

Web Programming #1 Intro.

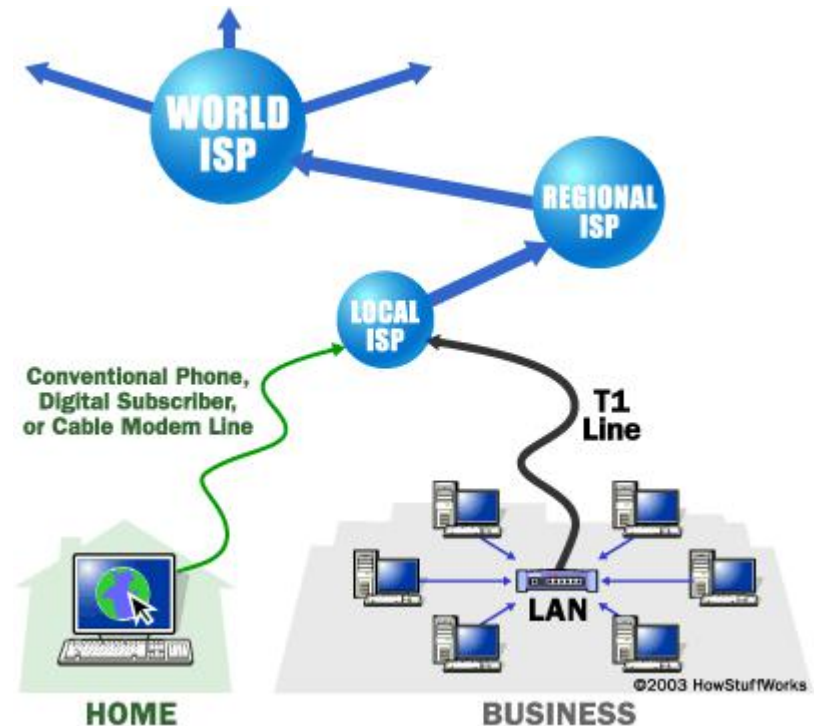


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Internet dan Web

- Internet merupakan kumpulan begitu banyak komputer yang terhubung pada jaringan internasional.
- Web atau World Wide Web merupakan salah satu tipe layanan (service) yang tersedia di dalam sebuah jaringan Internet.





Internet dan Web

Internet	Web / World Wide Web
Internet adalah hardware	Web adalah software
Mendukung beberapa protocol	Hanya salah satu protocol dari banyak protocol yang didukung oleh Internet
Menggunakan protokol aplikasi yang sudah ada atau mendefinisikan protokol sendiri	Menggunakan protokol HTTP
Aplikasi di sisi server berkomunikasi langsung dengan client	Aplikasi di sisi server berkomunikasi dengan client melalui web server
Aplikasi di sisi client dapat berupa aplikasi yang berdiri sendiri atau ditempelkan dalam aplikasi lain.	Aplikasi di sisi client umumnya berupa web browser.
	Informasi dalam web disimpan dalam format tertentu (HTML)



Sejarah Internet dan WWW

<i>Tahun</i>	<i>Peristiwa</i>
1963	Ide jaringan global muncul pertama kali.
1965	Ide <i>Hypertext</i> muncul (<i>Hypertext</i> adalah teks yang menyimpan hubungan-hubungan dengan teks lain).
1969	Sistem RFC (<i>Request For Comments</i>) dimulai. Sistem ini masih dipakai untuk definisi dan pengumuman “standar tak resmi” yang dipakai dalam Internet.
September 1970	Terbentuk jaringan “global” pertama (ARPANET) yang terdiri dari 5 komputer antar kampus di AS.
1972	Fasilitas aplikasi email diperkenalkan untuk pertama kali.
1974	Protokol TCP/IP untuk “mengatur” jaringan didefinisikan.
1977	Terdapat 111 komputer di Internet.
1980	TCP/IP menjadi standar.
1981	Terdapat 213 komputer di Internet.
1983	Terdapat 502 komputer di Internet.
1985	Internet sudah menghubungkan beberapa jaringan (BIT-NET, USENET, CSNET, NSFNET). Terdapat kira-kira 1.000 komputer.
1986	Terdapat kira-kira 5.000 komputer di Internet.
1987	Terdapat kira-kira 10.000 komputer di Internet.



