

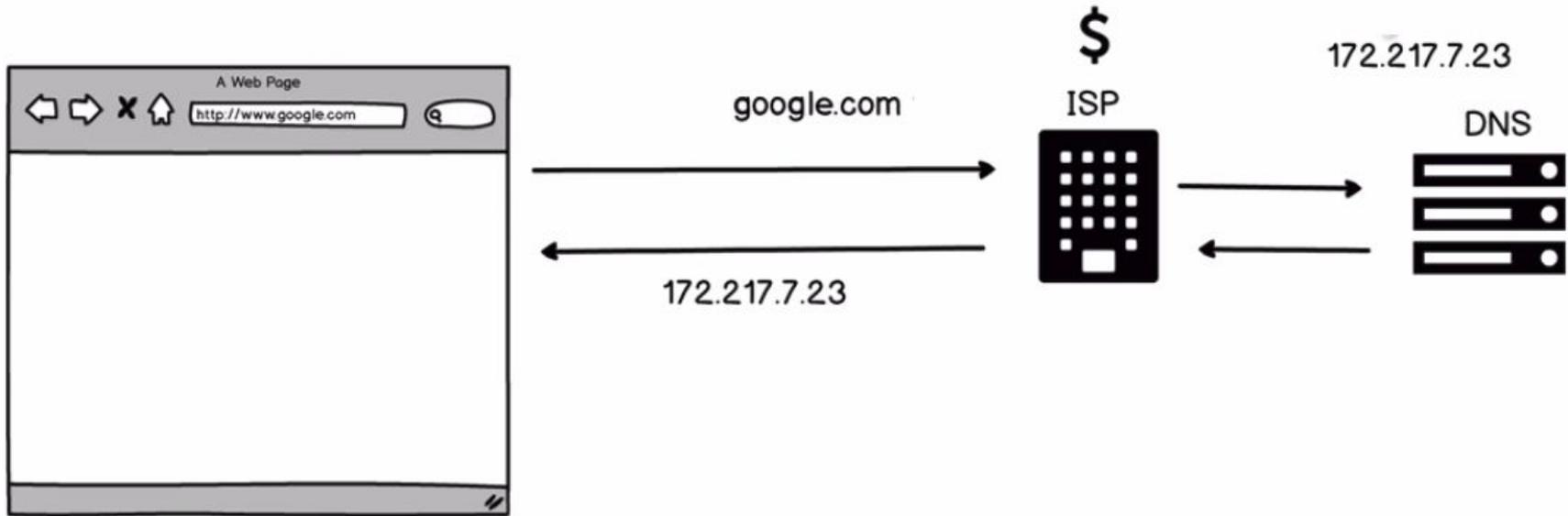


المدرسة العليا
للتكنولوجيا - الصويرة
L'ÉCOLE SUPÉRIEURE DE
TECHNOLOGIE – ESSAOUIRA

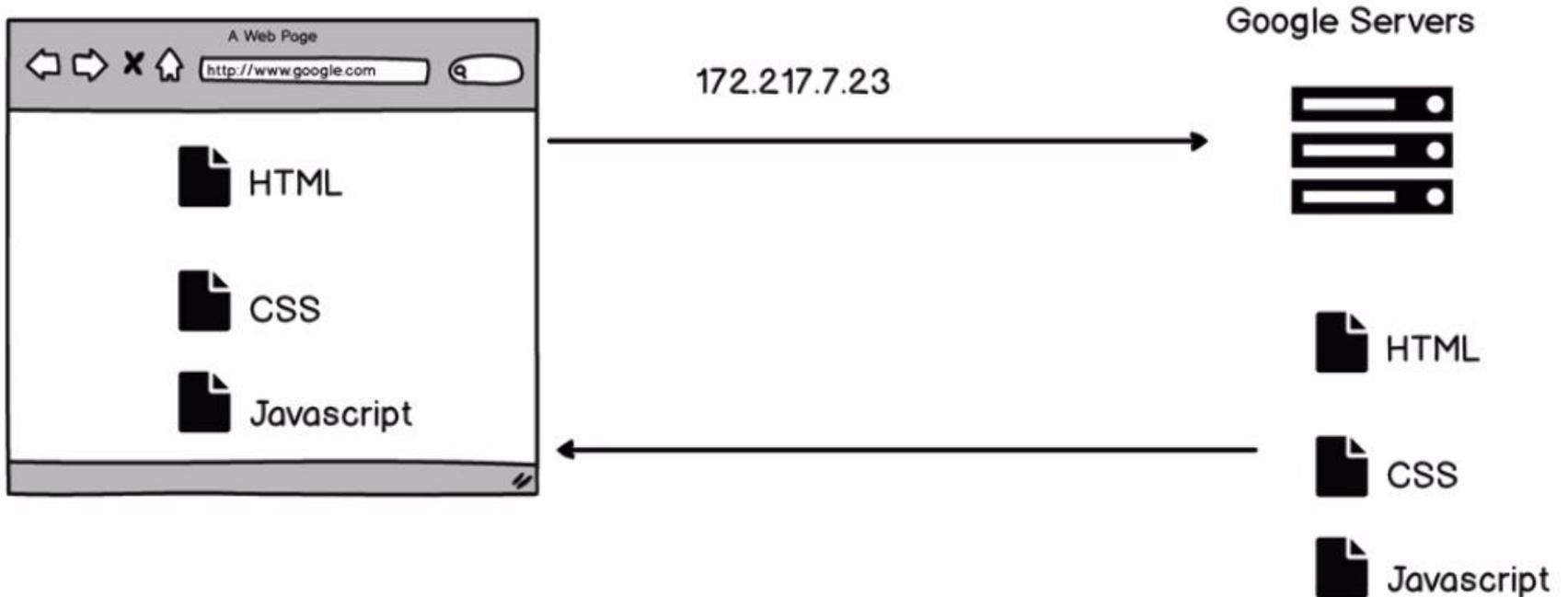
Introduction au Développement Web

Gounane Said
2020/2021

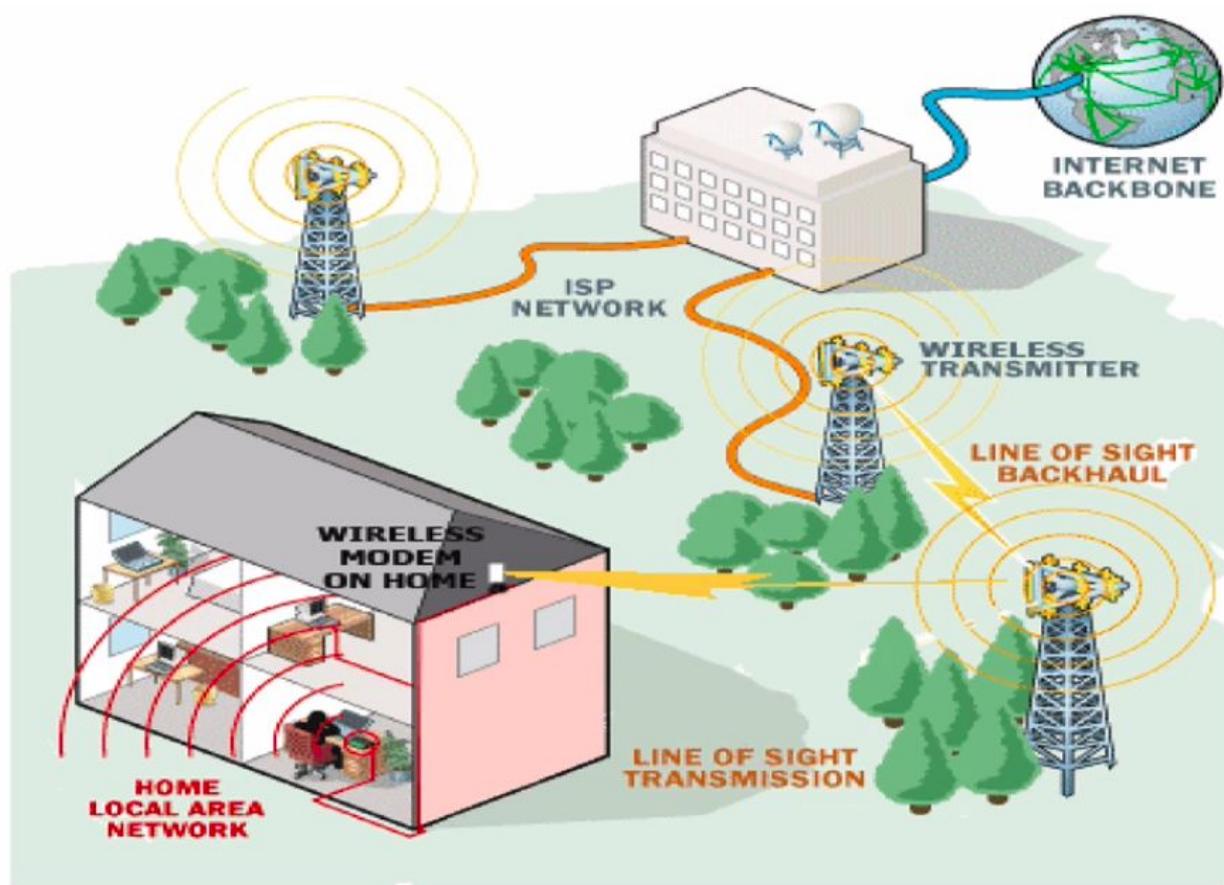
Introduction



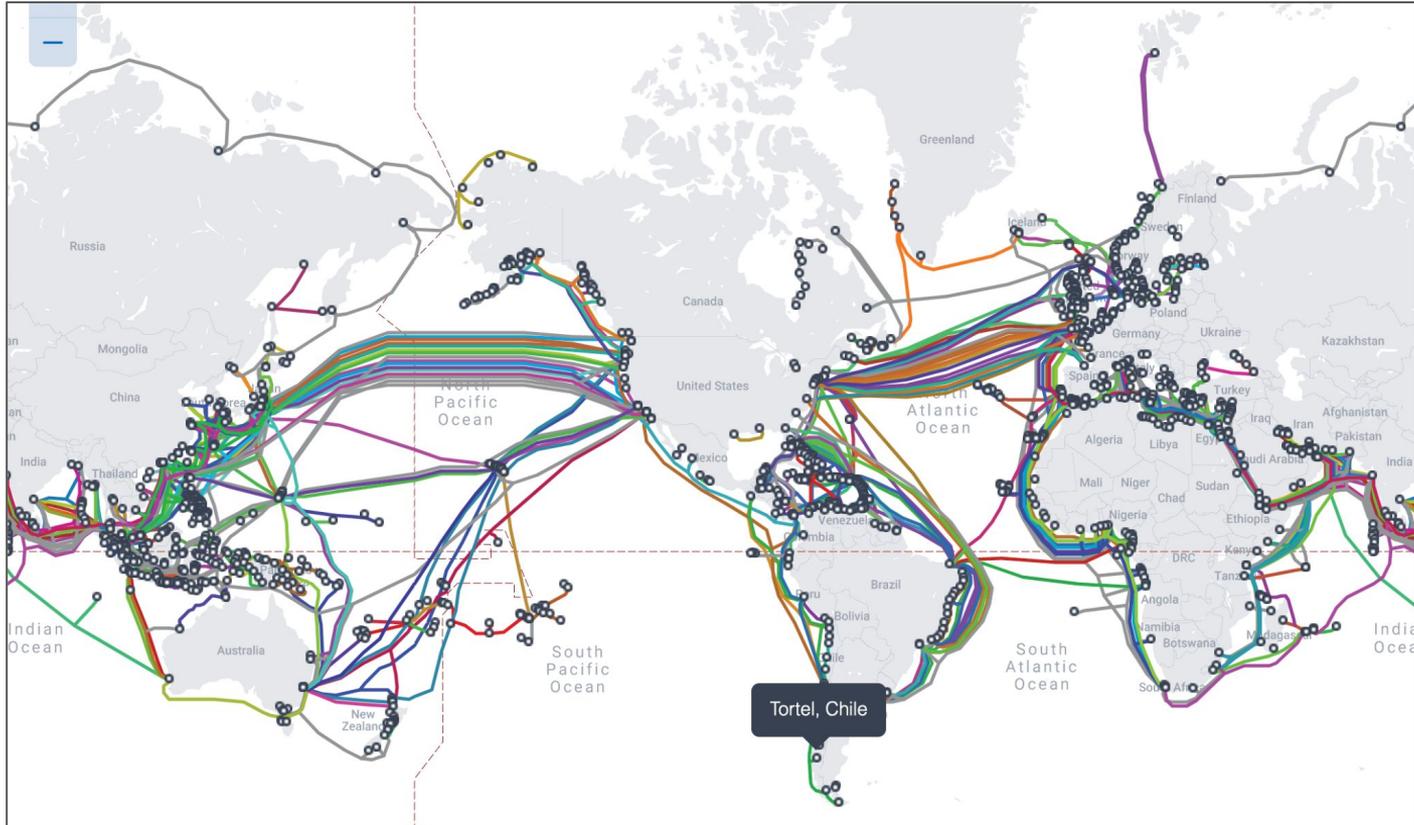
Introduction



Internet



Internet



<https://www.submarinecablemap.com/>

Traceroute

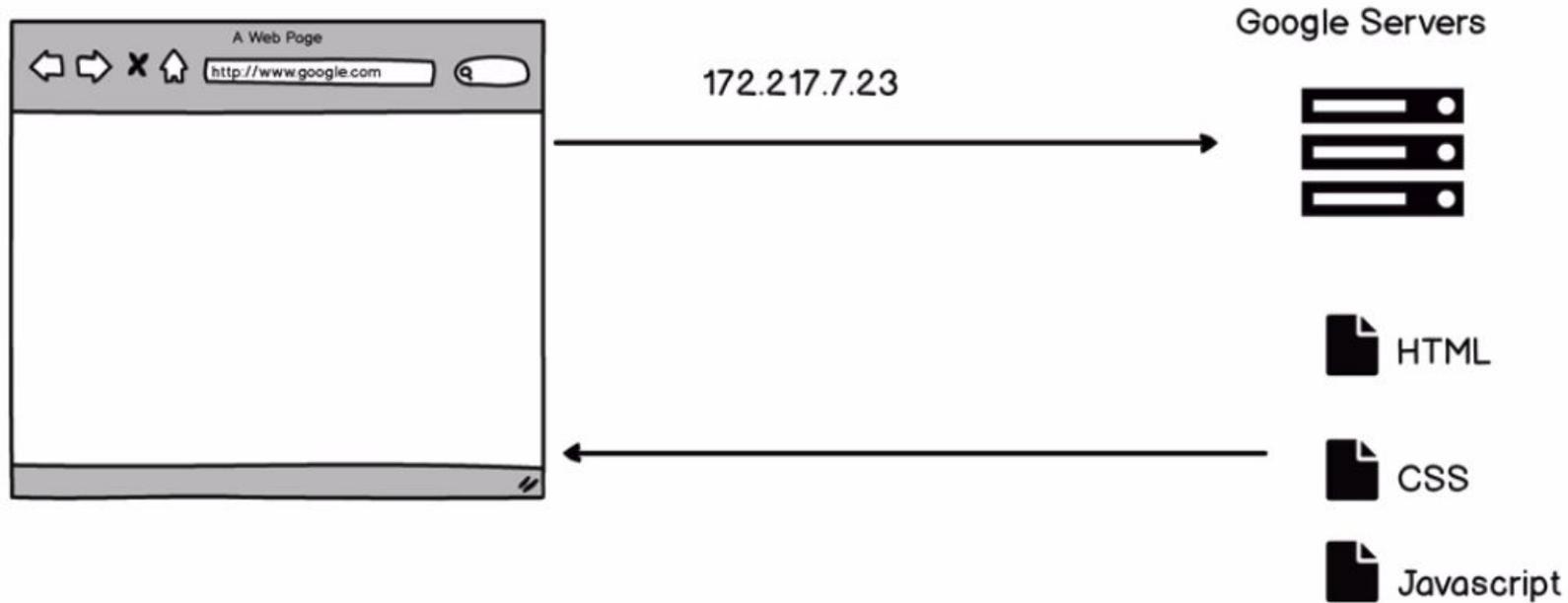
Dans un terminal tapez: \$traceroute google.com

```
~/Desktop traceroute google.com
traceroute to google.com (172.217.1.14), 64 hops max, 52 byte packets
 1  router.asus.com (192.168.1.1)  1.282 ms  1.282 ms  1.282 ms
 2  10.68.128.1 (10.68.128.1)  8.355 ms  8.345 ms  8.009 ms
 3  10.0.66.69 (10.0.66.69)  8.970 ms  8.446 ms  9.744 ms
 4  10.0.18.33 (10.0.18.33)  10.317 ms  11.940 ms
    10.0.18.25 (10.0.18.25)  11.968 ms
 5  17-6-226-24.rev.cgocable.net (24.226.6.17)  12.075 ms  12.430 ms  12.095 ms
 6  209.85.173.40 (209.85.173.40)  11.064 ms  11.185 ms  10.714 ms
 7  108.170.250.225 (108.170.250.225)  11.732 ms  11.092 ms
    108.170.250.241 (108.170.250.241)  10.771 ms
 8  216.239.35.233 (216.239.35.233)  10.259 ms  11.475 ms
    216.239.35.235 (216.239.35.235)  10.905 ms
 9  yyz10s14-in-f14.1e100.net (172.217.1.14)  10.000 ms  10.000 ms  10.000 ms
~/Desktop █
```

