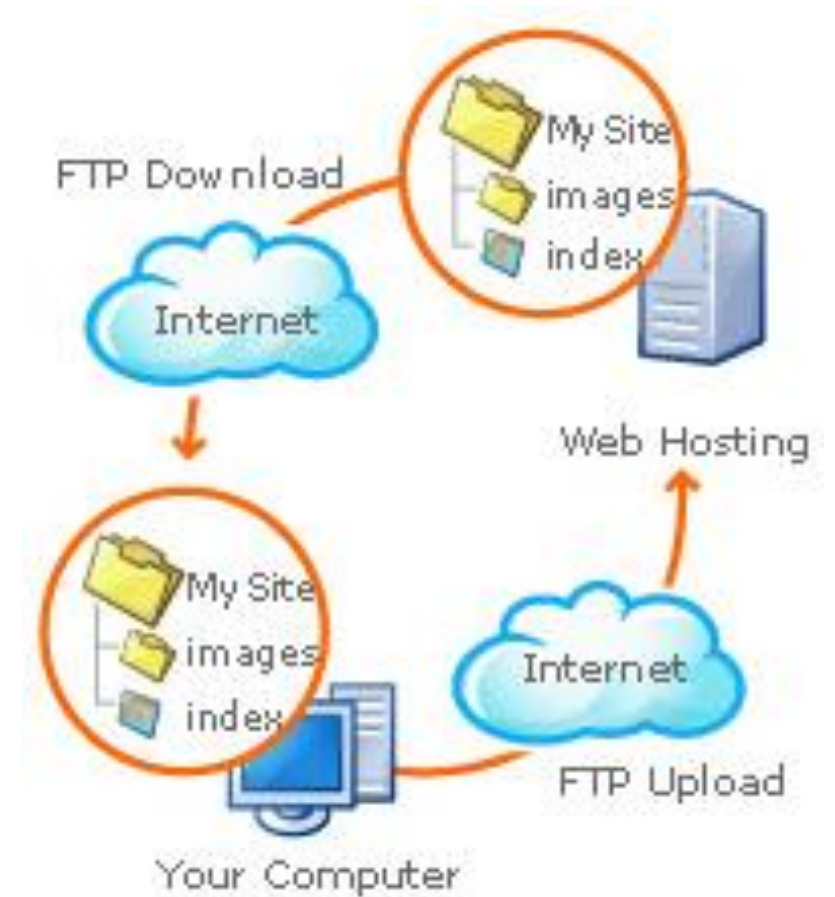
Teknologi lain yang perlu dipelajari

- 🎯 GIT : Versioning Control & github
- 🎯 SSH & Basic Command Line
- 🎯 CSS PreCompilers – Sass / Less
- 🎯 APIS / REST Web Services / Swagger
- 🎯 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
- ❏ CodIgniter