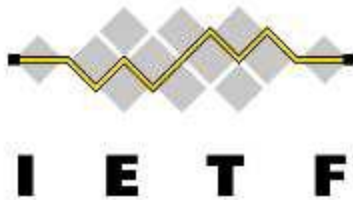
Sejarah Internet dan WWW

1989	Terdapat kira-kira 100.000 komputer di Internet.
Oktober 1990	Konsep WWW dan Browser dikembangkan dan dipakai di CERN (Institusi Fisika Nuklir) di Eropa.
12 Des. 1991	Web server pertama kali muncul di luar Eropa.
1992	Terdapat kira-kira 1.000.000 komputer di Internet.
Januari 1993	Terdapat 50 web server. Ada tiga browser yang berbeda untuk sistem operasi Unix, WWW memakai 0.1% dari seluruh <i>traffic</i> di Internet.
Februari 1993	Keluarnya browser baru Mosaic.
30 April 1993	Pemakaian teknologi WWW dibebaskan (tanpa paten) untuk semua orang.
Oktober 1993	Terdapat 200 web server.
Agustus 1994	Keluarnya browser Netscape (perkembangan dari Mosaic).
1 Oktober 1994	Organisasi W3C dibentuk.
1994-1995	Internet mulai dipakai di Indonesia.
2001	Terdapat kira-kira 150-175 juta komputer di Internet.



Organisasi

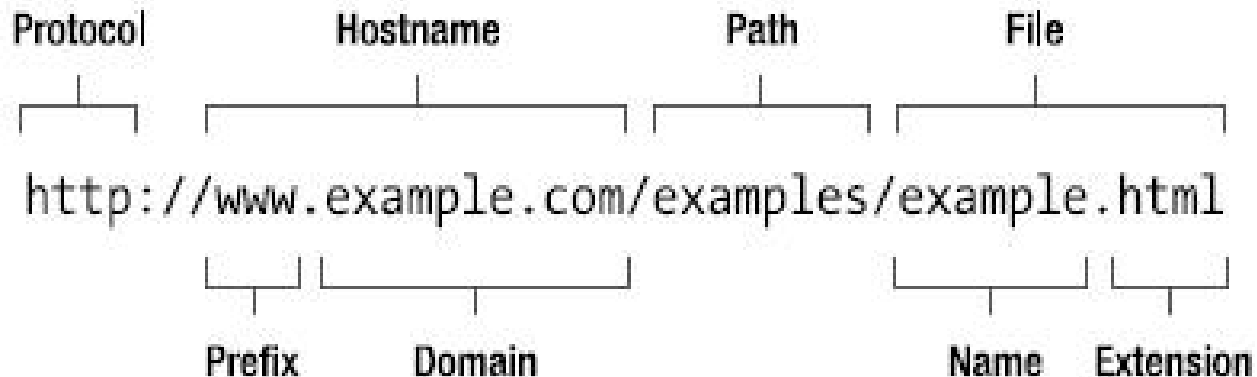
- Internet Engineering Task Force (IETF): internet protocol standards
- Internet Corporation for Assigned Names and Numbers (ICANN): decides top-level domain names
- World Wide Web Consortium (W3C): web standards





Komponen URL

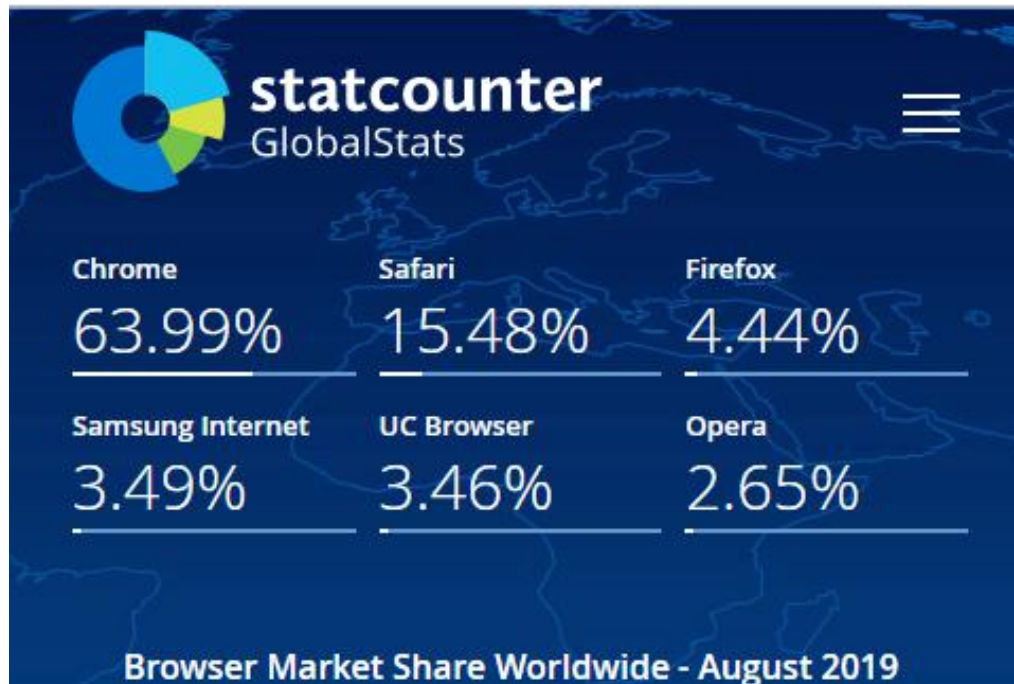
- Dokumen diakses web mempunyai alamat unik yang disebut *Uniform Resource Locator* (URL).
- Istilah *Uniform Resource Identifier* (URI) kadang-kadang digunakan secara bergantian dengan URL, meskipun URI adalah istilah yang lebih umum, sebuah URL adalah jenis URI.
- Alamat tersebut memungkinkan user mencari file di internet kemudian menampilkannya.