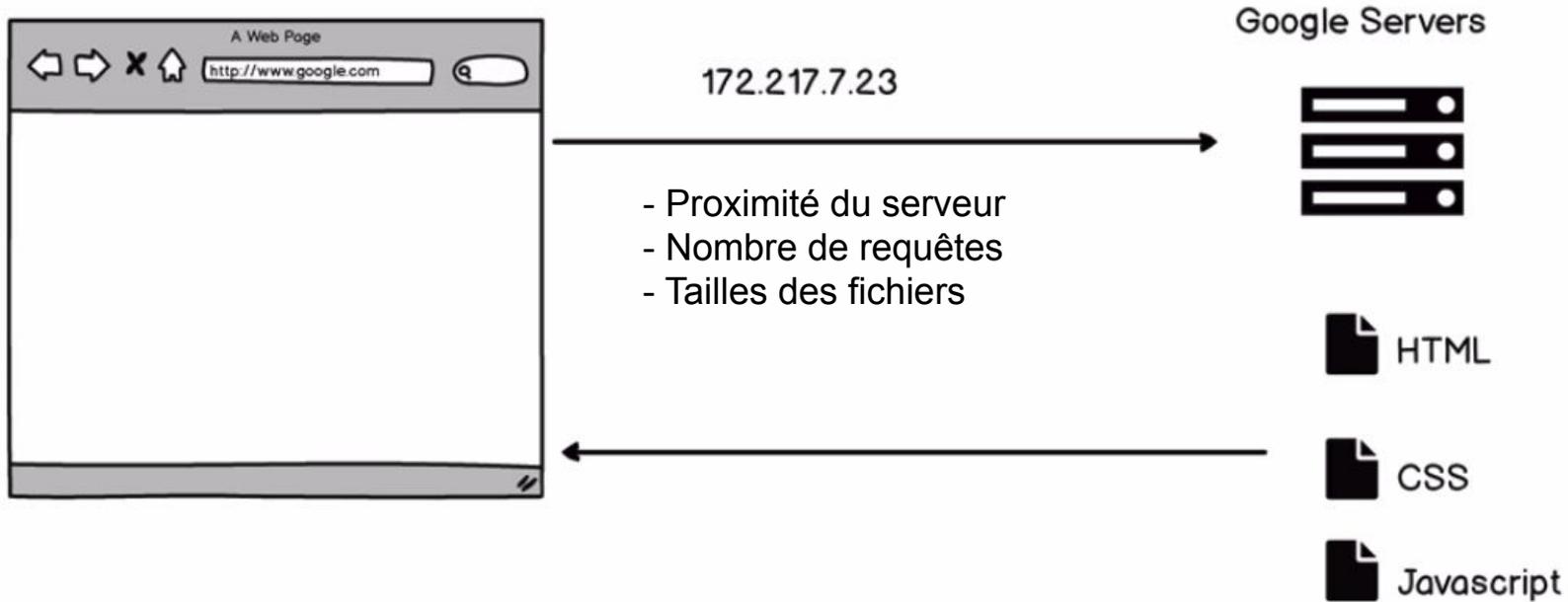
Home Router

Google Server

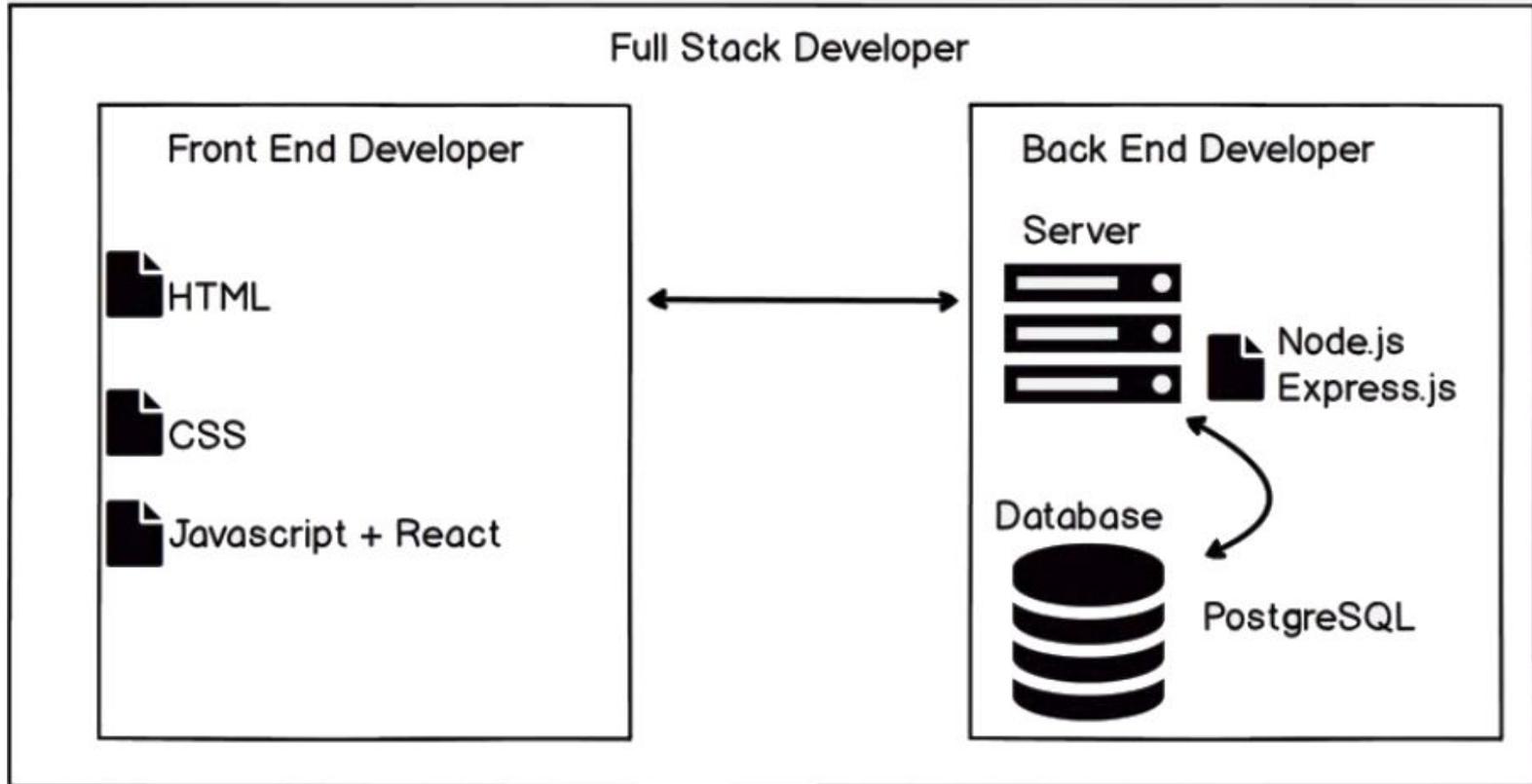
Pour un site réactif



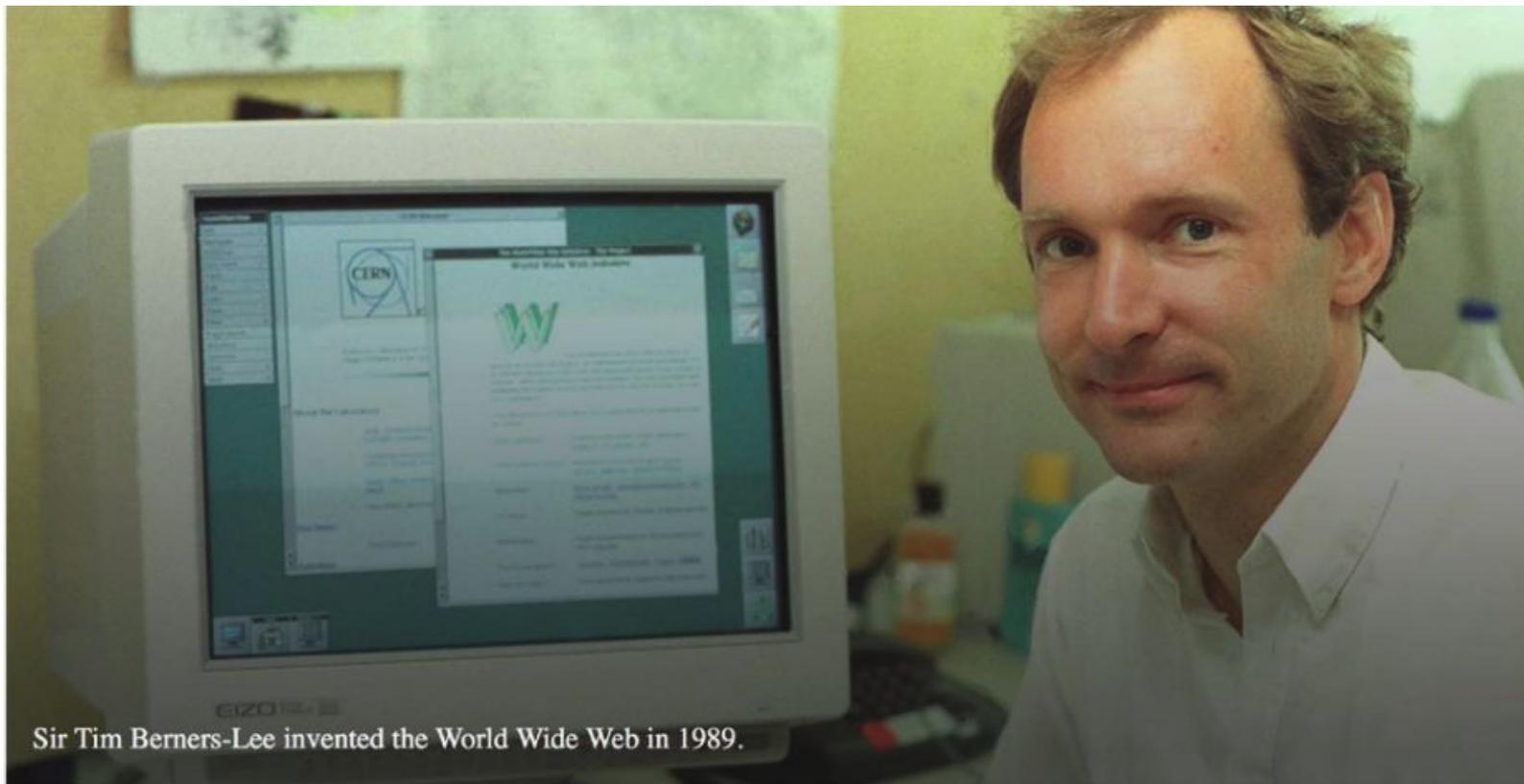
Pour un site réactif



Que fait un développeur web?



Histoire du web

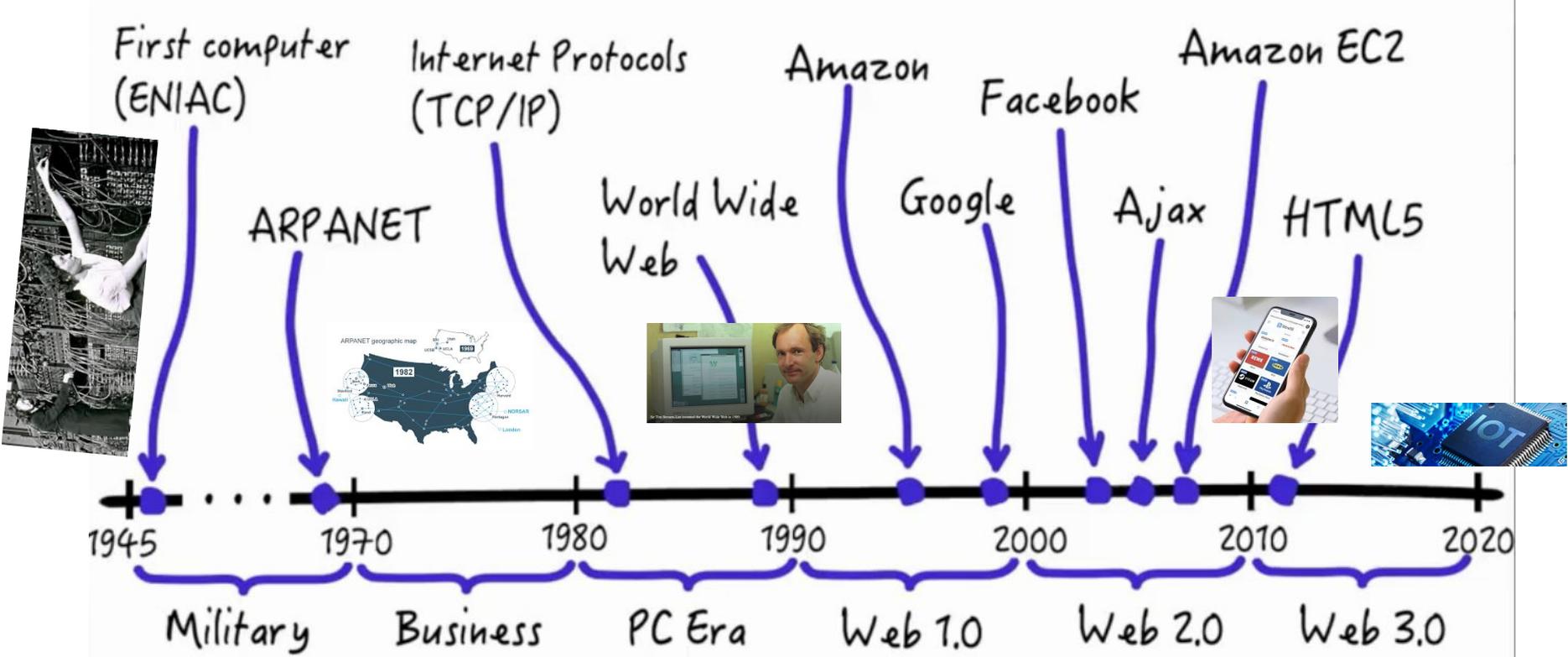


Sir Tim Berners-Lee invented the World Wide Web in 1989.

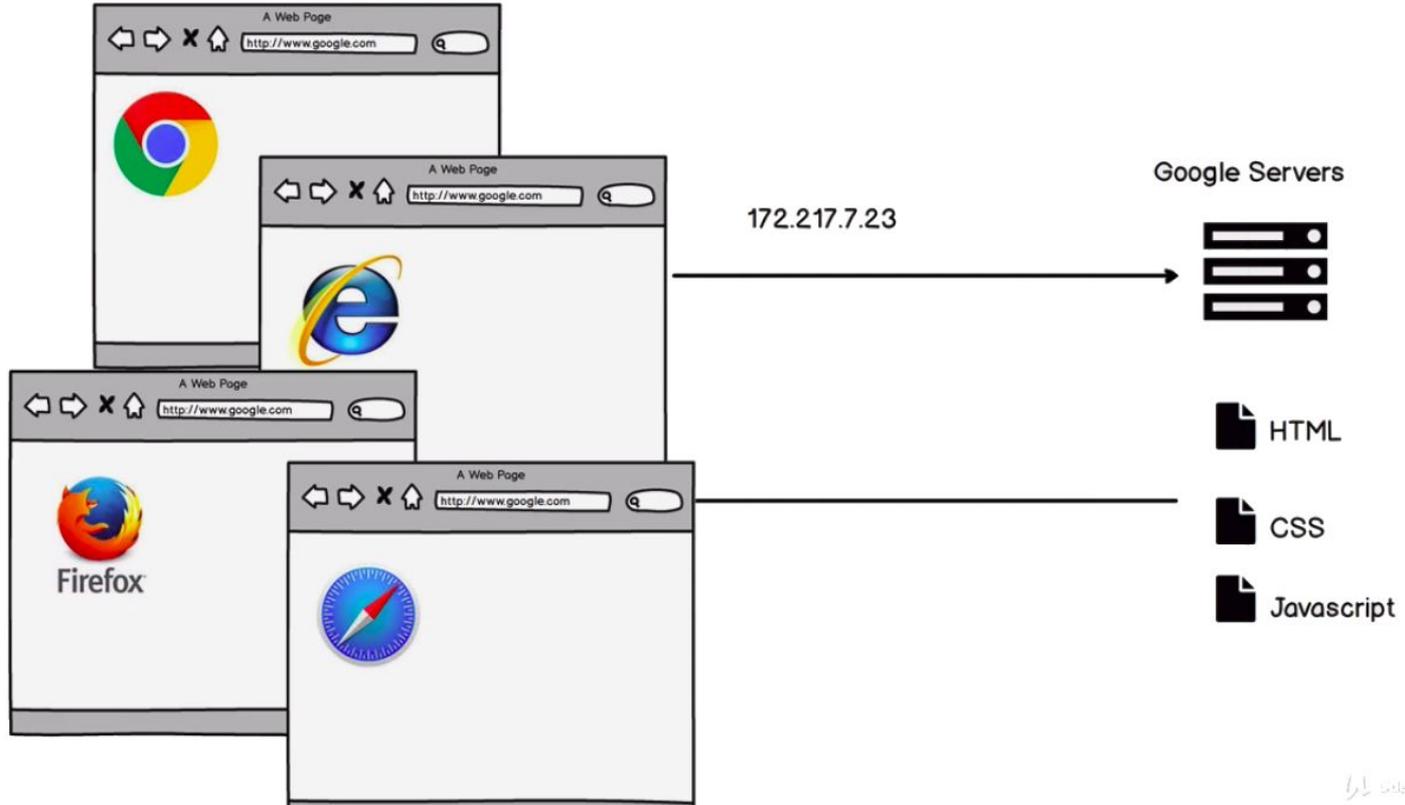
Histoire du web (internet vs web)

1. 40 maps that explain the internet : <https://www.vox.com/a/internet-maps>
2. Premier site web: <http://info.cern.ch/hypertext/WWW/TheProject.html>

Histoire du web (internet vs web)



