Miscellaneous; class 3 & 4

Time on the internet per week : 60h minimum

Web vs Internet :

* Web is page related
* ~~Site Internet~~ in French -> Site Web
* Web has idea of a spider web
* Both are graph but doesn’t represent the same thing
* In Internet :
  + Nodes are computer
  + Arcs are wires (or wireless)
  + Allow redundancy (in case of nuclear attack during cold war)
  + Start 1950s
  + Trading systems and banks needed the same kind of network
  + Soo build it together -> internet
* In Web :
  + Nodes are pages
  + Arcs are links
  + Oriented graph, each link point from somewhere to somewhere else
  + Start 1990s
  + Start in Geneva by Tim Berners Lee wanted to build a documentation system to help the Cern with this issue (began in 1989 and first page in 1992)
  + 3 decisions :
    - Format : ASCII + markers
    - Version : Client - Server, one and only document is on the server, don’t keep the copy
    - Structure : Hypertext
    - Hyper Text Markups Language : HTML
    - Hyper Text Transfert Protocol : HTTP
  + Creation of the World Wide Web
  + HTML Evolution with creation of CSS : In the beginning personal css and now each website has own css
  + Javascript : interaction inside browser
  + Software to interpret and display HTML
    - Services = Daemons in Unix, works in shadows, background tasks
    - Web server :
      * First name was HTTPD
      * APACHE -> a patch
      * IIS by Microsoft
      * NGINX
    - Browser : Blood Fire Death
      * First Mozaic
      * Then best Netscape : THE browser before the first browser war
      * IE with Windows 98, it’s a link sale and abuse of dominant position, killed netscape, Microsoft got sued & lost but too late. Didn’t use the same standards so to keep market share because in dominant position
      * 2002 : Firefox crowdfunded so created Mozilla Foundation with respected standards and code inspector
      * Chrome to be independent for javascript speed when developing Drive
      * Fight to first to implement HTML5 when everybody had same market share 30%
      * Chrome is now the biggest player, relay on fame, “don’t be the evil one”
  + DNS lookup table
  + VHost
  + HTTP 200 ok
  + HTTP 404 file not found
  + HTTP 30\* don’t have but you can find it there
  + HTTP 50\* not working well
  + Nowadays HTML is created at the time the page is asked, usually with a PHP engine, send result of the PHP file processing
  + PHP = PHP Hyper Processor
    - <https://whydoesitsuck.com/why-does-php-suck/>
    - <https://webonastick.com/php.html>
    - Personal Home Page ?????
  + Perl, Ruby, Python, Js, Node.js
  + AJAX : Asynchronous Js And Xml (or JSON)

Development process:

**Idea**

* **Meeting**
  + **Document**
    - **Implementation**

**↓**

* + - **Production**

**- stats**

**- traffic**

**- earnings**

* **Graph meeting**
* **Function meeting**
* **Integration meeting**

### Technologies

|  |  |  |  |
| --- | --- | --- | --- |
| **Client** | **Server** | **Framework** | **CMS** |
| HTML  CSS  JS  React  JQuery  AngularJS | PHP  Node.js  Ruby on Rails  Python  Perl | Laravel | |
| Cakephp  Symfony  Zend  Meteor  Matamo (Piwik) | Wordpress (with Templates and Plugins)  Joomla  Drupal  SPIP  PHPBB / PUNBB (& extensions)  Prestashop  Mager PRO |
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You also need :

### Hosting

* Dedicated : Physical machine for you, with great powers come great responsibilities
* Mutalized : no freedom, no program installation. You share resources with everyone else.
  + + Everything is configured by someone else
  + + cheap
* VPS : run any OS at the same time separately, freedom but shared resources. Not too expensive. You can extend it (bigger server, more memory…) without having to change anything.

### Domain Name

* + **Top Level Domain (TLD)** : .com, .net, .org, .pro, .io, .edu, .gov…
    - All of these names are restricted to US system
  + **Countries** : .fr, .uk, .se, .ge, .es, .me(Montenégro), .tv (petite île, 2nd pays le moins peuplé)…
  + .xxx can be rented or can be forbidden for 2 different prices
  + Price varies with :
    - Top level domain
    - Register
    - Special domain name : 2 letters + dictionary word with 4 letters
    - 15 €/y
    - If it’s asked a lot or not (ex : data very asked => very expensive)
* The country where is located your server decides of which laws are applied to it.

### Statistics

* **Server** : bots, search engine..
* **Built in** : daily income for shop, number of death in game
* **3rd Part**
  + **Trackers :** each time someone reads your page, a script is called thanks to it. This means that a servers knows when you’re loading a page in a browser (Matomo , gAnalytics, xiti). Very dangerous if most people uses google services.
  + Cookies and traffic of visitors

### Traffic

Referencing with links pointing to your website

SEO : search engine optimisation

* Write for the internet while keeping text clean
* Page Rank (PG) : the more links to a given website the more it’s a relevant website. Going from 0 to 10.
* Google is not a public service.They can do what they want, if they want to make you disappear, they can. Don’t try to fool google algorithm
* Advertisement

### Earnings

* Selling website
* Display advertisement (gAddsense)
* Open donations (Wikipedia)