Web Browser

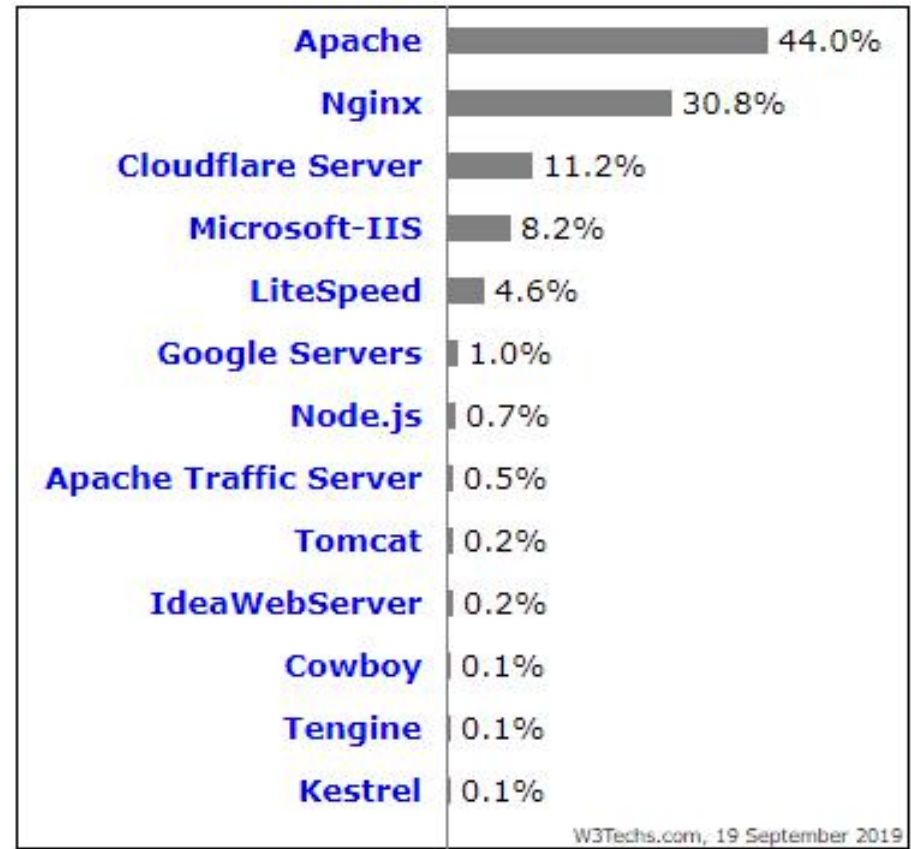
- Menampilkan dan melakukan interaksi dengan dokumen-dokumen yang disediakan oleh server web.
- Secara teknis akan menterjemahkan kode yang dikirim dari web server untuk ditampilkan ke user.