Browser war



Devices



Firefox



172.217.7.23



Google Servers



HTML



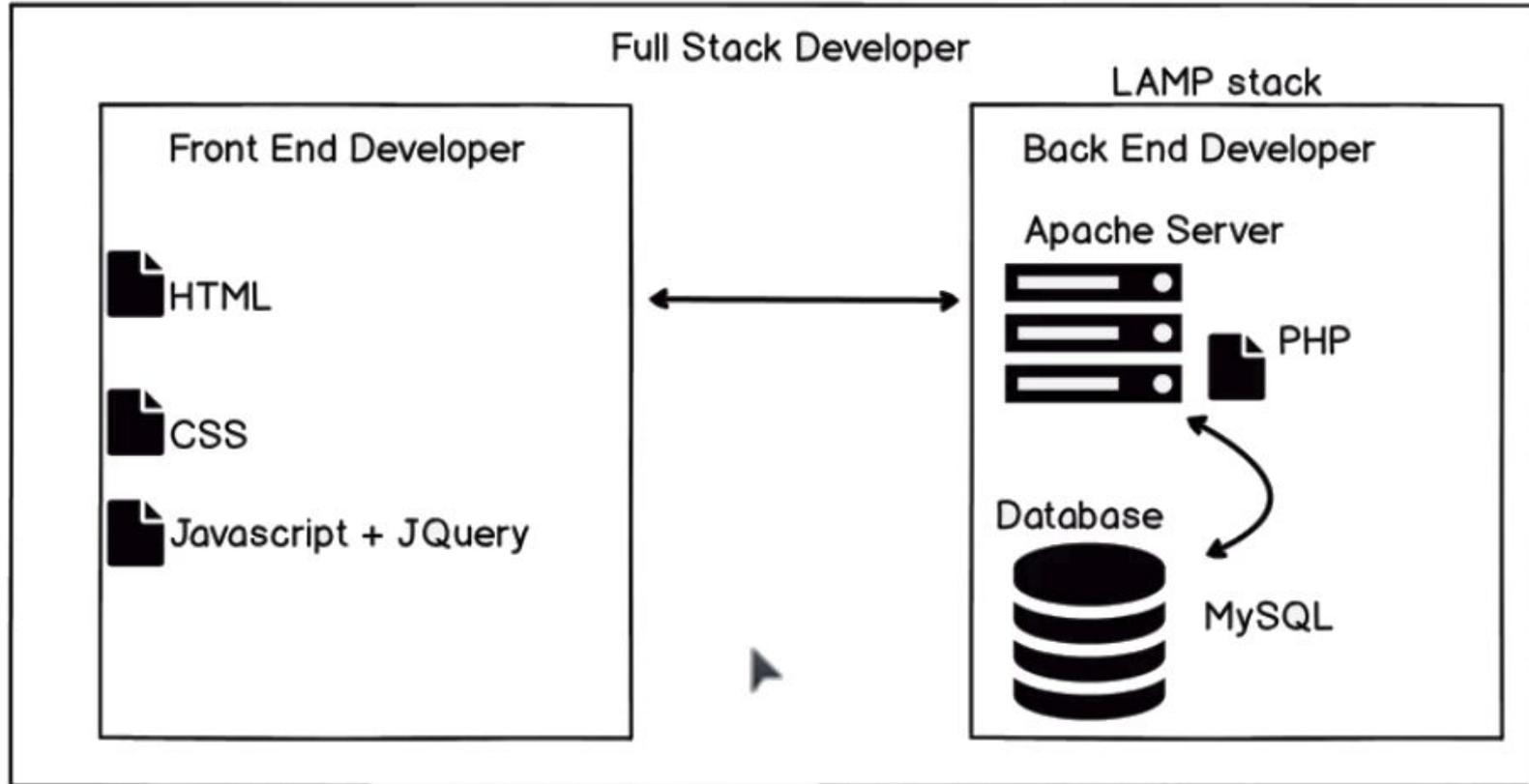
CSS



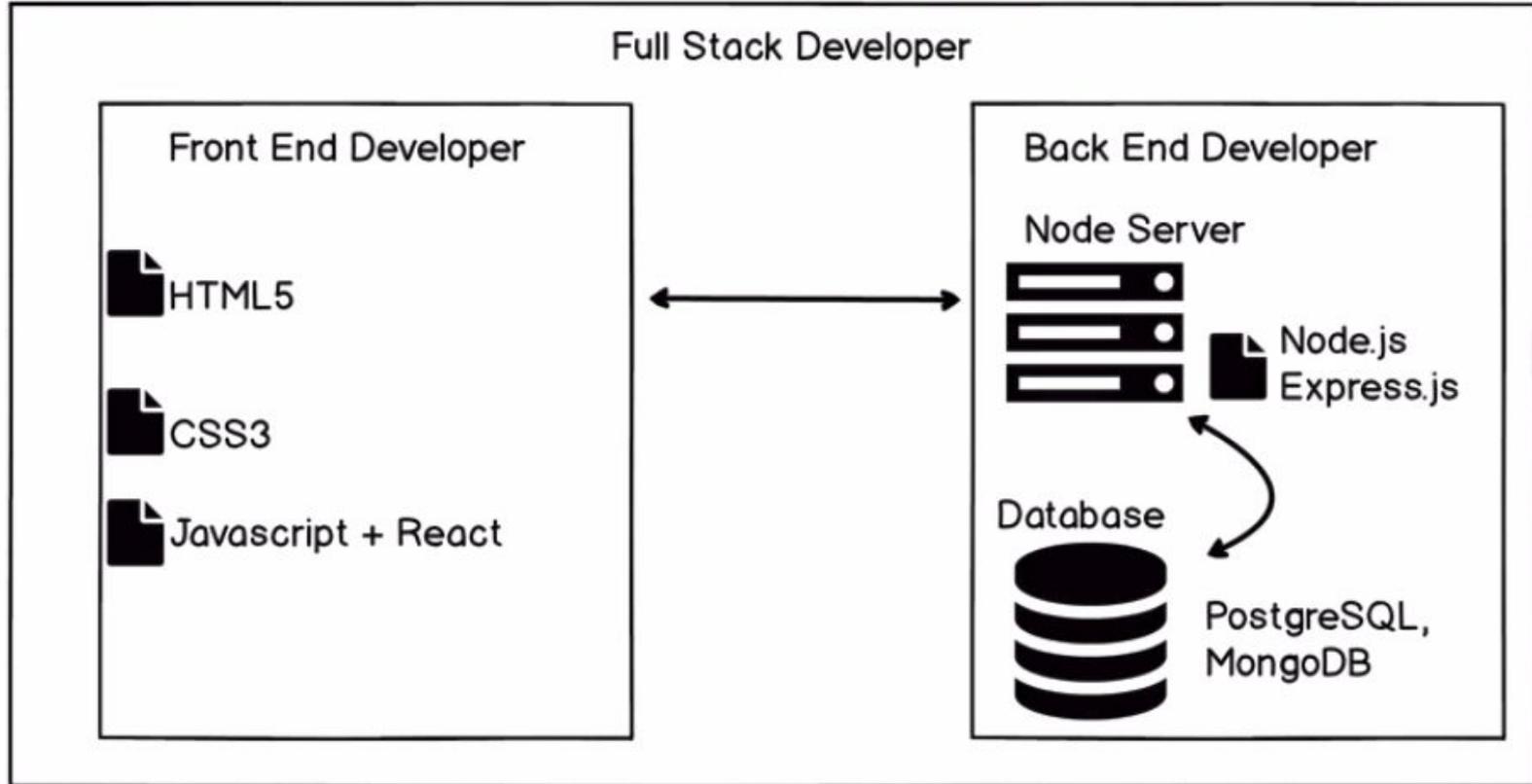
Javascript



Développement web



Développement web



Le Protocole HTTP

C'est quoi HTTP

- **H**yper **T**ext **T**ransfer **P**rotocol
- Assure la Communication entre un client et un serveur
- Essentiellement sous forme de Requête/Réponse
- Chaque requête est indépendante des précédentes (Stateless)
- Charger des pages, envoyer des formulaires ...

C'est quoi HTTPS

- Hyper **T**ext **T**ransfer **P**rotocol **S**ecure
- Echange des données cryptées
- SSL (Secure Sockets Layer) / TLS (Transfer Layer Security)
- Il faut installer un certificat sur le serveur

HTTP: Méthodes

- GET: récupérer des données du serveur
- POST: envoyer des données au serveur
- PUT: mettre à jour des données sur le serveur
- DELETE: supprimer des données du serveur

HTTP : Header

▶ **GET** https://www.google.com/

Status **200 OK** 
Version HTTP/2
Transferred 43.05 KB (131.40 KB size)
Request Priority Highest

▼ Request Headers (804 B)

Raw 

-  **Accept:** text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
-  **Accept-Encoding:** gzip, deflate, br
-  **Accept-Language:** en-US,en;q=0.5
-  **Connection:** keep-alive
-  **Cookie:** 1P_JAR=2022-10-20-12; AEC=AakniGMjy6zoHKAjDRmDfX5Hd3gctDWSL_1f43WA1t2m6n77swJzmmLFLA; NID=511=E7loqCuG-9dh6cq8dl8sLJ6JEIL3YCDBHzlvif_YDnkW84irDX9WZ6NFgwiiGWsqMgzQR-wW2rEOICib3e13RaC3fN9HCmnE8Ru9j4c6A-YIZ9wl-Yxmbiu9M56hmTzdAvvrz2Y7a9aXfW18QXx6ds0iHgYK3xmcgtFjIE9on0; ANID=AHWqTUmgGdJzSLn8w8l5l929NGrdJf1ovJdpK7tnf9hDLUiiQJtkZ7B9FVT3vrjt
-  **DNT:** 1
-  **Host:** www.google.com
-  **Sec-Fetch-Dest:** document
-  **Sec-Fetch-Mode:** navigate
-  **Sec-Fetch-Site:** none
-  **Sec-Fetch-User:** ?1
-  **TE:** trailers
-  **Upgrade-Insecure-Requests:** 1
-  **User-Agent:** Mozilla/5.0 (Macintosh; Intel Mac OS X 10.15; rv:105.0) Gecko/20100101 Firefox/105.0

HTTP : Header

▼ Response Headers (612 B) Raw

- [alt-svc](#): h3=":443"; ma=2592000,h3-29=":443"; ma=2592000,h3-Q050=":443"; ma=2592000,h3-Q046=":443"; ma=2592000,h3-Q043=":443"; ma=2592000,quic=":443"; ma=2592000; v="46,43"
- [cache-control](#): private, max-age=0
- [content-encoding](#): br
- [content-length](#): 40941
- [content-type](#): text/html; charset=UTF-8
- [date](#): Thu, 20 Oct 2022 12:37:55 GMT
- [expires](#): -1
- [server](#): gws
- [set-cookie](#): 1P_JAR=2022-10-20-12; expires=Sat, 19-Nov-2022 12:37:55 GMT; path=/; domain=.google.com; Secure; SameSite=none
- [strict-transport-security](#): max-age=31536000
- [X-Firefox-Spdy](#): h2
- [x-frame-options](#): SAMEORIGIN
- [x-xss-protection](#): 0

HTTP: Status Code

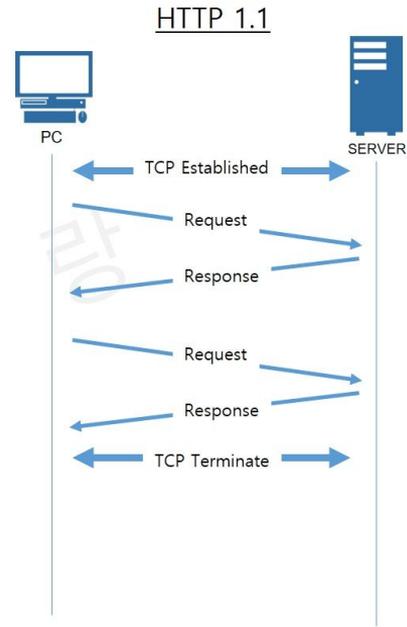
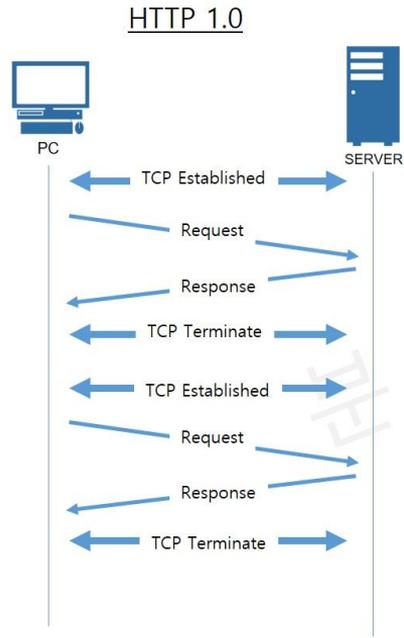
- 100 - 199 : Les réponses informatives,
- 200 - 299 : Les réponses de succès ,
- 300 - 399 : Les messages de redirection,
- 400 - 499 : Les erreurs du client,
- 500 - 599 : Les erreurs du serveur.

<https://developer.mozilla.org/fr/docs/Web/HTTP/Status>

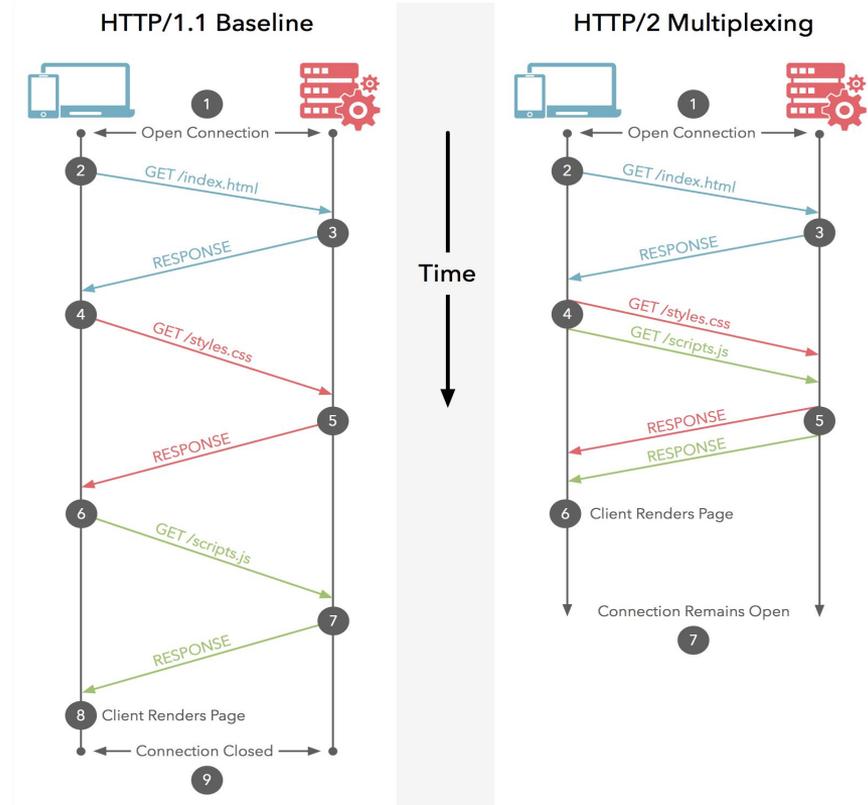
HTTP: Status Code

- 200 : OK
- 201 : OK Created
- 301 : Moved Permanently
- 304 : Not Modified
- 400 : Bad Request,
- 401 : Unauthorized
- 403 : Forbidden
- 404 : Not Found
- 405 : Method Not Allowed
- 500 : Internal Server Error
- 502 : Bad Gateway

HTTP 1.0 Vs HTTP 1.1



HTTP 1.1 Vs HTTP 2

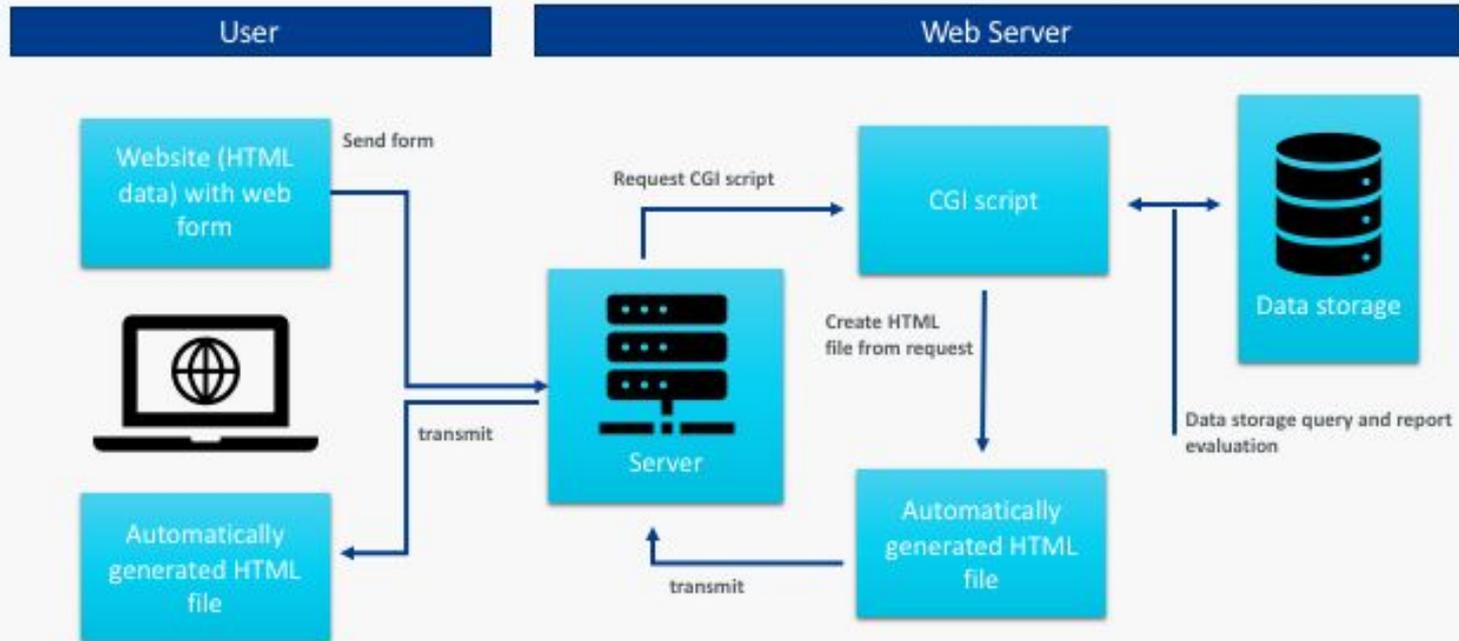


CGI, qu'est-ce que c'est ?

- CGI signifie Common Gateway Interface.
- Permet à un serveur web d'exécuter des script et envoyer la sortie aux clients.
- Ces script peuvent être écrits dans n'importe quel langage supporté par le serveur: BASH, Korn shell, Perl, Python, java, C !

CGI, qu'est-ce que c'est ?

Mode of operation of Common Gateway Interfaces



Premier script CGI

- Pour les exemples présentés dans le reste de cette partie il faut :
 - Installer un serveur web : apache (xamp)
 - Shell Bash sous une distro Linux et mac ou Linux Bash Shell sous windows
 - Éditeur de texte (vi, nano, vs code ..)
- Dans le dossier cgi-bin créer un fichier *hello* avec le contenu ci contre.
- `$ chmod +x hello`
- Dans le navigateur visitez : `http://localhost/cgi-bin/hello`

cgi-bin/hello

```
#!/bin/bash
echo "Content-type: text/html "
echo ""
echo '<html>'
echo '<head>'
echo '<meta'
http-equiv="Content-Type"
content="text/html; charset=UTF-8">'
echo '<title>Hello World</title>'
echo '</head>'
echo '<body>'
echo 'Hello World'
echo '<br>'
date
echo '</body>'
echo '</html>'

exit 0
```

Si le serveur ne reconnaît pas le chemin du script, ajouter la ligne: `ScriptAlias "/cgi-bin/" "/chemin/vers/ledossier/cgi-bin/"` au fichier `httpd.conf`

Les variables d'environnement

cgi-bin/echoenv

```
#!/bin/bash

echo "Content-type: text/html"
echo ""
cat << EOT
<html>
  <head>
    <title>Hello World</title>
  </head>
  <body>
    <h1>Hello World</h1>
EOT
env
echo "</body></html>"
exit 0
```

```
SERVER_SIGNATURE=
HTTP_SEC_FETCH_DEST=document
HTTP_SEC_FETCH_USER=?1
UNIQUE_ID=Y1HTTghoXpsLtp_kBhFQ0AAAAAQ
HTTP_USER_AGENT=Mozilla/5.0 (Macintosh; Intel Mac OS X 10.15; rv:105.0) Gecko/
SERVER_PORT=80
HTTP_HOST=localhost
DOCUMENT_ROOT=/Applications/XAMPP/xamppfiles/htdocs
SCRIPT_FILENAME=/Applications/XAMPP/xamppfiles/cgi-bin/echoenv
REQUEST_URI=/cgi-bin/echoenv
SCRIPT_NAME=/cgi-bin/echoenv
HTTP_CONNECTION=keep-alive
REMOTE_PORT=56070
PATH=/usr/bin:/bin:/usr/sbin:/sbin
CONTEXT_PREFIX=/cgi-bin/
PWD=/Applications/XAMPP/xamppfiles/cgi-bin
SERVER_ADMIN=you@example.com
REQUEST_SCHEME=http
HTTP_ACCEPT_LANGUAGE=en-US,en;q=0.5
HTTP_ACCEPT=text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,i
REMOTE_ADDR=127.0.0.1
SHLVL=1
SERVER_NAME=localhost
SERVER_SOFTWARE=Apache/2.4.53 (Unix) OpenSSL/1.1.1o PHP/8.1.6 mod_perl/2.0.12
HTTP_SEC_FETCH_MODE=navigate
QUERY_STRING=
SERVER_ADDR=127.0.0.1
GATEWAY_INTERFACE=CGI/1.1
HTTP_UPGRADE_INSECURE_REQUESTS=1
SERVER_PROTOCOL=HTTP/1.1
HTTP_ACCEPT_ENCODING=gzip, deflate, br
HTTP_SEC_FETCH_SITE=none
REQUEST_METHOD=GET
HTTP_COOKIE=username=localhost-8888="2|1:0|10:1665008079|23:username=localhost
CONTEXT_DOCUMENT_ROOT=/Applications/XAMPP/xamppfiles/cgi-bin/
```