Ruby On Rails

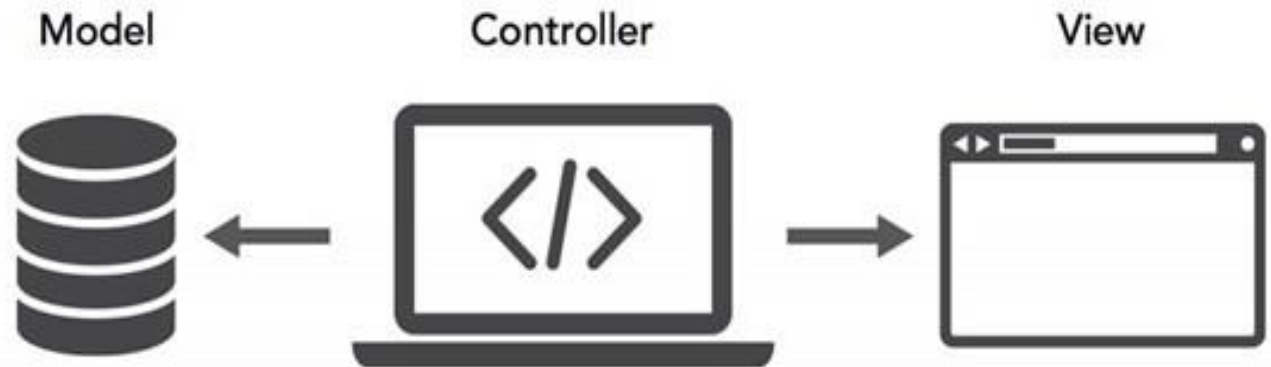
Java Web Framework

- ❏ Spring MVC
- ❏ JSF
- ❏ Vaadin

Python

- ❏ Django
- ❏ CubicWeb
- ❏ Zope2

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

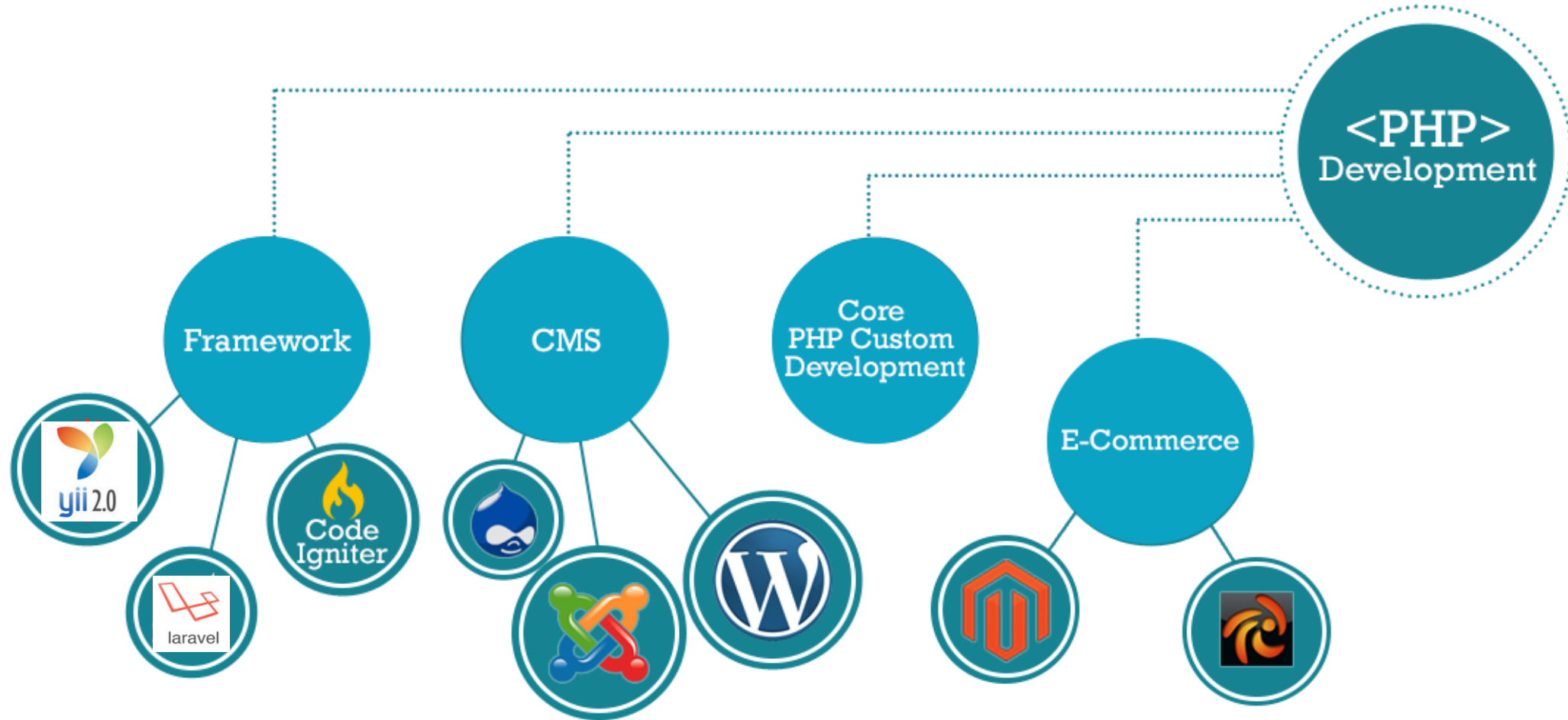


Content Management Systems (PHP)

- ⊕ 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



Now What?

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



Tugas 1 - Individu

1. Jelaskan perbedaan teknologi Web 1.0 , 2.0 , 3.0 dan x.0 , dan berikan contoh masing-masing dari teknologi web yang dimaksud?
2. Sertakan referensi dari penjelasan anda !!
3. Format tulisan ilmiah anda dapat di unduh di elena
4. Dateline 1 pekan (lihat di ELENA)

Sumber:

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