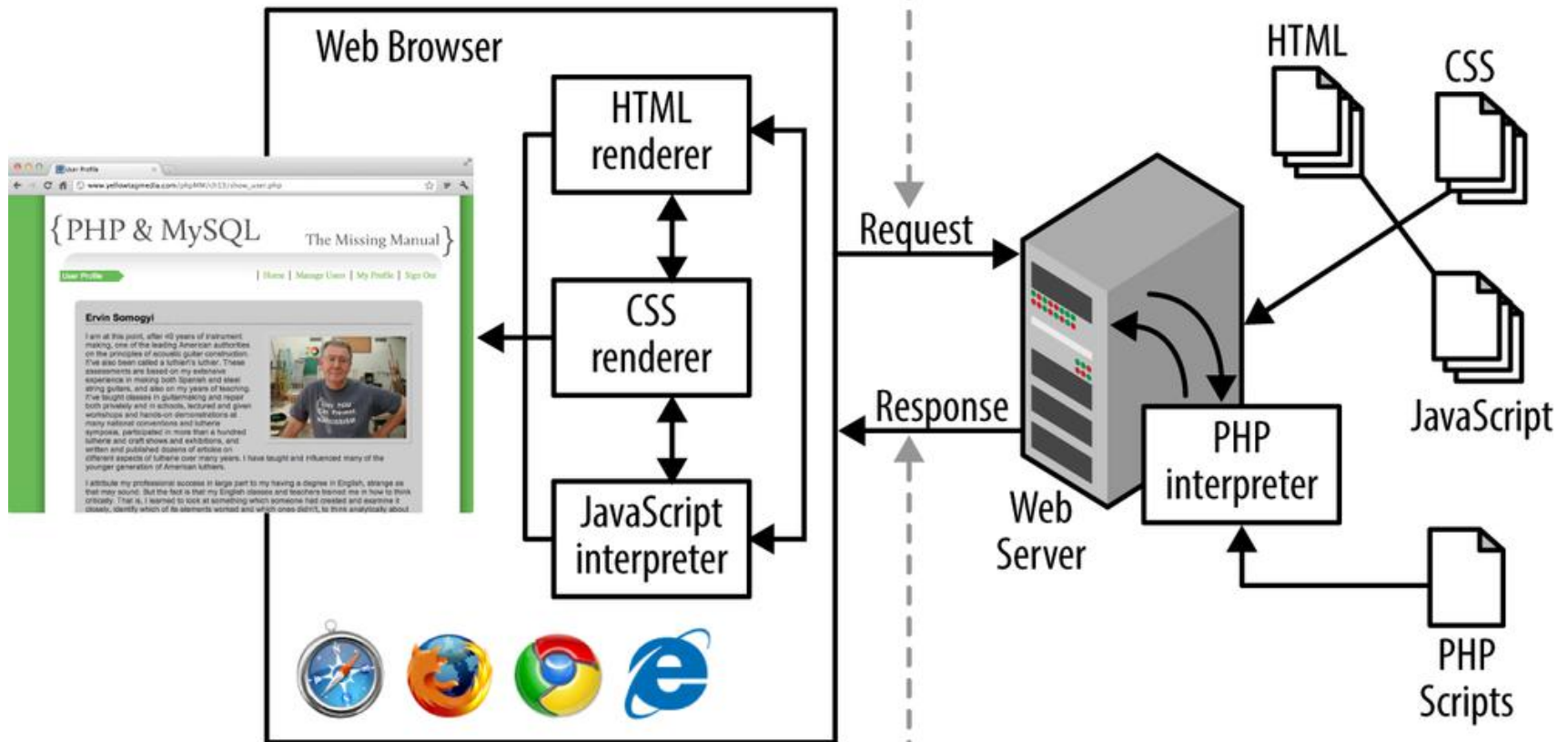
Web Server

Server web adalah sebuah perangkat lunak server yang berfungsi menerima permintaan HTTP atau HTTPS dari klien yang dikenal dengan browser web dan mengirimkan kembali hasilnya dalam bentuk halaman-halaman web yang umumnya berbentuk dokumen HTML.





Konsep



Could be for HTML, CSS,
PHP or a combination.

Response is not PHP,
but the result of
interpreting PHP, usually
more HTML and CSS.