La Query String

```
#!/bin/bash

echo "Content-type: text/html "
echo ""
cat << EOT
<html>
  <head>
    <title>Hello World</title>
  </head>
  <body>
    <h1>Hello World</h1>
EOT
oldIFS=$IFS
```

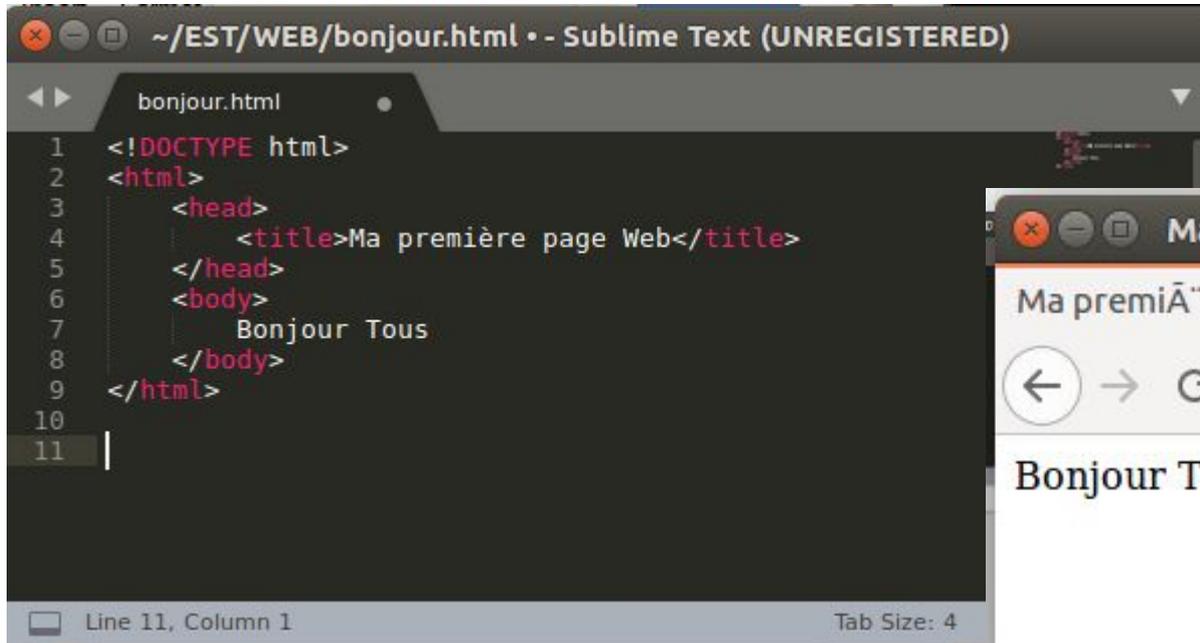
cgi-bin/qs

```
IFS='=&'
param=$QUERY_STRING
#echo "$param"
for i in $param
do
  echo "$i"
  echo "<br>"
done
IFS=$oldIFS
echo "</body>"
echo "</html>"
exit 0
```

2- HTML5

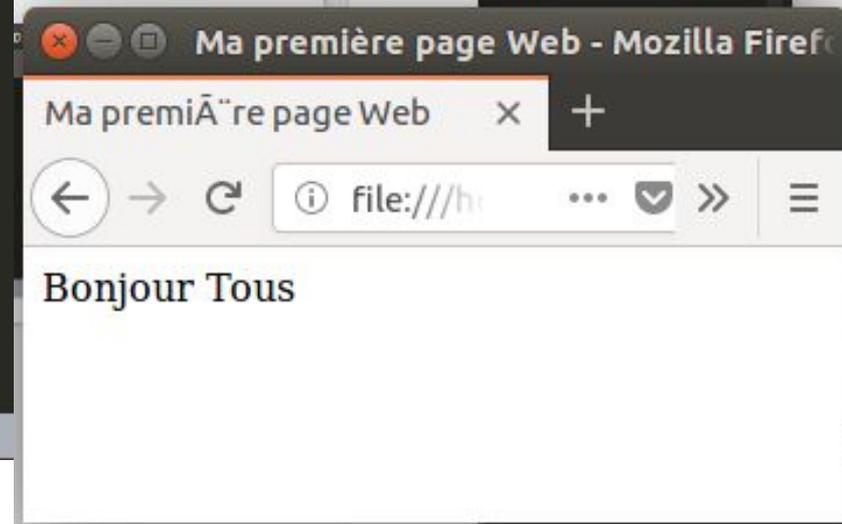
Environnement de travail

1. Éditeur de texte: Vs code, sublime text, Atom, notpad++, gedit



```
~/EST/WEB/bonjour.html • - Sublime Text (UNREGISTERED)
bonjour.html
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>Ma première page Web</title>
5   </head>
6   <body>
7     Bonjour Tous
8   </body>
9 </html>
10
11 |
```

Line 11, Column 1 Tab Size: 4



Balises & Attributs

Les Balise

- Les pages HTML sont remplies de balises.
- Invisibles à l'écran pour les visiteurs
- Permettent à l'ordinateur de comprendre ce qu'il doit afficher.
- Elles sont entourées de chevrons < et > <balise>
- On distingue deux types de balises :
 - les balises en paires `<titre>Ceci est un titre</titre>`
 - les balises orphelines. `<image />`

Balises & Attributs

Les attributs

- Les attributs sont des options des balises.
- Ils donnent des informations supplémentaires.
- L'attribut se place après le nom de la balise ouvrante et a le plus souvent une valeur

```
<balise attribut="valeur">.... </balise>
```

- Exp:

```
<image src="photo.jpg" />
```

L'ordinateur comprend alors qu'il doit afficher l'image contenue dans le fichier photo.jpg

- Remarque: Dans le cas d'une balise fonctionnant « par paire », on ne met les attributs que dans la balise ouvrante et pas dans la balise fermante.

Structure de base d'un page HTML

```
<!DOCTYPE html>                                <!-- doctype -->
<html>     <!-- Englobe tout le contenu de votre page. -->
  <head>    <!-- Informations générales sur la page -->
    <!-- Détermine comment les caractères spéciaux vont s'afficher -->
    <meta charset="utf-8" />
    <title>Titre</title>
  </head>
  <body>    <!-- Partie principale visible de la page -->
  </body>
</html>
```

Fondamentaux

Impossible de se rappeler de tout

⇒ Google.com

<https://www.w3schools.com/>

Balises HTML: <h1>,<h2>.....<h6>

```
~/EST/WEB/bonjour.html - Sublime Text (UNREGISTERED)
bonjour.html x
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>Ma première page Web</title>
5   </head>
6   <body>
7     <h1>Bonjour Tous!</h1>
8     <h2>Bonjour Tous!</h2>
9     <h3>Bonjour Tous!</h3>
10    <h3>Bonjour Tous!</h3>
11  </body>
12 </html>
13
14
Line 13, Column 1; Saved ~/EST/WEB/bonjour.html (UTF-8)
```



Balises HTML: <p>



The image displays two windows side-by-side. The left window is Sublime Text (UNREGISTERED) editing a file named 'bonjour.html'. The code is as follows:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>Ma première page Web</title>
5   </head>
6   <body>
7     <h1>Bonjour Tous!</h1>
8     <p>Lorem ipsum dolor sit amet, consectetur
9     adipiscing elit</p>
10    <p>sed do eiusmod tempor incididunt ut
11    labore et dolore magna aliqua. Ut enim ad
12    minim veniam,
13    quis nostrud exercitation ullamco laboris
14    nisi ut aliquip ex ea commodo
15    consequat. </p>
16    <p>Duis aute irure dolor in reprehenderit
17    in voluptate velit esse
18    cillum dolore eu fugiat nulla pariatur.
19    Excepteur sint occaecat.</p>
20  </body>
21 </html>
```

The right window is Mozilla Firefox displaying the rendered page. The title bar reads 'Ma première page Web - Mozilla Firefox'. The address bar shows 'file:///home/gnu...'. The page content is:

Bonjour Tous!

Lorem ipsum dolor sit amet, consectetur adipiscing elit

sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

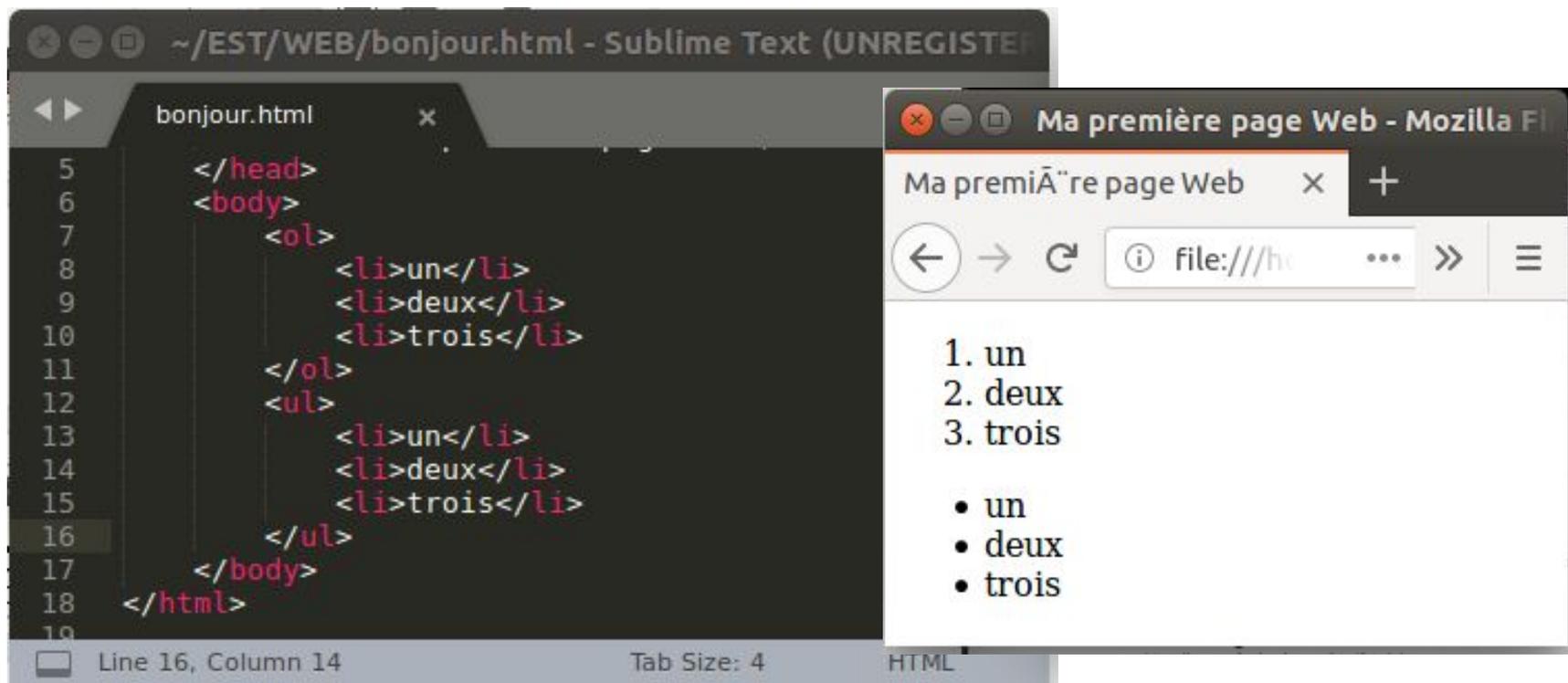
Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat.

Mise en valeur d'un text

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8" />
    <title>Titre</title>
  </head>
  <body>
    <p> <!-- Ces balises indiquent à l'ordinateur que Ce texte est important -->
      Lorem ipsum dolor sit, amet consectetur adipisicing elit. Asperiores voluptatem
      <em>--similique repudiandae -- </em> deserunt minima commodi non <strong> *perspiciatis*
      </strong> tenetur perferendis quibusdam <mark> laboriosam voluptate </mark> molestiae
      autem quos!
    </p>
  </body>
</html>
```

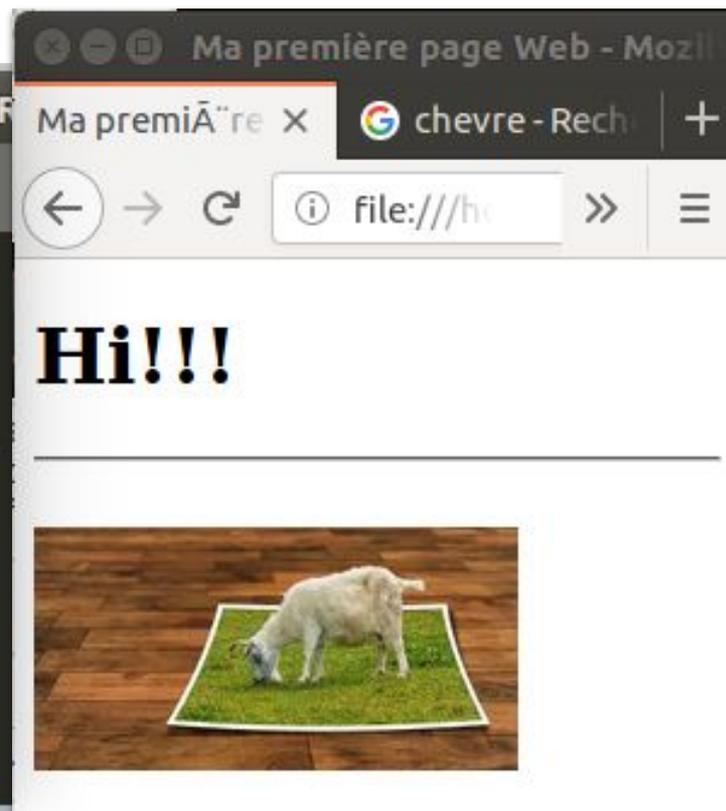
Lorem ipsum dolor sit, amet consectetur adipisicing elit. Asperiores voluptatem
--similique repudiandae -- deserunt minima commodi non ***perspiciatis*** tenetur
perferendis quibusdam laboriosam voluptate molestiae autem quos!

Balises HTML: ,



Balises HTML: ``; `
`; `<hr />`

```
~/EST/WEB/bonjour.html - Sublime Text (UNF
bonjour.html x
5     </head>
6     <body>
7         <h1>Hi!!!</h1>
8         <hr />
9         <br/>
10        
13    </body>
14 </html>
```



Les liens hypertexte

- Il s'agit d'un texte sur lequel on peut cliquer pour se rendre sur une autre page.
 - Lien vers un autre site
 - Lien vers une autre page dans le même site
 - Lien vers un autre endroit dans la même page
- Par défaut les liens sont écrits en bleu et soulignés et un curseur en forme de main apparaît lorsqu'on pointe dessus.
- Pour faire un lien, on utilise la balise `<a>`. Avec l'attribut, *href*, pour indiquer vers quelle page le lien doit conduire.

```
<a href="http://learn.este.ovh">Cours Web</a>
```

Les liens hypertexte

```
<!-- Lien vers un site -->  
<a href="http://learn.este.ovh">Cours Web</a>  
  
<!-- Lien vers une page dans le même dossier dans le même site -->  
<a href="web.html">Cours Web</a>  
  
<!-- Lien vers une page dans le sous dossier "cours" dans le même site -->  
<a href="cours/web.html">Cours Web</a>  
  
<!-- Lien vers une ancre dans la même page -->  
<a href="#css">Cours Web</a>  
  
<!-- Lien vers une ancre dans une autre page -->  
<a href="page02.html#css">Cours Web</a>  
  
<!-- il faut que la page contient une balise avec un attribut id="css"-->  
<h2 id="css">Introduction à css</h2>
```

Les liens hypertexte

```
<!-- pour afficher une infobulle -->  
<a href="http://learn.este.ovh" title="voir le cours">Cours Web</a>  
<!-- Ouvrir la page dans une nouvelle fenêtre -->  
<a href="http://learn.este.ovh" target="_blank">Cours Web</a>  
<!-- Envoyer un email à admin@este.ovh -->  
<a href="mailto:admin@este.ovh">Nous contacter</a>  
<!-- Télécharger un fichier -->  
<a href="cous.pdf">Télécharge le cours</a>
```

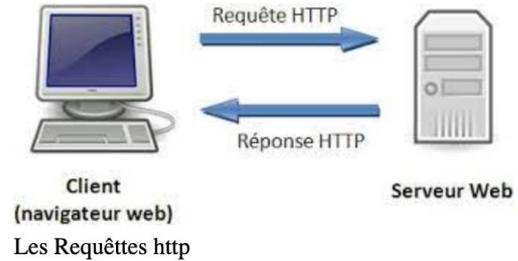
Les figures

- Les figures sont des éléments qui viennent enrichir le texte pour compléter les informations de la page.
- Elles peuvent être de différents types :
 - images ;
 - codes source ;
 - citations ;
 - tout ce qui vient illustrer le texte est une figure.
- Une figure peut comporter plusieurs images

Les figures

```
<body>
  <p>
    Lorem ipsum dolor, sit amet consectetur adip
    vero eaque alias vel. Deserunt officiis dign
    Provident optio excepturi cum recusandae ma
  </p>
  <figure>
    
    <figcaption>Les Requette http</figcaption>
  </figure>
</body>
```

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Libero aliquid magnam vero eaque alias vel. Deserunt officiis dignissimos alias aspernatur unde. Provident optio excepturi cum recusandae magni nulla aspernatur sint.



Les tableaux

```
<table border="1px">
  <caption>Liste des
candidats</caption>
  <thead> <!-- En-tête du
tableau -->
    <tr>
      <th>Nom</th>
      <th>Âge</th>
      <th>Pays</th>
    </tr>
  </thead>
```

```
<tfoot> <!-- Pied de tableau -->
  <tr>
    <th>Nom</th>
    <th>Âge</th>
    <th>Pays</th>
  </tr>
</tfoot>
<tbody> <!-- Corps du tableau -->
  <tr>
    <td>ANAS</td>
    <td>24 ans</td>
    <td>Casablanca</td>
  </tr>
```

```
<tr>
  <td>Imane</td>
  <td>26 ans</td>
  <td>Essaouira</td>
</tr>
<tr>
  <td>Mohammed</td>
  <td>20 ans</td>
  <td>Marrakech</td>
</tr>
</tbody>
```

Nom	Âge	Pays
ANAS	24 ans	Casablanca
Imane	26 ans	Essaouira
Mohammed	20 ans	Marrakech

Tableaux: Fusions

	Tête col 1	Tête col 2	
Tête row 1	Contenu 1	Contenu 2	Contenu 3
Tête row 2		Contenu 4	
Tête row 3			

- Dans certains cas, on a besoin de « fusionner »
- Pour effectuer une fusion, on rajoute un attribut à la balise `<td>`
 - ***colspan*** pour La fusion de colonnes.
 - ***rowspan*** pour La fusion de lignes .
- Il faut donner une valeur à l'attribut (`colspan` ou `rowspan`), pour indiquer le nombre de cellules à fusionner.

```
<td colspan="2">fusion de deux cellules de la même ligne</td>
```

```
<td rowspan="2">fusion de deux cellules de la même colonne</td>
```

Formulaires

```
~/EST/WEB/form.html - Sublime Text (UNREGISTERED)
bonjour.html x form.html x chevre.html x
6 <body>
7   <form>
8     Nom: <input type="text" /><br>
9     Prenom: <input type="text" /><br>
10    Email: <input type="Email" required><br>
11    Password: <input type="Password" min="5">
12    Date de naissance: <input type="Date"><br>
13    Genre: <br>
14    <input type="radio" name="genre"> Mal<br>
15    <input type="radio" name="genre"> Femelle<br>
16    Language:<br>
17    <input type="checkbox" > C<br>
18    <input type="checkbox" > PYTHON<br>
19    <input type="checkbox" > JAVA<br>
20    Paye:
21    <select>
22      <option value="Maroc">Maroc</option>
23      <option value="Algerie">Algerie</option>
24      <option value="Tunisie">Tunisie</option>
25    </select><br>
26    <input type="submit" value="Register">
27    <input type="reset" value="clear">
28  </form>
```

Formulaires - Mozilla Firefox

Formulaires x chevre-Recher x +

file:///h...