HTTP Error Codes

- When something goes wrong, the web server returns a special "error code" number
- Common error codes:

Number

Meaning

200

OK

301-303

page has moved (permanently or temporarily)

403

you are forbidden to access this page

404

page not found

500

internal server error



Web Languages

- Hypertext Markup Language (HTML): used for writing web pages
- Cascading Style Sheets (CSS): stylistic info for web pages
- PHP Hypertext Processor (PHP): dynamically create pages on a web server
- JavaScript: interactive and programmable web pages
- Asynchronous JavaScript and XML (Ajax): accessing data for web applications
- eXtensible Markup Language (XML): metalanguage for organizing data



Client-Side Scripting

Bahasa pemrograman (web) yang proses pengolahannya dilakukan di komputer pengunjung (Client)

Contoh : HTML, CSS, JavaScript , XML



Server-Side Scripting

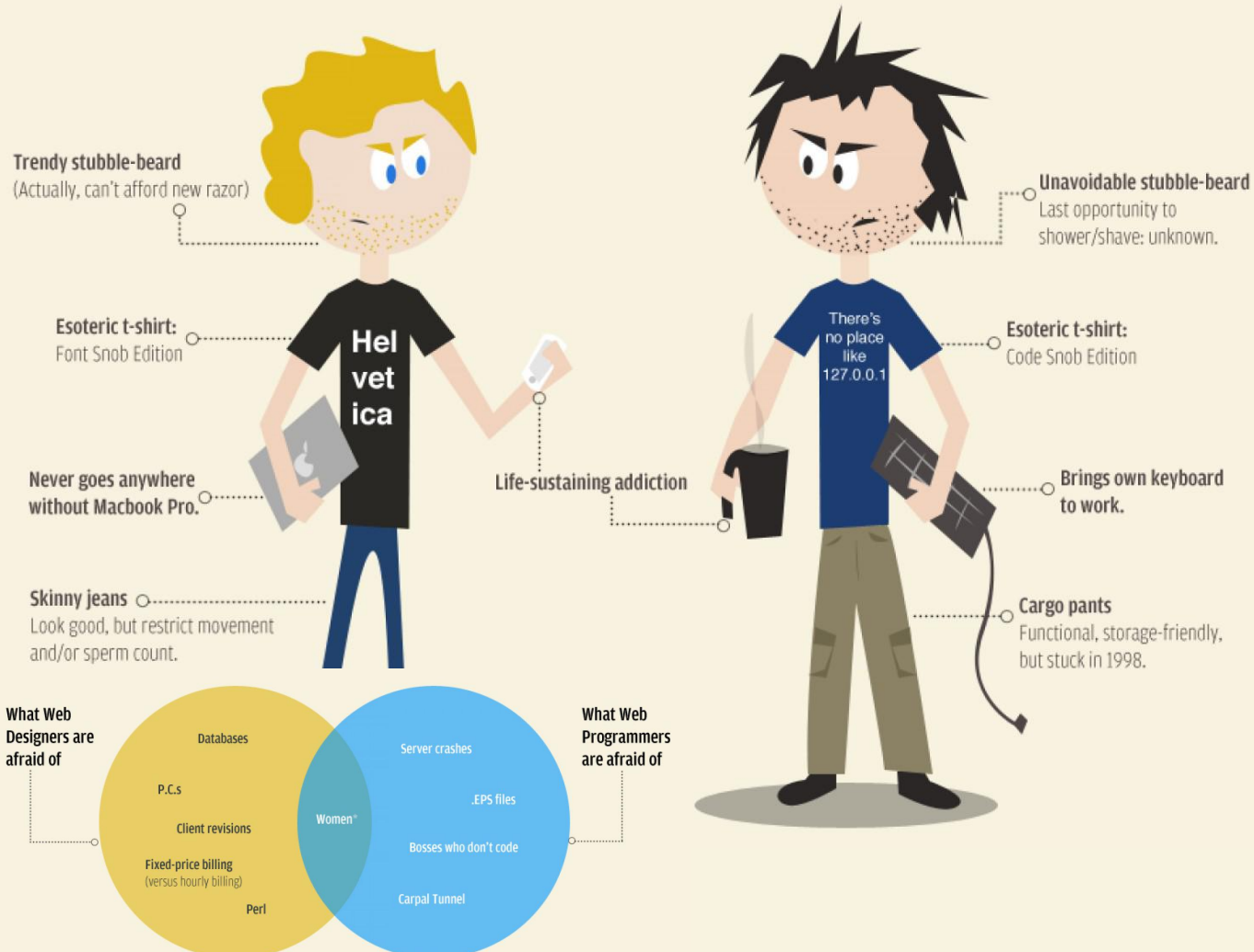
Bahasa pemrograman (web) yang pengolahannya dilakukan di komputer server dan hasil pengolahannya dikirimkan ke komputer client dalam bentuk bahasa html.

Contoh : PHP, ASP, JSP dan lain-lain.



Designer vs Programmer

WEB DESIGNERS VS WEB DEVELOPERS



*Yes, we know some designers and programmers are female. But the statement stands!