Nom:

Prenom:

Email:

Password:

Date de naissance:

Genre:

Mal

Femelle

Language:

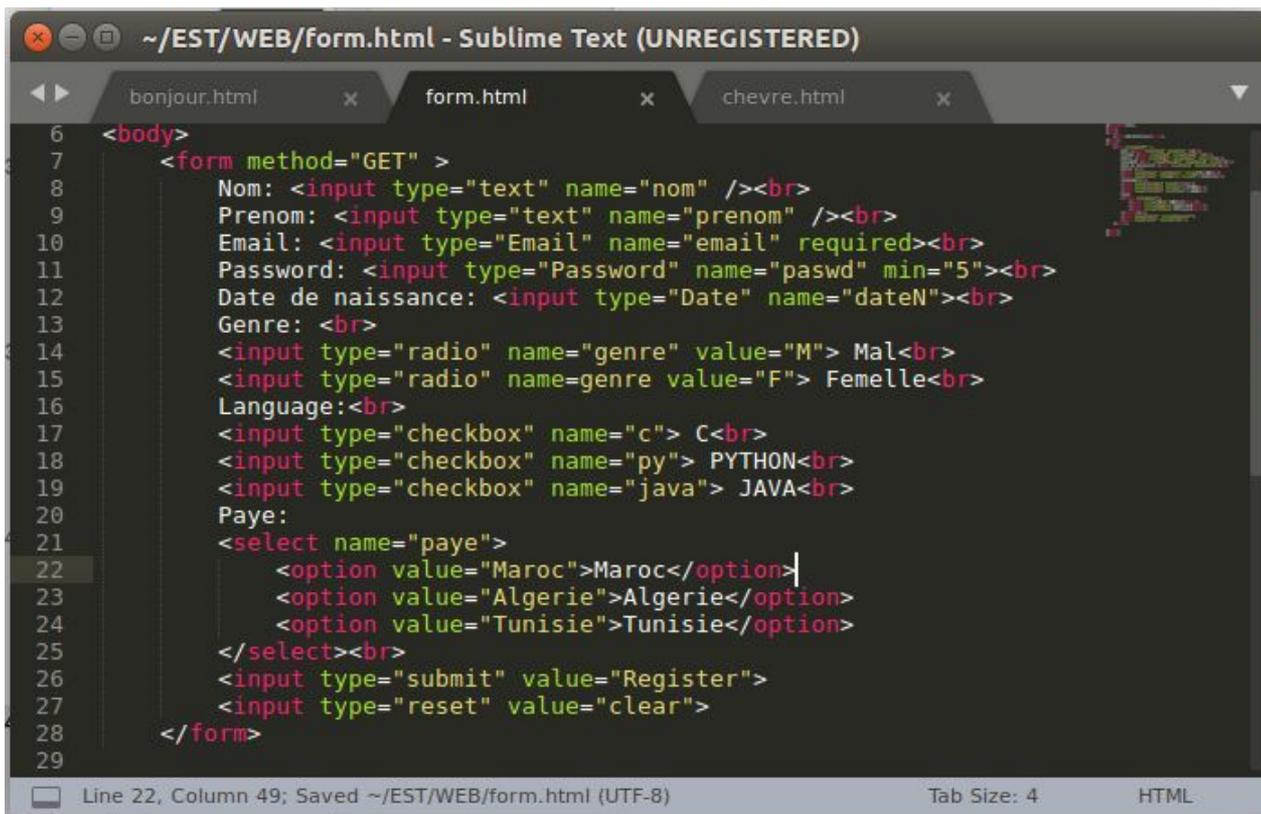
C

PYTHON

JAVA

Paye:

Formulaires (submet)



```
~/EST/WEB/form.html - Sublime Text (UNREGISTERED)
bonjour.html x form.html x chevre.html x
6 <body>
7   <form method="GET" >
8     Nom: <input type="text" name="nom" /><br>
9     Prenom: <input type="text" name="prenom" /><br>
10    Email: <input type="Email" name="email" required><br>
11    Password: <input type="Password" name="paswd" min="5"><br>
12    Date de naissance: <input type="Date" name="dateN"><br>
13    Genre: <br>
14    <input type="radio" name="genre" value="M"> Mal<br>
15    <input type="radio" name="genre" value="F"> Femelle<br>
16    Language:<br>
17    <input type="checkbox" name="c"> C<br>
18    <input type="checkbox" name="py"> PYTHON<br>
19    <input type="checkbox" name="java"> JAVA<br>
20    Paye:
21    <select name="paye">
22      <option value="Maroc">Maroc</option>
23      <option value="Algerie">Algerie</option>
24      <option value="Tunisie">Tunisie</option>
25    </select><br>
26    <input type="submit" value="Register">
27    <input type="reset" value="clear">
28  </form>
29
```

Line 22, Column 49; Saved ~/EST/WEB/form.html (UTF-8) Tab Size: 4 HTML

Autre types d'entrée

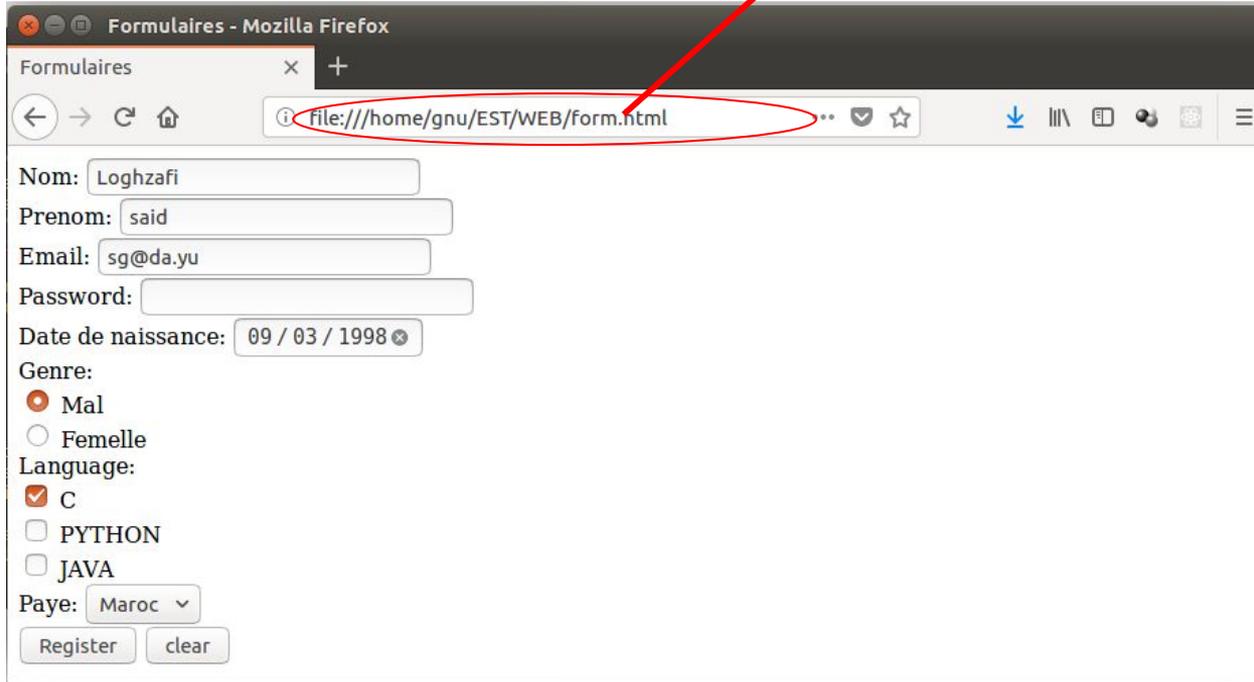
```
<input type="url" />
<input type="tel" />
<input type="number" />
<input type="range" />
<input type="color" />
<input type="date" />
<input type="checkbox" name="element" />
<input type="radio" name="groupe"/>
```

```
<select name="pays" id="pays">
  <option value="ma">Maroc</option>
  <option value="fr">France</option>
  <option value="es">Espagne</option>
  <option value="it">Italie</option>
  <option value="ru">Royaume-Uni</option>
</select>
```

```
<fieldset>
  <legend>Vos coordonnées</legend> <!-- Titre du fieldset →
  <!-- Entrées du formulaire -->
</fieldset>
```

Formulaires (submit)

file:///home/gnu/EST/WEB/form.html?nom=Loghzafi&prenom=said&email=sg%40da.yu&paswd=12345&dateN=2018-08-28&genre=M&c=on&paye=Maroc



Formulaires - Mozilla Firefox

Formulaires

file:///home/gnu/EST/WEB/form.html

Nom: Loghzafi

Prenom: said

Email: sg@da.yu

Password:

Date de naissance: 09 / 03 / 1998

Genre:

Mal

Femelle

Language:

C

PYTHON

JAVA

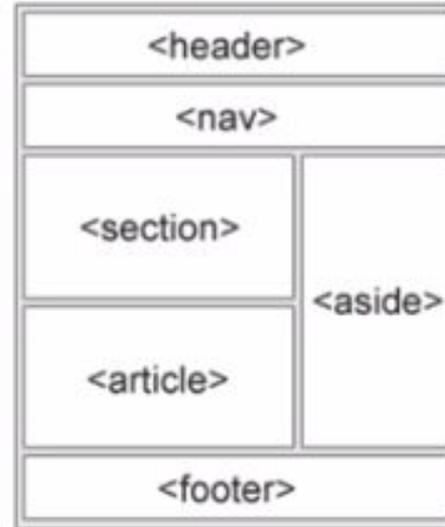
Paye: Maroc

Register clear

HTML vs HTML5

1. HTML5 est compatible avec les anciennes versions
2. Introduction des balises sémantiques:

- `<article>`
- `<aside>`
- `<details>`
- `<figcaption>`
- `<figure>`
- `<footer>`
- `<header>`
- `<main>`
- `<mark>`
- `<nav>`
- `<section>`
- `<summary>`
- `<time>`



3- Introduction à CSS

Pourquoi CSS (une page sans CSS)

Embed Type Terms onto your website

`<a href="https://www.supremo.co.uk/typeterms/"`

LEARN TYPOGRAPHIC TERMINOLOGY WITH TYPE TERMS

Type Terms is the perfect tool for designers to learn the basics of typographic terminology. If you are new to typography or here to refresh your memory, then Type Terms is perfect for you.

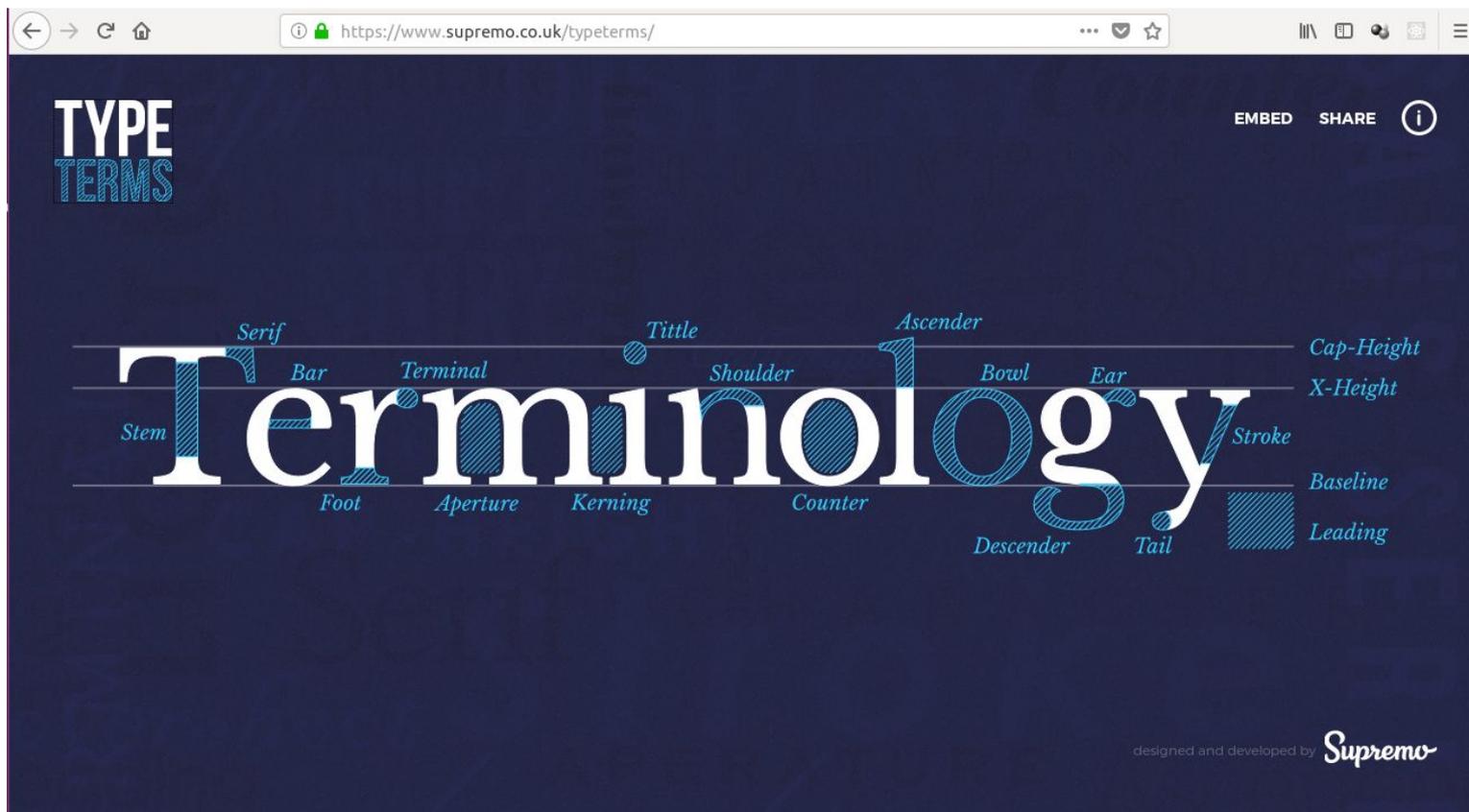
Please feel free to share this on your website. All that we ask is that you link your post back to this URL. Download the press kit below to access large, medium and small versions of the 7 images below.

[DOWNLOAD PRESS KIT](#)

Stem, Serif, Bar, Terminal, Tittle, Shoulder, Ascender, Bowl, Ear, Cap-Height, X-Height, Stroke, Foot, Aperture, Kerning, Counter, Descender, Tail, Leading

designed and developed by **Supremo**

Pourquoi CSS (Avec CCS)



Première feuille de style (HTML)

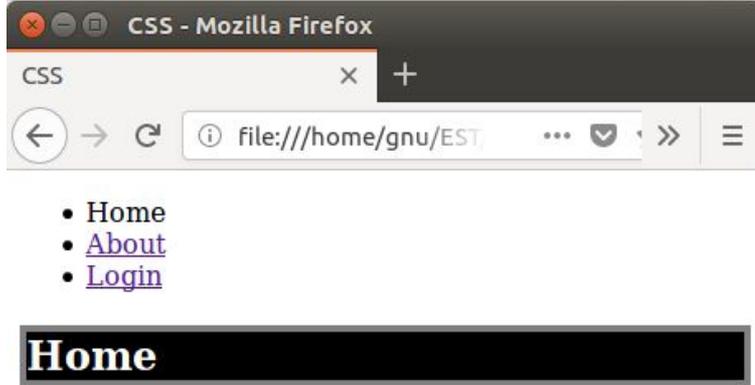


```
index.html x login.html x about.html x style.css x
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>CSS</title>
5 </head>
6 <body>
7   <header>
8     <nav>
9       <ul>
10        <li>Home</li>
11        <li><a href="about.html">About </a></li>
12        <li><a href="login.html">Login </a></li>
13      </ul>
14    </nav>
15  </header>
16  <section>
17    <h2>Home</h2>
18    <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
19    eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip
20    ex ea commodo consequat.</p>
21    <p> Duis aute irure dolor in reprehenderit in voluptate velit esse
22    cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat
23    cupidatat non proident, sunt in culpa qui officia deserunt mollit
24    anim id est laborum.</p>
25  </section>
26 </body>
```

Line 18, Column 88

Tab Size: 4 HTML

Première feuille de style (HTML + CSS)

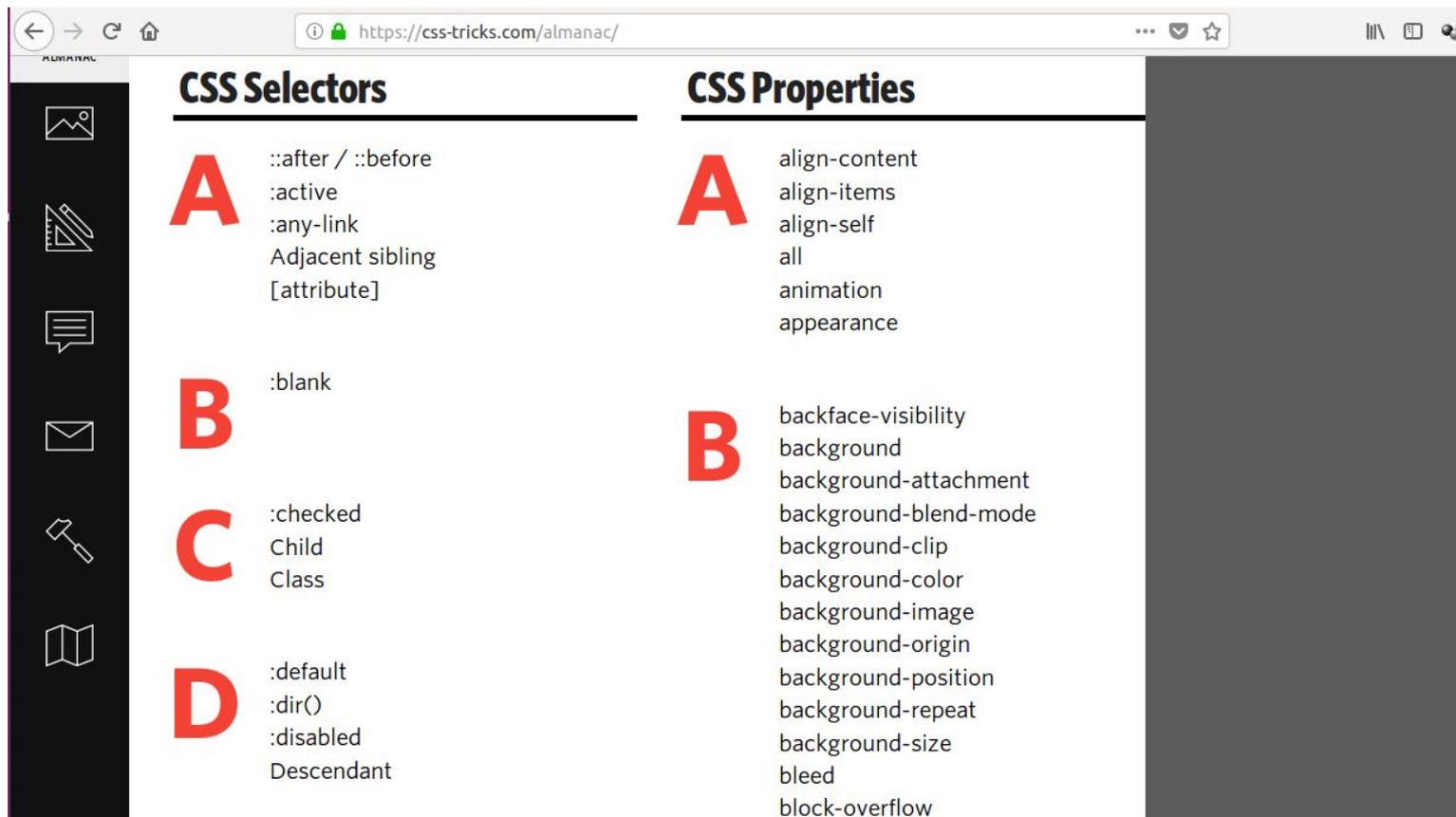


Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Propriétés css:

<https://css-tricks.com/almanac/>



The image shows a browser window displaying the CSS Tricks Almanac website. The browser's address bar shows the URL <https://css-tricks.com/almanac/>. The page is divided into two main columns: "CSS Selectors" and "CSS Properties".