Web Design Trends

WEB DESIGN TRENDS OF

2

0

1

4



RESPONSIVE DESIGN

Responsive sites are those that have been optimized for each viewing experience; they are easy to read and navigate, with a minimal amount of scrolling, panning, or resizing necessary.

84%

of smartphone users use their smartphone to navigate the web.



FIXED HEADER BARS

By deploying simple CSS, designers have begun keeping the navigation bar at the top of the page in a fixed position;

This allows the user access to the header's menu items from anywhere on the page.



CONTENT IS KING

As focus shifts back to the content of the pages, the sites that remain popular and useful are those with the most engaging content.



of consumers feel more positive about a company after they read original, custom content on the company's website.



MINIMALISM

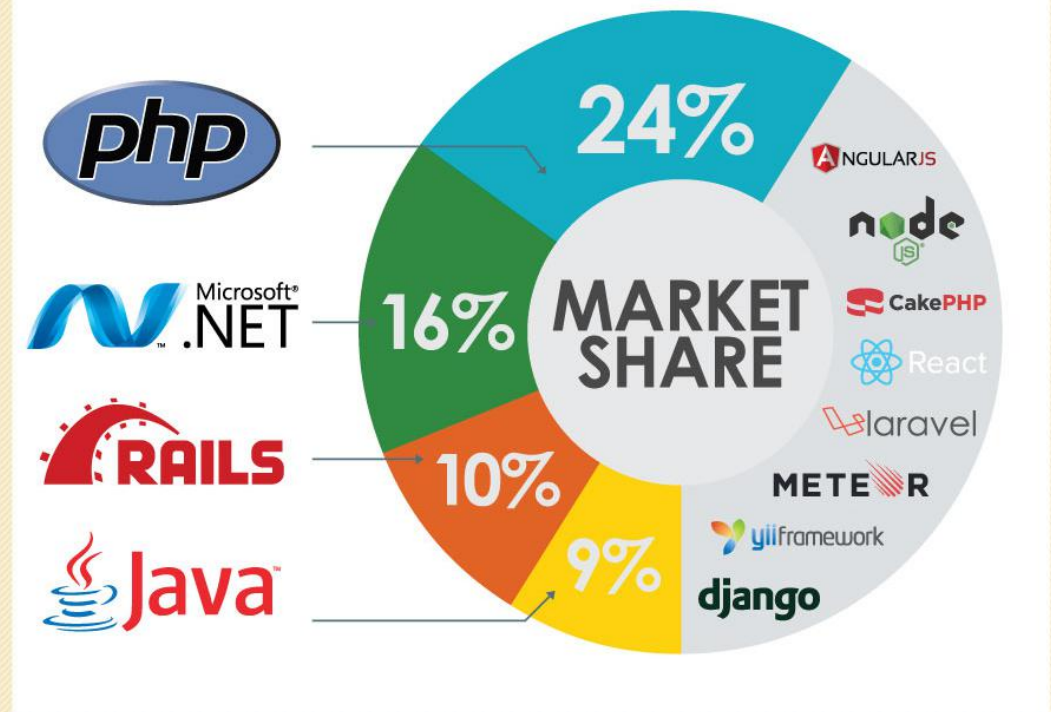
Everything from a site's layout to its color palettes and typography are being stripped down to the bare essentials as part of the move toward minimalist design.

Design trends are not the end-all of Web design; while a designer may allow current trends to inform their thought process, the principles of good design and a positive user experience should always win out in the end.



Web Dev Framework

MARKET SHARE ANALYSIS





Full Stack?

FULL STACK WEB DEVELOPMENT

Learn By Building 40+ Apps





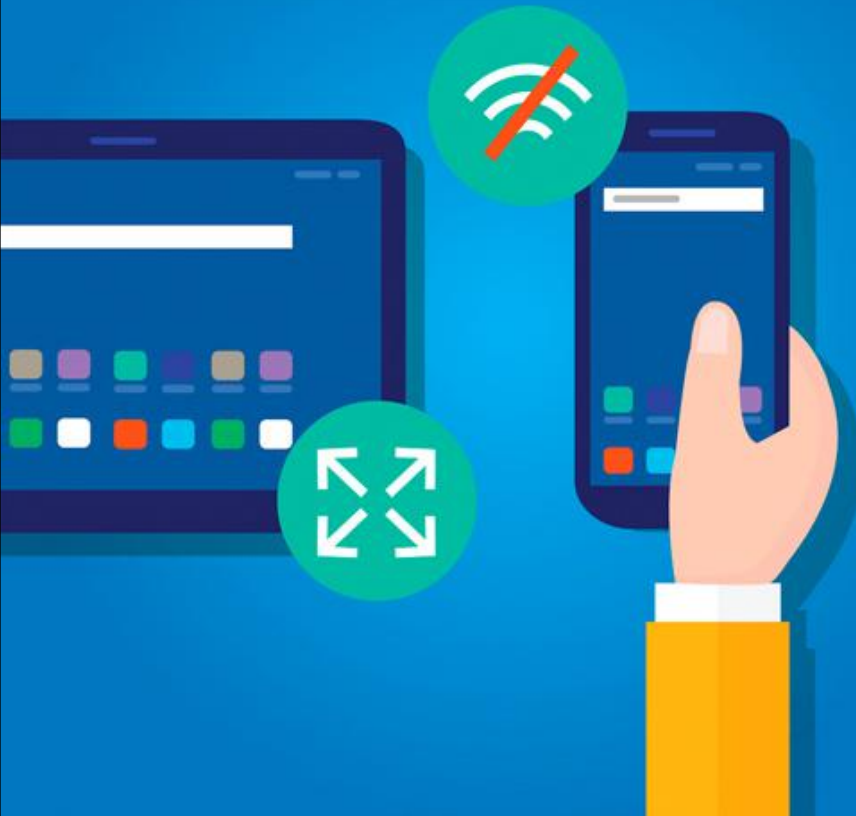
Instant Web (Content Management System)





Web Development Trends in 2019

Introducing the Progressive Web Apps (PWA)



You can offer a good UX as PWA gives full-screen experience because of which the brand identity is more visible and much stronger. Using push notification PWA can mimic the native app experience offering full control over when and what you want to 'push' to users. This helps to re-engage to the site by sharing web content with any app that is on your device but not limited to Facebook and Twitter for example.

One of the best things is that PWA can do all this offline. Your content will always be available even if you have a poor connection.



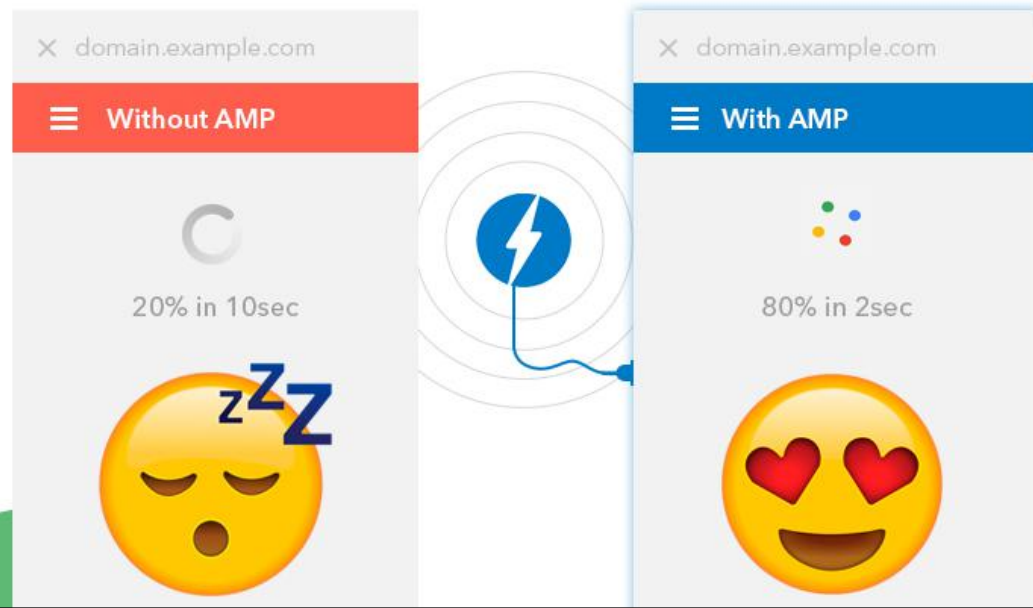
Web Development Trends in 2019

Adoption of AMP (Accelerated Mobile Pages)

AMP is a Google-led initiative to enhance the mobile web. You must implement AMP pages if you are keen to improve the speed of mobile pages. After all, good page speed has always been a significant ranking factor. Also, AMP pages have the opportunity to be featured in dedicated carousels at the top of relevant search pages. These two factors alone elevate the worth of having AMP pages for your website.