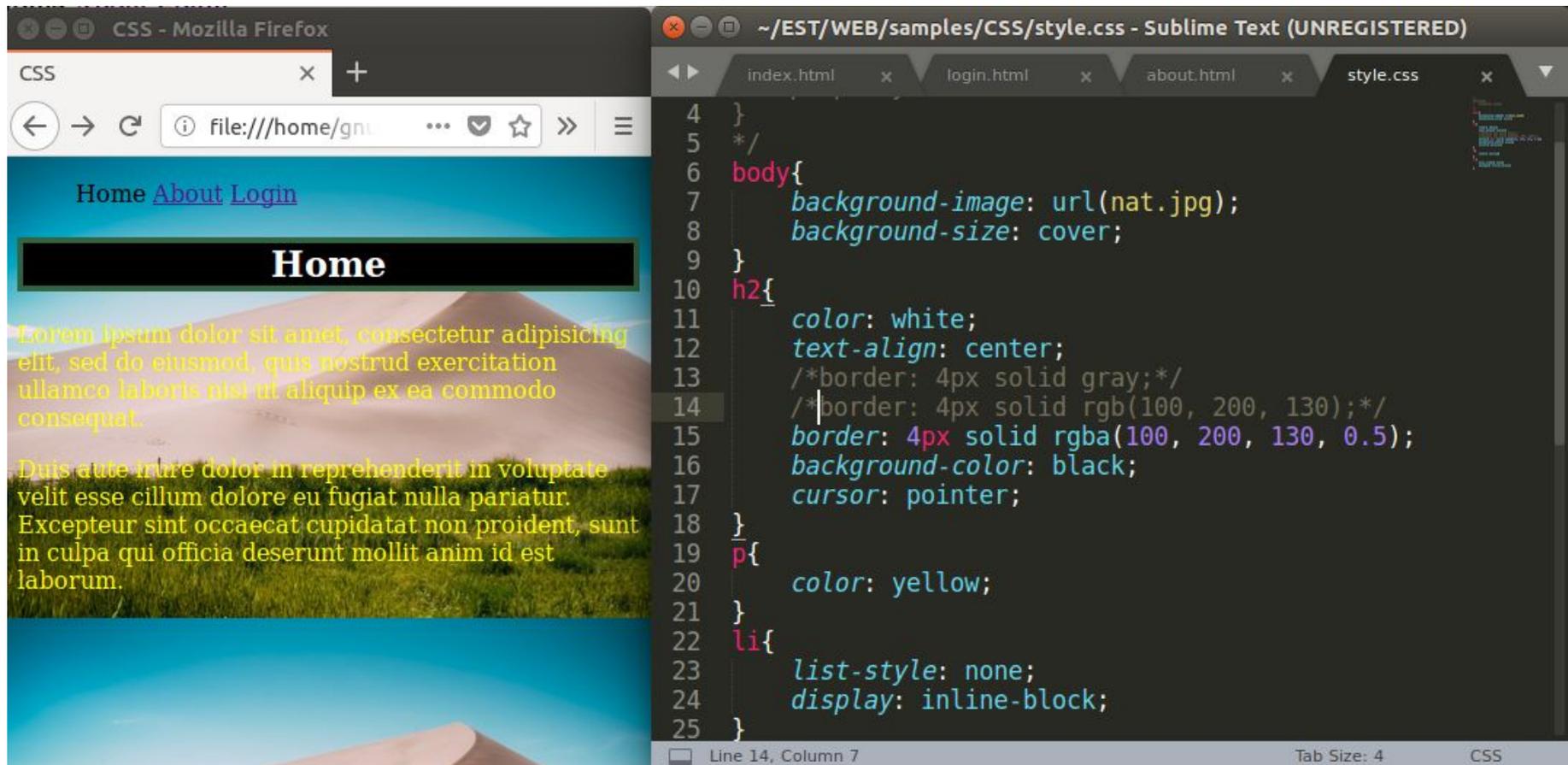
CSS Selectors

- A**:
 - ::after / ::before
 - :active
 - :any-link
 - Adjacent sibling [attribute]
- B**:
 - :blank
- C**:
 - :checked
 - Child
 - Class
- D**:
 - :default
 - :dir()
 - :disabled
 - Descendant

CSS Properties

- A**:
 - align-content
 - align-items
 - align-self
 - all
 - animation
 - appearance
- B**:
 - backface-visibility
 - background
 - background-attachment
 - background-blend-mode
 - background-clip
 - background-color
 - background-image
 - background-origin
 - background-position
 - background-repeat
 - background-size
 - bleed
 - block-overflow

Propriétés:



The image shows a side-by-side comparison of a web browser and a code editor. The browser on the left displays a simple web page with a blue header, a black navigation bar with the word "Home", and two paragraphs of yellow placeholder text. The code editor on the right shows the CSS file being used, with syntax highlighting. The code defines styles for the body, h2, and p elements, including background image, color, text alignment, and border properties.

Browser View (Left):

- Address bar: `file:///home/gnt`
- Page Title: CSS
- Navigation: Home [About](#) [Login](#)
- Header: **Home**
- Text 1: Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
- Text 2: Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Code Editor View (Right):

```
4 }
5 */
6 body{
7     background-image: url(nat.jpg);
8     background-size: cover;
9 }
10 h2{
11     color: white;
12     text-align: center;
13     /*border: 4px solid gray;*/
14     /*border: 4px solid rgb(100, 200, 130);*/
15     border: 4px solid rgba(100, 200, 130, 0.5);
16     background-color: black;
17     cursor: pointer;
18 }
19 p{
20     color: yellow;
21 }
22 li{
23     list-style: none;
24     display: inline-block;
25 }
```

Line 14, Column 7 | Tab Size: 4 | CSS

Sélecteurs CSS: Les sélecteurs simples

Sélecteur	Exemple	Explication
nom_baise	h1	Cible tous les éléments h1
.nom_classe	.news	Cible tous les éléments de classe news
#id	#titre1	Cible l'élément dont l'identifiant est titre1
*	*	Cible tous les élément de la page
nom_baise[attribut]	img[alt]	Cible tous les éléments
nom_baise[attribut=val]	img[alt="nature"]	Cible tous les élément
nom_baise[attribut^=val]	img[alt^="na"]	Cible tous les élément
nom_baise[attribut\$=val]	img[alt\$="na"]	Cible tous les élément

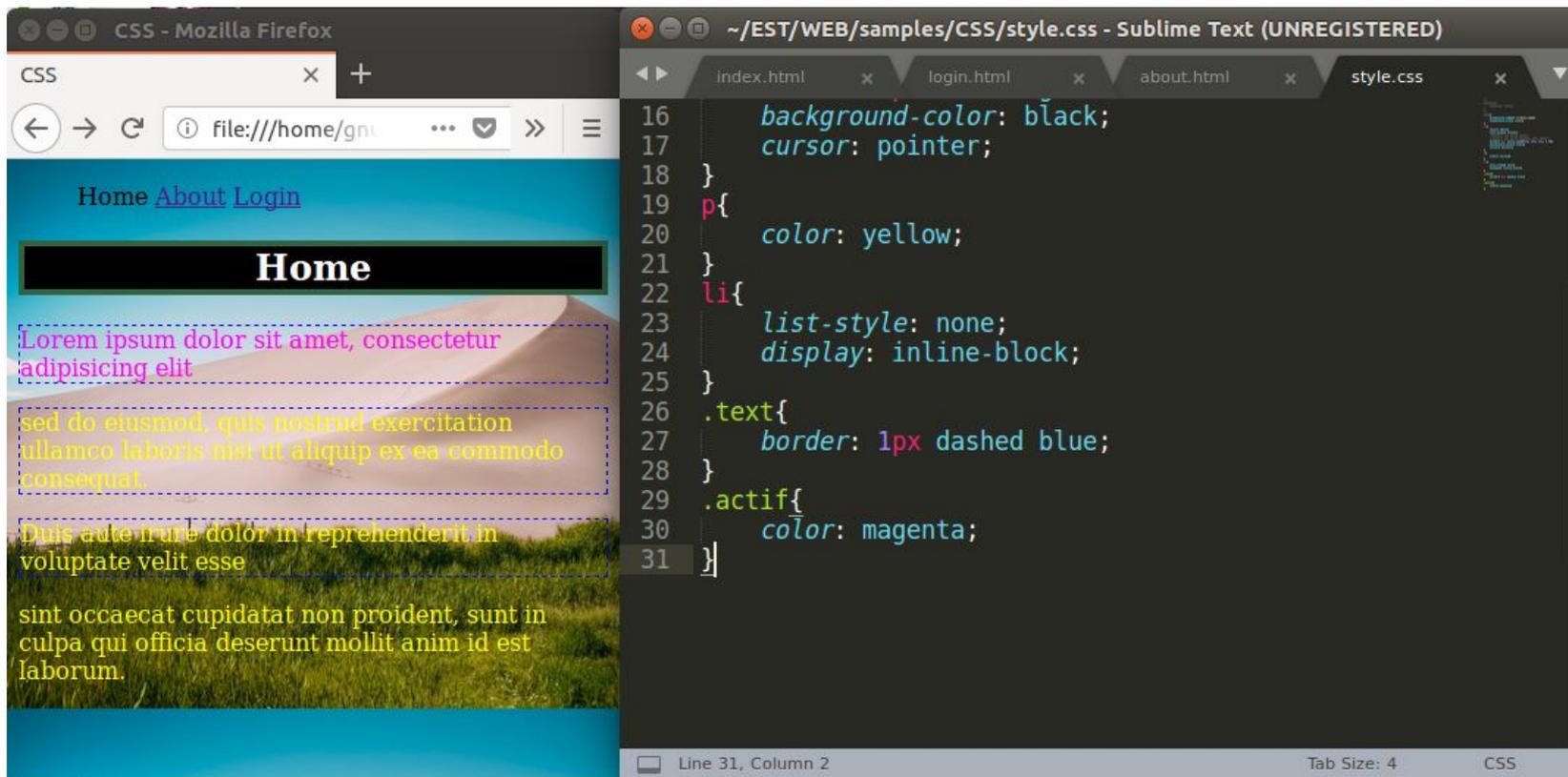
Sélecteurs CSS: Les combineurs

Sélecteur	Exemple	Explication
element1, element2	h1, p	Cible tous les éléments h1 et p
element1 element	div p	Cible tous les éléments p descendants d'un div
element1 > element2	.news > p	Cible tous les éléments p enfants directs d'un élément de classe news
element1 + element2	div+p	Cible les élément p qui suivent immédiatement un élément div
element1 ~ element2	div~p	Cible les élément p qui suivent immédiatement un élément div et ont le même parent

Sélecteurs CSS: Les pseudo-classes & Les pseudo-éléments

- Les ***pseudo-classes*** permettent de cibler des éléments selon une information d'état qui n'est pas stockée dans l'arbre du document.
 - **Exemple**: ***a:visited*** permettra de cibler l'ensemble des éléments <a> (des liens) ayant déjà été visités par l'utilisateur. (***:first-child*** , ***:last-child***, ***:current***, ***:active*** ...)
- Les ***pseudo-éléments*** représentent des entités du document qui ne sont pas décrites en HTML.
 - **Exemple** : ***p::first-line*** permettra de cibler la première ligne de chacun des éléments <p> (les paragraphes) du document.

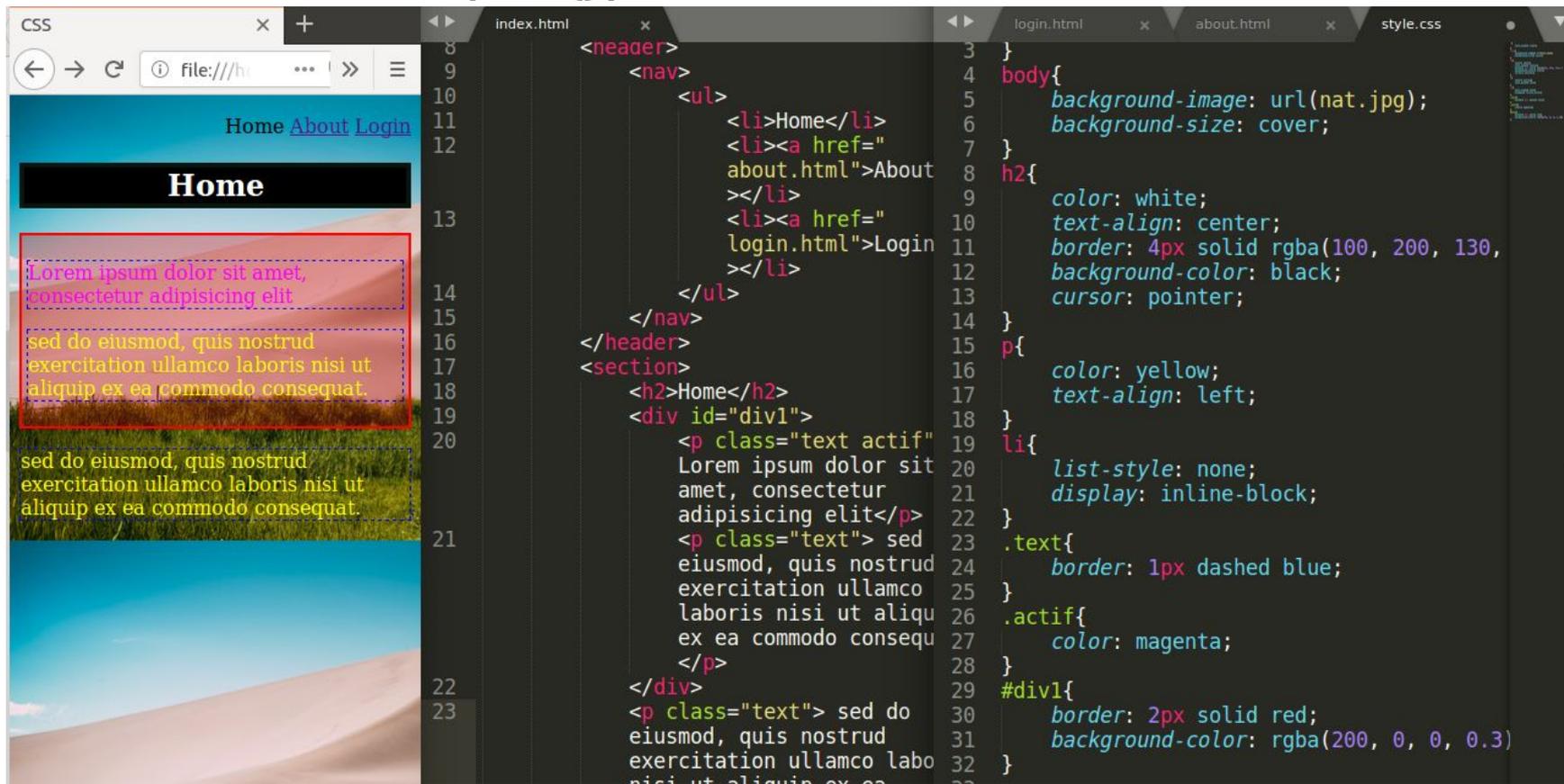
Sélecteurs CSS: (.class{})



The image displays a side-by-side comparison of a web browser and a code editor. On the left, the Mozilla Firefox browser shows a page titled 'CSS' with a URL of 'file:///home/gnu...'. The page content includes a navigation menu with 'Home', 'About', and 'Login' links. Below the menu is a large black box with the word 'Home' in white. Three paragraphs of Lorem Ipsum text are shown, each enclosed in a dashed blue border. The text is colored: the first paragraph is pink, the second is yellow, and the third is magenta. On the right, the Sublime Text code editor shows the CSS file 'style.css'. The code defines several selectors: a default style for the body (background-color: black; cursor: pointer;), a paragraph selector (p{ color: yellow;}), a list item selector (li{ list-style: none; display: inline-block;}), a class selector (.text{ border: 1px dashed blue;}), and another class selector (.actif{ color: magenta;}). The code is numbered from 16 to 31. The status bar at the bottom indicates 'Line 31, Column 2', 'Tab Size: 4', and 'CSS'.

```
16 background-color: black;
17 cursor: pointer;
18 }
19 p{
20 color: yellow;
21 }
22 li{
23 list-style: none;
24 display: inline-block;
25 }
26 .text{
27 border: 1px dashed blue;
28 }
29 .actif{
30 color: magenta;
31 }
```

Sélecteurs CSS: (#id{})

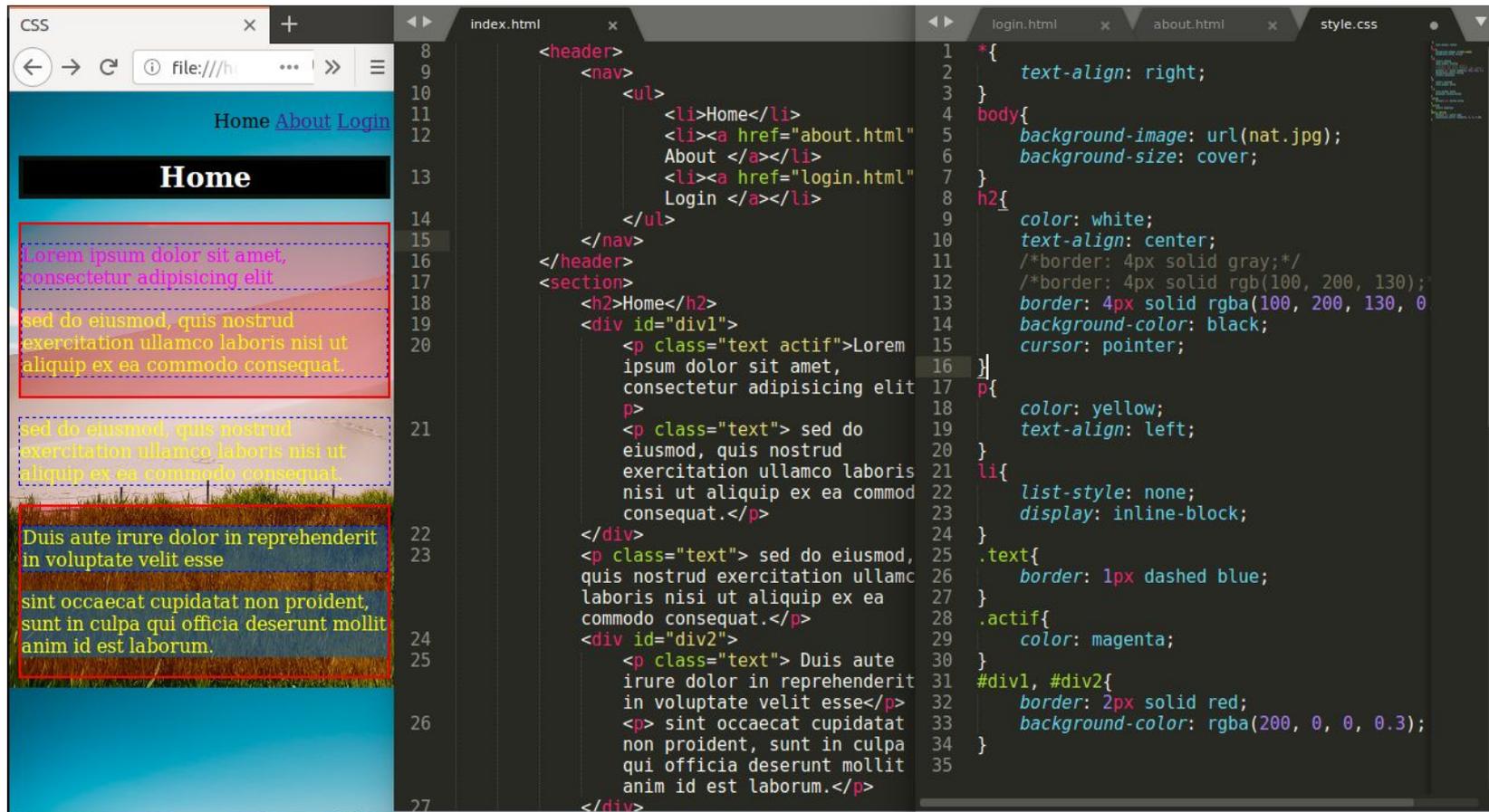


```
index.html
8 <header>
9 <nav>
10 <ul>
11 <li>Home</li>
12 <li><a href="
13 about.html">About
14 </li>
15 <li><a href="
16 login.html">Login
17 </li>
18 </ul>
19 </nav>
20 </header>
21 <section>
22 <h2>Home</h2>
23 <div id="div1">
24 <p class="text actif">
25 Lorem ipsum dolor sit
26 amet, consectetur
27 adipiscing elit</p>
28 <p class="text"> sed
29 eiusmod, quis nostrud
30 exercitation ullamco
31 laboris nisi ut aliqu
32 ex ea commodo consequ
33 </p>
34 </div>
35 <p class="text"> sed do
36 eiusmod, quis nostrud
37 exercitation ullamco labo
38 nisi ut aliquip ex ea
```

```
login.html
3 }
4 body{
5 background-image: url(nat.jpg);
6 background-size: cover;
7 }
8 h2{
9 color: white;
10 text-align: center;
11 border: 4px solid rgba(100, 200, 130,
12 0.3);
13 cursor: pointer;
14 }
15 p{
16 color: yellow;
17 text-align: left;
18 }
19 li{
20 list-style: none;
21 display: inline-block;
22 }
23 .text{
24 border: 1px dashed blue;
25 }
26 .actif{
27 color: magenta;
28 }
29 #div1{
30 border: 2px solid red;
31 background-color: rgba(200, 0, 0, 0.3)
32 }
```

```
style.css
3 }
4 body{
5 background-image: url(nat.jpg);
6 background-size: cover;
7 }
8 h2{
9 color: white;
10 text-align: center;
11 border: 4px solid rgba(100, 200, 130,
12 0.3);
13 cursor: pointer;
14 }
15 p{
16 color: yellow;
17 text-align: left;
18 }
19 li{
20 list-style: none;
21 display: inline-block;
22 }
23 .text{
24 border: 1px dashed blue;
25 }
26 .actif{
27 color: magenta;
28 }
29 #div1{
30 border: 2px solid red;
31 background-color: rgba(200, 0, 0, 0.3)
32 }
```

Sélecteurs CSS: (element, element{}



The image displays a web browser window on the left and a code editor on the right. The browser shows a page with a blue header, a black navigation bar with 'Home', 'About', and 'Login' links, and a main content area with a black 'Home' heading and several paragraphs of placeholder text. The code editor shows the HTML and CSS files. The HTML file (index.html) contains a navigation menu and a main section with a heading and several paragraphs. The CSS file (style.css) defines styles for the body, h2, p, and li elements, as well as specific classes and IDs used in the HTML.

```
index.html
8 <header>
9 <nav>
10 <ul>
11 <li>Home</li>
12 <li><a href="about.html">
13 About </a></li>
14 <li><a href="login.html">
15 Login </a></li>
16 </ul>
17 </nav>
18 </header>
19 <section>
20 <h2>Home</h2>
21 <div id="div1">
22 <p class="text actif">Lorem
23 ipsum dolor sit amet,
24 consectetur adipisicing elit
25 <p>
26 <p class="text"> sed do
27 eiusmod, quis nostrud
28 exercitation ullamco laboris
29 nisi ut aliquip ex ea commod
30 consequat.</p>
31 </div>
32 <p class="text"> sed do eiusmod,
33 quis nostrud exercitation ullamc
34 laboris nisi ut aliquip ex ea
35 commodo consequat.</p>
36 <div id="div2">
37 <p class="text"> Duis aute
38 irure dolor in reprehenderit
39 in voluptate velit esse</p>
40 <p> sint occaecat cupidatat
41 non proident, sunt in culpa
42 qui officia deserunt mollit
43 anim id est laborum.</p>
44 </div>
```

```
style.css
1 *{
2 text-align: right;
3 }
4 body{
5 background-image: url(nat.jpg);
6 background-size: cover;
7 }
8 h2{
9 color: white;
10 text-align: center;
11 /*border: 4px solid gray;*/
12 /*border: 4px solid rgb(100, 200, 130);
13 border: 4px solid rgba(100, 200, 130, 0
14 background-color: black;
15 cursor: pointer;
16 }
17 p{
18 color: yellow;
19 text-align: left;
20 }
21 li{
22 list-style: none;
23 display: inline-block;
24 }
25 .text{
26 border: 1px dashed blue;
27 }
28 .actif{
29 color: magenta;
30 }
31 #div1, #div2{
32 border: 2px solid red;
33 background-color: rgba(200, 0, 0, 0.3);
34 }
35 }
```

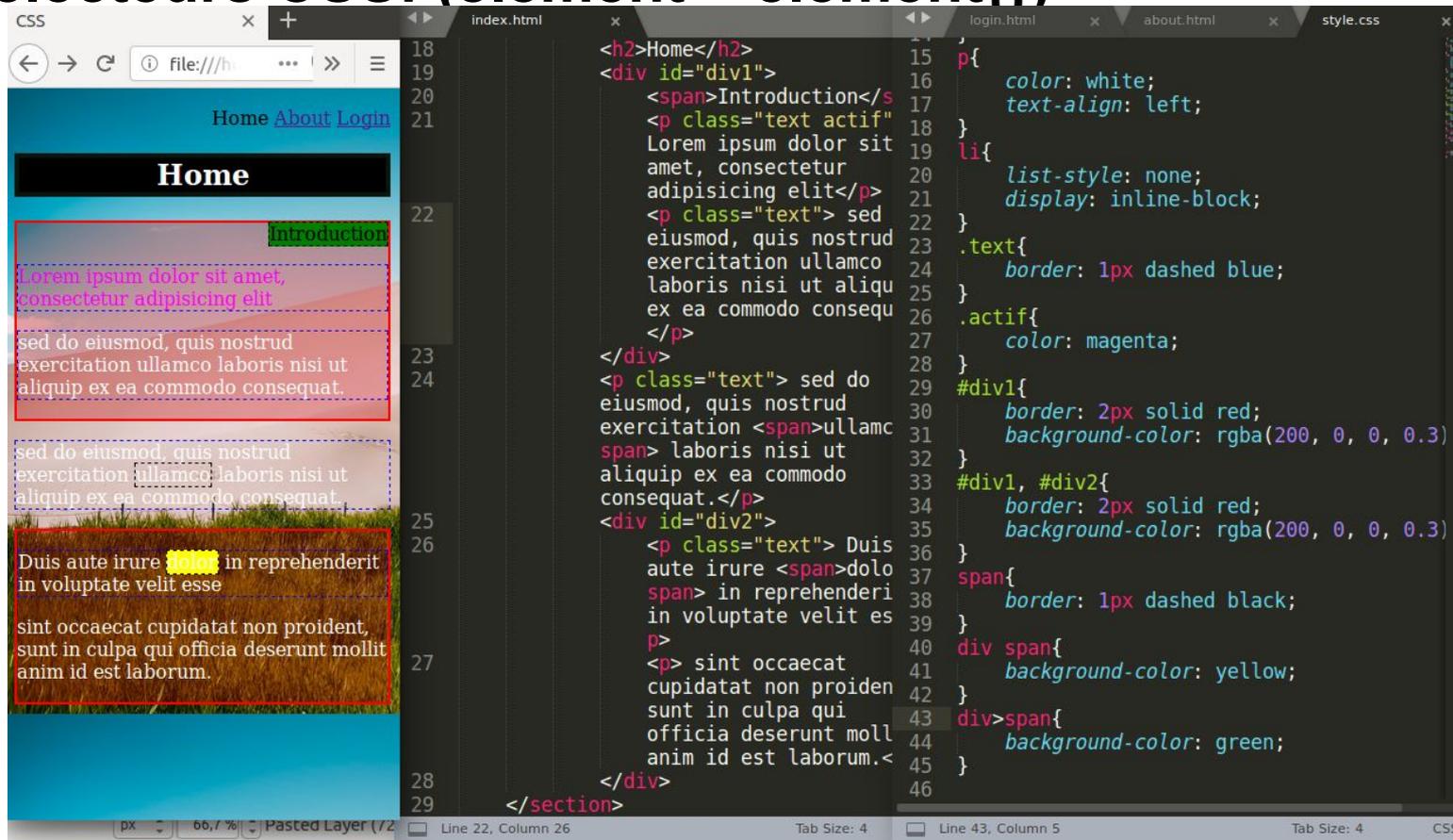
Sélecteurs CSS: (element element{ })

The image shows a web browser on the left and a code editor on the right. The browser displays a page with a blue header, a black navigation bar, and a main content area with a green background. The code editor shows the HTML and CSS files. The HTML file contains a `<div id="div1">` containing a `<h2>`, a ``, and several `<p>` elements. The CSS file defines styles for `.text`, `.actif`, `#div1`, `#div1, #div2`, `span`, and `div span`.

```
index.html
18 <h2>Home</h2>
19 <div id="div1">
20   <span>Introduction</span>
21   <p class="text actif">
22     Lorem ipsum dolor sit
23     amet, consectetur
24     adipiscing elit</p>
25   <p class="text"> sed
26     eiusmod, quis nostrud
27     exercitation ullamco
28     laboris nisi ut aliquip
29     ex ea commodo consequat.
30 </p>
31 </div>
32 <p class="text"> sed do
33   eiusmod, quis nostrud
34   exercitation <span>ullamco
35   span> laboris nisi ut
36   aliquip ex ea commodo
37   consequat.</p>
38 <div id="div2">
39   <p class="text"> Duis
40   aute irure <span>dolor
41   span> in reprehenderit
42   in voluptate velit esse
43   sint occaecat cupidatat
44   non proident, sunt in
45   culpa qui officia deserunt
46   mollit anim id est laborum.
47 </p>
48 <p> sint occaecat
49   cupidatat non proident,
50   sunt in culpa qui officia
51   deserunt mollit anim id est
52   laborum.</p>
53 </div>
54 </section>
```

```
style.css
11 border: 4px solid rgba(100, 200, 130,
12   background-color: black;
13   cursor: pointer;
14 }
15 p{
16   color: white;
17   text-align: left;
18 }
19 li{
20   list-style: none;
21   display: inline-block;
22 }
23 .text{
24   border: 1px dashed blue;
25 }
26 .actif{
27   color: magenta;
28 }
29 #div1{
30   border: 2px solid red;
31   background-color: rgba(200, 0, 0, 0.3)
32 }
33 #div1, #div2{
34   border: 2px solid red;
35   background-color: rgba(200, 0, 0, 0.3)
36 }
37 span{
38   border: 1px dashed black;
39 }
40 div span{
41   background-color: yellow;
42 }
```

Sélecteurs CSS: (element > element{ })



The image shows a web browser on the left and a code editor on the right. The browser displays a page with a blue header, a black navigation bar, and a main content area with a red border. The code editor shows the HTML and CSS files. The HTML file contains the following code:

```
18 <h2>Home</h2>
19 <div id="div1">
20   <span>Introduction</span>
21   <p class="text actif">
22     Lorem ipsum dolor sit amet, consectetur
23     adipiscing elit</p>
24   <p class="text"> sed
25     eiusmod, quis nostrud
26     exercitation ullamco
27     laboris nisi ut aliquip
28     ex ea commodo consequat.
29 </div>
30 <p class="text"> sed do
31   eiusmod, quis nostrud
32   exercitation <span>ullamco
33   span> laboris nisi ut
34   aliquip ex ea commodo
35   consequat.</p>
36 <div id="div2">
37   <p class="text"> Duis
38   aute irure <span>dolo
39   span> in reprehenderi
40   in voluptate velit esse
41   sint occaecat cupidatat non proident,
42   sunt in culpa qui officia deserunt mollit
43   anim id est laborum.</p>
44 </div>
45 </section>
```

The CSS file contains the following code:

```
15 p{
16   color: white;
17   text-align: left;
18 }
19 li{
20   list-style: none;
21   display: inline-block;
22 }
23 .text{
24   border: 1px dashed blue;
25 }
26 .actif{
27   color: magenta;
28 }
29 #div1{
30   border: 2px solid red;
31   background-color: rgba(200, 0, 0, 0.3)
32 }
33 #div1, #div2{
34   border: 2px solid red;
35   background-color: rgba(200, 0, 0, 0.3)
36 }
37 span{
38   border: 1px dashed black;
39 }
40 div span{
41   background-color: yellow;
42 }
43 div>span{
44   background-color: green;
45 }
```

The browser shows the following visual elements:

- A blue header with the text "Home About Login".
- A black navigation bar with the text "Home".
- A main content area with a red border, containing the text "Introduction" and "Lorem ipsum dolor sit amet, consectetur adipiscing elit".
- A text block with a magenta color, containing the text "sed do eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat."
- A text block with a yellow background color, containing the text "Duis aute irure in reprehenderit in voluptate velit esse".
- A text block with a green background color, containing the text "sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum."

Sélecteurs CSS: (element+element{ })

The image shows a browser window on the left and a code editor on the right. The browser displays a webpage with several elements highlighted by colored boxes, corresponding to the CSS rules in the editor.

Browser View (Left):

- Navigation bar: Home About Login
- Header: Home
- Section 1: Introduction (green box)
- Text 1: Lorem ipsum dolor sit amet, consectetur adipiscing elit (magenta box)
- Text 2: sed do eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. (red box)
- Section 2: sed do eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. (green box)
- Text 3: Duis aute irure dolor in reprehenderit in voluptate velit esse (yellow box)
- Text 4: sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum. (green box)

Code Editor View (Right):

```
18 <h2>Home</h2>
19 <div id="div1">
20   <span>Introduction</span>
21   <p class="text actif">
22     Lorem ipsum dolor sit
23     amet, consectetur
24     adipiscing elit</p>
25   <p class="text"> sed
26     eiusmod, quis nostrud
27     exercitation ullamco
28     laboris nisi ut aliqu
29     ex ea commodo consequ
30   </p>
31 </div>
32 <p class="text"> sed do
33   eiusmod, quis nostrud
34   exercitation <span>ullamc
35   span> laboris nisi ut
36   aliquip ex ea commodo
37   consequat.</p>
38 <div id="div2">
39   <p class="text"> Duis
40   aute irure <span>dolo
41   span> in reprehenderi
42   in voluptate velit es
43   p>
44   <p> sint occaecat
45   cupidatat non proiden
46   sunt in culpa qui
47   officia deserunt moll
48   anim id est laborum.<
49 </div>
```

style.css View (Right):

```
18 }
19 li{
20   list-style: none;
21   display: inline-block;
22 }
23 .text{
24   border: 1px dashed blue;
25 }
26 .actif{
27   color: magenta;
28 }
29 #div1{
30   border: 2px solid red;
31   background-color: rgba(200, 0, 0, 0.3)
32 }
33 #div1, #div2{
34   border: 2px solid red;
35   background-color: rgba(200, 0, 0, 0.3)
36 }
37 span{
38   border: 1px dashed black;
39 }
40 div span{
41   background-color: yellow;
42 }
43 div>span{
44   background-color: green;
45 }
46 div+p{
47   background-color: green;
48   font-weight: bold;
49 }
```