Accelerated Mobile Pages load **85% more faster**



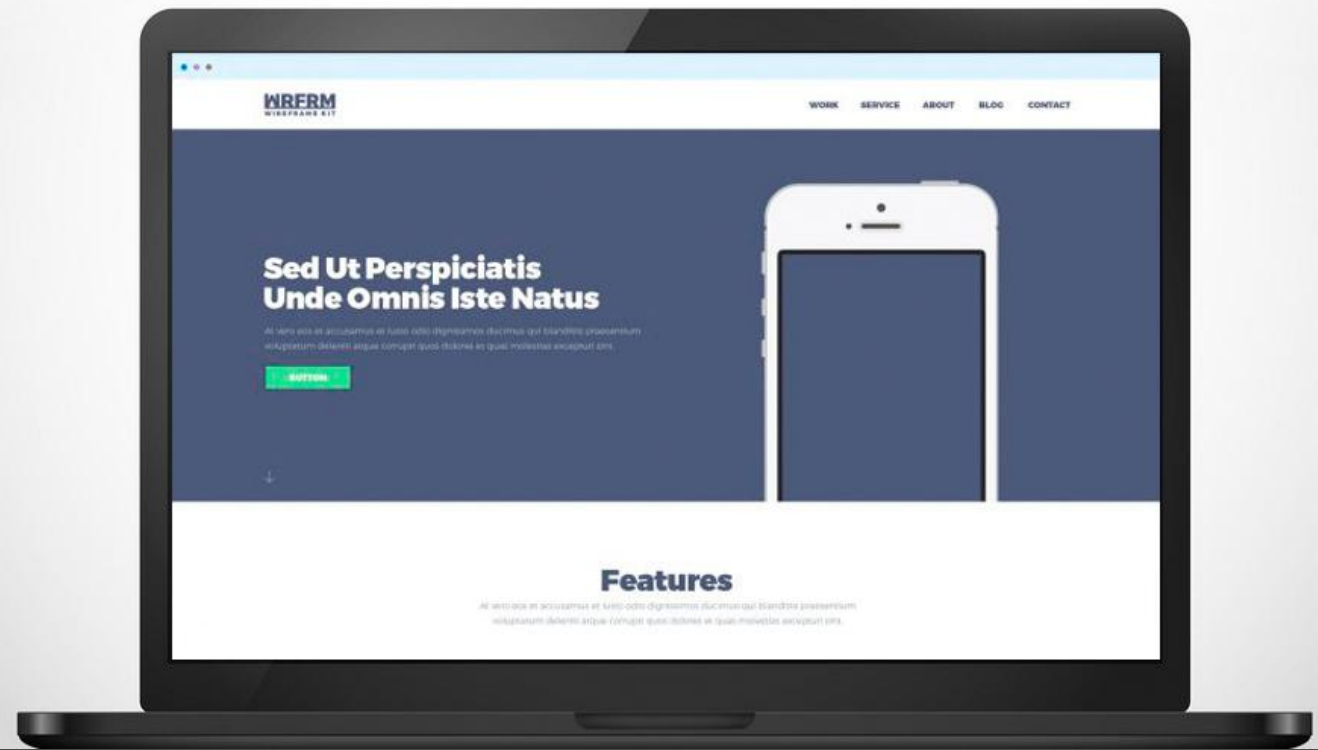


Web Development Trends in 2019

Thumbs up to Single Page Websites

One of the biggest pros of single page websites is their simplicity. No complex navigation, no deep menu to pass – many people today love such browsing on their mobile devices. Single web page design offers the best experience on mobile devices as they offer easy scrolling – a common navigation method. Knowing the popularity of smartphones such as web development style offers a modern solution to simplify your online needs while being inexpensive to develop.

Looking the way how people read websites, one must minimize the amount of the text on the webpage to improve conversion rates.





Web Development Trends in 2019

Chatbots

Good customer service is the key to flourishing businesses. Chatbots ensure that there is always someone available 24x7 helping your business while avoiding the need to hire a full-time online customer service representative.





Software development

- PHP
- Webserver (Apache/NGinX)
- Database (MySQL / MariaDB)
- Code Editor



Code Editor

- Notepad
- Notepad++
- SublimeText
- Visual Studio Code
- Adobe Dreamweaver
- Atom
- Vim
- Eclipse
- Netbeans
- PHPStorm
- Komodo
- Aptana
- ZendStudio
- NUSphere