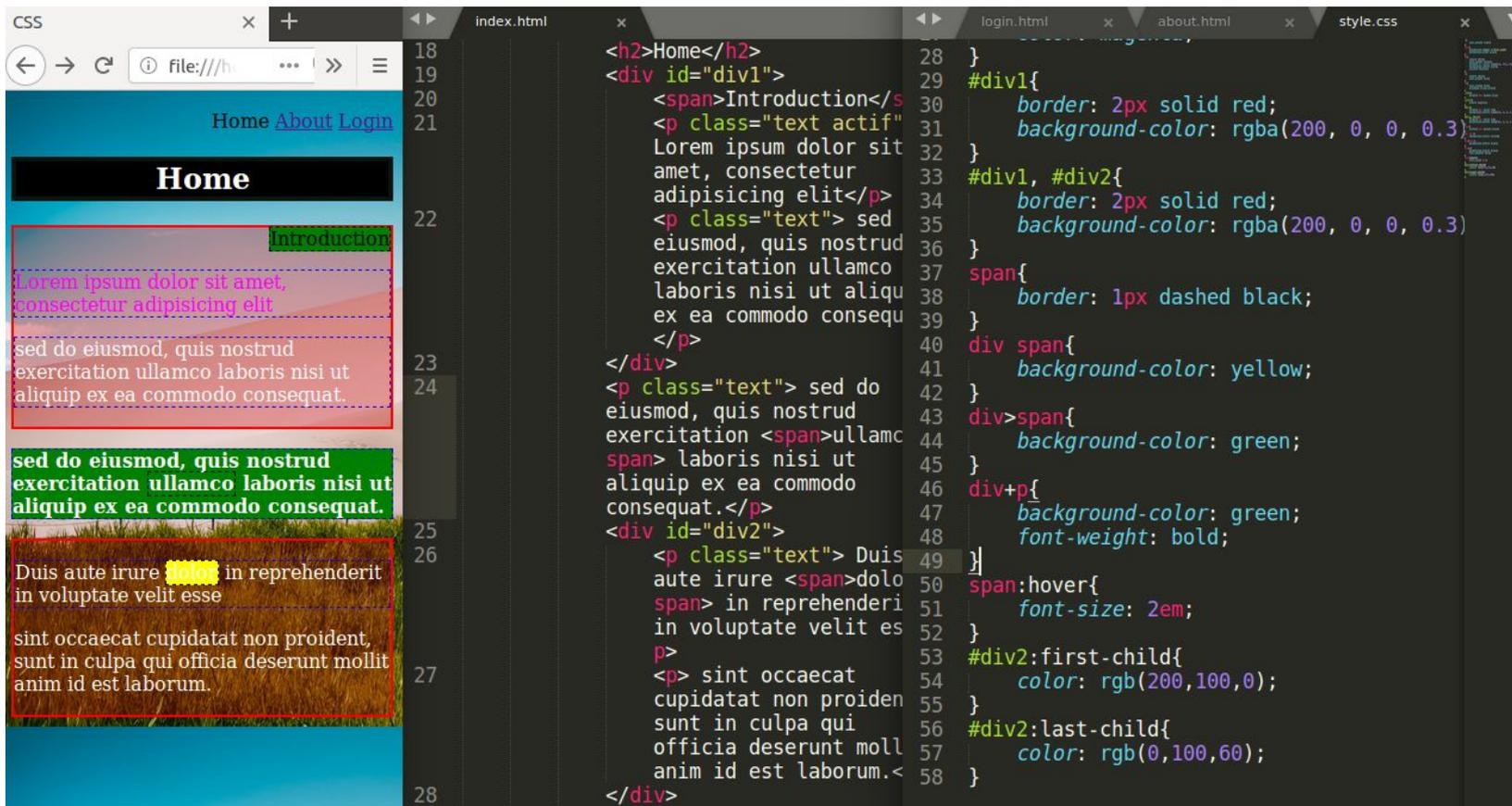
Sélecteurs CSS: (element:hover{ })

The image shows a web browser on the left and a code editor on the right. The browser displays a website with a blue header containing 'Home About Login' and a black 'Home' button. Below the header, there are several text blocks with different styles: a blue dashed border, a red dashed border, a green background, and a yellow dashed border. The code editor shows the HTML and CSS files. The HTML file contains the structure of the page, and the CSS file contains the styles for the elements, including a hover effect for a span element.

```
18 <h2>Home</h2>
19 <div id="div1">
20   <span>Introduction</span>
21   <p class="text actif">
22     Lorem ipsum dolor sit
23     amet, consectetur
24     adipiscing elit</p>
25   <p class="text"> sed
26     eiusmod, quis nostrud
27     exercitation ullamco
28     laboris nisi ut aliquip
29     ex ea commodo consequat.
30 </div>
31 <p class="text"> sed do
32   eiusmod, quis nostrud
33   exercitation <span>ullamco
34   laboris nisi ut
35   aliquip ex ea commodo
36   consequat.</p>
37 <div id="div2">
38   <p class="text"> Duis
39   aute irure <span>dolor
40   <span> in reprehenderit
41   in voluptate velit esse
42   sint occaecat cupidatat non
43   proident, sunt in culpa qui
44   officia deserunt mollit
45   anim id est laborum.</p>
46 </div>
47 </section>
```

```
22 }
23 .text{
24   border: 1px dashed blue;
25 }
26 .actif{
27   color: magenta;
28 }
29 #div1{
30   border: 2px solid red;
31   background-color: rgba(200, 0, 0, 0.3)
32 }
33 #div1, #div2{
34   border: 2px solid red;
35   background-color: rgba(200, 0, 0, 0.3)
36 }
37 span{
38   border: 1px dashed black;
39 }
40 div span{
41   background-color: yellow;
42 }
43 div>span{
44   background-color: green;
45 }
46 div+p{
47   background-color: green;
48   font-weight: bold;
49 }
50 span:hover{
51   font-size: 2em;
52 }
```

Sélecteurs CSS: (element:first-child{})



The image displays a web browser window on the left and a code editor on the right. The browser shows a page with a blue header, a black navigation bar, and several text blocks. The code editor shows the HTML and CSS files. The HTML file contains the following code:

```
18 <h2>Home</h2>
19 <div id="div1">
20   <span>Introduction</s
21   <p class="text actif"
22     Lorem ipsum dolor sit
23     amet, consectetur
24     adipiscing elit</p>
25   <p class="text"> sed
26     eiusmod, quis nostrud
27     exercitation ullamco
28     laboris nisi ut aliquip
29     ex ea commodo consequat.
30 </div>
31 <p class="text"> sed do
32   eiusmod, quis nostrud
33   exercitation ullamco
34   laboris nisi ut aliquip
35   ex ea commodo consequat.
36 </p>
37 <div id="div2">
38   <p class="text"> Duis
39   aute irure <span>dolo
40   span> in reprehenderi
41   in voluptate velit es
42   p>
43   <p> sint occaecat
44   cupidatat non proiden
45   sunt in culpa qui
46   officia deserunt moll
47   anim id est laborum.<
48 </div>
```

The CSS file contains the following code:

```
28 }
29 #div1{
30   border: 2px solid red;
31   background-color: rgba(200, 0, 0, 0.3)
32 }
33 #div1, #div2{
34   border: 2px solid red;
35   background-color: rgba(200, 0, 0, 0.3)
36 }
37 span{
38   border: 1px dashed black;
39 }
40 div span{
41   background-color: yellow;
42 }
43 div>span{
44   background-color: green;
45 }
46 div+p{
47   background-color: green;
48   font-weight: bold;
49 }
50 span:hover{
51   font-size: 2em;
52 }
53 #div2:first-child{
54   color: rgb(200,100,0);
55 }
56 #div2:last-child{
57   color: rgb(0,100,60);
58 }
```

The browser window shows the rendered page with the following elements highlighted:

- The navigation bar with "Home", "About", and "Login" links.
- The main heading "Home".
- The "Introduction" section with a red border and a semi-transparent red background.
- The "sed do eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat." section with a red border and a semi-transparent red background.
- The "sed do eiusmod, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat." section with a green background.
- The "Duis aute irure dolor in reprehenderit in voluptate velit esse sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum." section with a red border and a semi-transparent red background.

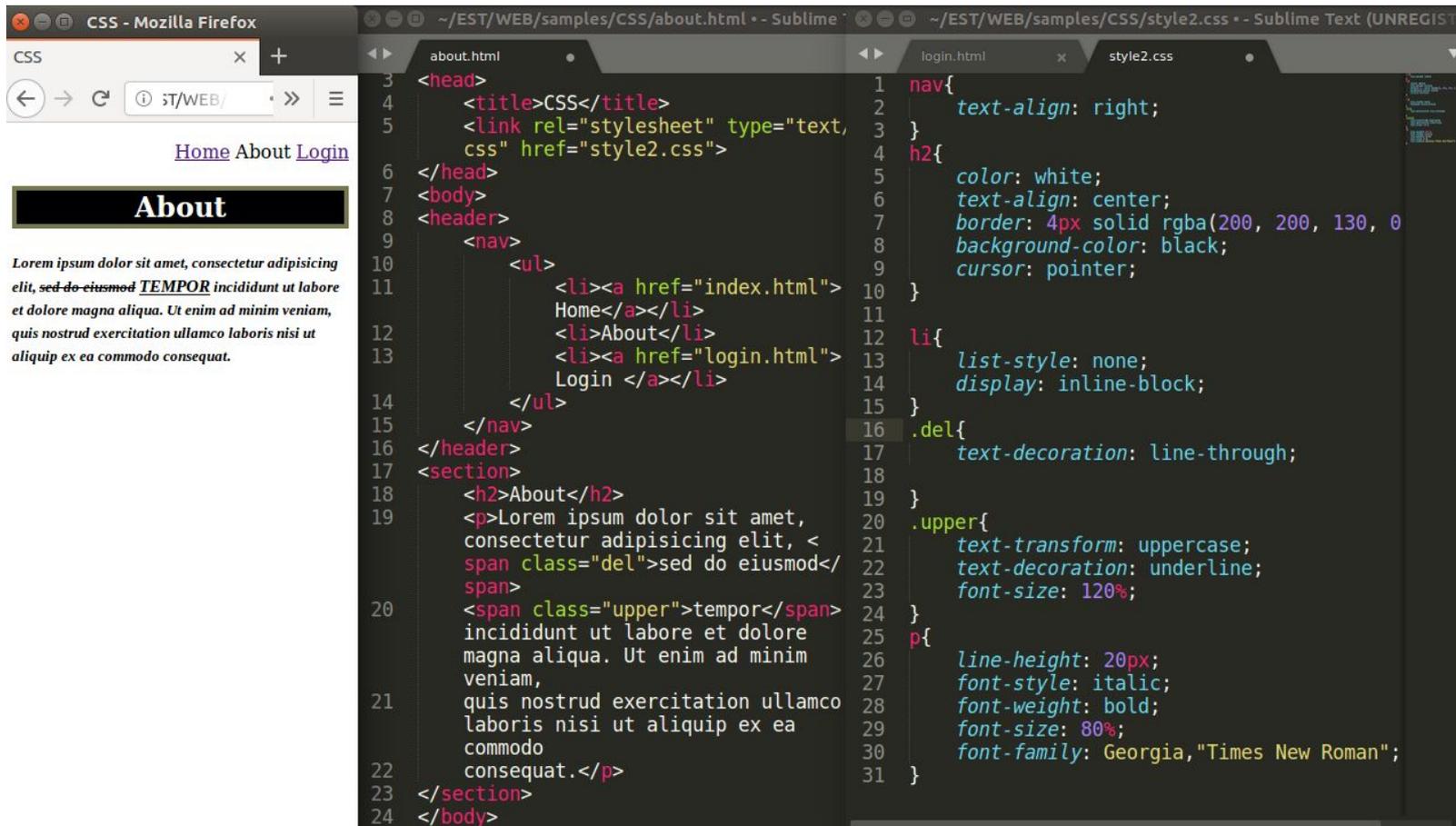
Sélecteurs CSS: (element:first-child{ })

The image shows a browser window on the left and a code editor on the right. The browser displays a web page with a blue header, a black navigation bar, and several content blocks. The code editor shows the HTML and CSS files. The CSS file defines styles for various elements, including a selector for the first child of a text element.

```
18 <h2>Home</h2>
19 <div id="div1">
20 <span>Introduction</s
21 <p class="text" actif"
22 Lorem ipsum dolor sit
23 amet, consectetur
24 adipiscing elit</p>
25 <p class="text"> sed
26 eiusmod, quis nostrud
27 exercitation ullamco
28 laboris nisi ut aliqu
29 ex ea commodo consequ
30 </p>
31 </div>
32 <p class="text"> sed do
33 eiusmod, quis nostrud
34 exercitation ullamc
35 span> laboris nisi ut
36 aliquip ex ea commo
37 do consequat.</p>
38 <div id="div2">
39 <p class="text"> Duis
40 aute irure <span>dolo
41 span> in reprehendi
42 in voluptate velit es
43 p>
44 <p> sint occaecat
45 cupidatat non proiden
46 sunt in culpa qui
47 officia deserunt moll
48 anim id est laborum.<
49 </div>
50 </section>
```

```
28 }
29 #div1{
30   border: 2px solid red;
31   background-color: rgba(200, 0, 0, 0.3)
32 }
33 #div1, #div2{
34   border: 2px solid red;
35   background-color: rgba(200, 0, 0, 0.3)
36 }
37 span{
38   border: 1px dashed black;
39 }
40 div span{
41   background-color: yellow;
42 }
43 div>span{
44   background-color: green;
45 }
46 div+p{
47   background-color: green;
48   font-weight: bold;
49 }
50 span:hover{
51   font-size: 2em;
52 }
53 .text:first-child{
54   color: black;
55 }
56 .text:last-child{
57   color: red;
58 }
```

Textes et fonts



The image shows a browser window on the left and two code editors on the right. The browser displays a page titled "About" with a navigation menu and a paragraph of text. The code editors show the HTML and CSS files that generate this page.

Browser View (Left):

- Address bar: `~T/WEB/`
- Navigation links: [Home](#) About [Login](#)
- Section header:

About
- Text:

*Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod **TEMPOR** incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.*

Code Editors (Right):

about.html

```
3 <head>
4   <title>CSS</title>
5   <link rel="stylesheet" type="text,
6     css" href="style2.css">
7 </head>
8 <body>
9   <header>
10    <nav>
11      <ul>
12        <li><a href="index.html">
13          Home</a></li>
14        <li>About</li>
15        <li><a href="login.html">
16          Login </a></li>
17      </ul>
18    </nav>
19  </header>
20  <section>
21    <h2>About</h2>
22    <p>Lorem ipsum dolor sit amet,
23      consectetur adipisicing elit, <
24      span class="del">sed do eiusmod</
25      span>
26    <span class="upper">tempor</span>
27    incididunt ut labore et dolore
28    magna aliqua. Ut enim ad minim
29    veniam,
30    quis nostrud exercitation ullamco
31    laboris nisi ut aliquip ex ea
32    commodo
33    consequat.</p>
34  </section>
35 </body>
```

style2.css

```
1 nav{
2   text-align: right;
3 }
4 h2{
5   color: white;
6   text-align: center;
7   border: 4px solid rgba(200, 200, 130, 0
8   background-color: black;
9   cursor: pointer;
10 }
11 li{
12   list-style: none;
13   display: inline-block;
14 }
15 }
16 .del{
17   text-decoration: line-through;
18 }
19 .upper{
20   text-transform: uppercase;
21   text-decoration: underline;
22   font-size: 120%;
23 }
24 }
25 p{
26   line-height: 20px;
27   font-style: italic;
28   font-weight: bold;
29   font-size: 80%;
30   font-family: Georgia,"Times New Roman";
31 }
```

Google fonts

The screenshot shows the Google Fonts website interface. At the top, there is a browser address bar with the URL <https://fonts.google.com>. Below the address bar, the page title "Google Fonts" is on the left, and navigation links "DIRECTORY", "FEATURED", "ARTICLES", and "ABOUT" are on the right. The main content area displays six font cards in a 2x3 grid. Each card includes the font name, the creator's name and the number of styles available, a red plus icon, and a sample of text in that font. A dark grey button with the text "Try typing directly into the text fields." and "GOT IT" is positioned between the two rows of cards.

Indie Flower (+)
Kimberly Geswein (1 style)
The recorded voice
scratched in the
speaker.

Quicksand (+)
Andrew Paglinawan (4 styles)
The sky was
cloudless and of a
deep dark blue.

Oxygen (+)
Vernon Adams (3 styles)
The spectacle
before us was
indeed sublime.

Rubik (+)
Hubert and Fischer, Meir Sadan, Cyreal (10 styles)
Then came the
night of the first
falling star.

Bitter (+)
Huerta Tipográfica (3 styles)
Waves flung
themselves at the
blue evening.

Hind (+)
Indian Type Foundry (5 styles)
All their equipment
and instruments are
alive.

Try typing directly into the text fields. GOT IT

Google fonts

The image shows a browser window on the left and two code editors on the right. The browser displays the rendered page with the 'Indie Flower' font. The code editors show the HTML and CSS files used to create the page.

Browser Window (CSS - Mozilla Firefox):

- Address bar: `~/EST/WEB/`
- Navigation: Home About Login
- Section Header: **About**
- Text:

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod TEMPOR incididunt ut labore et dolore magna aliqua. ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Code Editor 1 (about.html - Sublime Text):

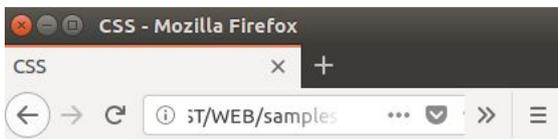
```
3 <head>
4   <title>CSS</title>
5   <link href="https://fonts.googleapis.com/css?family=Indie+Flower" rel="
  stylesheet">
6   <link rel="stylesheet" type="text/css" href="style2.css">
7
8 </head>
9 <body>
10 <header>
11   <nav>
12     <ul>
13       <li><a href="index.html">Home</a></li>
14       <li>About</li>

```

Code Editor 2 (style2.css - Sublime Text):

```
25 p{
26   text-align: justify;
27   line-height: 30px;
28   font-style: italic;
29   font-weight: bold;
30   font-size: 120%;
31   font-family: 'Indie Flower', cursive;
32 }
```

Les Images



[Home](#) [About](#) [Login](#)

About



Lorem ipsum dolor sit amet, consectetur
 adipiscing elit, ~~sed do eiusmod~~ **TEMPOR**
 incididunt ut labore et dolore magna aliqua.
 Ut enim ad minim veniam, quis nostrud
 exercitation ullamco laboris nisi ut aliquip ex
 ea commodo consequat.

© Toto team

```
~/EST/WEB/samples/CSS/about.html - Sublime Text (UNREGISTERED)
18 </header>
19 <section>
20   <h2>About</h2>
21   
22   <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, <span
23     <span class="del">sed do eiusmod</span>
24     <span class="upper">tempor</span> incididunt ut labore et dolore
25     magna aliqua. Ut enim ad minim veniam,
26     quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea
27     commodo
28     consequat.</p>
29 </section>
30 <footer>&copy; Toto team</footer>
31 </body>

~/EST/WEB/samples/CSS/style2.css - Sublime Text (UNREGISTERED)
29 font-weight: bold;
30 font-size: 120%;
31 font-family: 'Indie Flower', cursive;
32 }
33 #aboutImg{
34   width: 200px;
35 }
36 footer{
37   text-align: center;
38 }
```

Les Images: float



```
~/EST/WEB/samples/CSS/about.html - Sublime Text (UNREGISTERED)
18 </header>
19 <section>
20   <h2>About</h2>
21   
22   <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, <span
23     class="del">sed do eiusmod</span>
24   <span class="upper">tempor</span> incididunt ut labore et dolore
25     magna aliqua. Ut enim ad minim veniam,
26     quis nostrud exercitation ullamco
27     consequat.</p>
28 </section>
29 <footer>&copy; Toto team</footer>
30 </body>
31 </html>

~/EST/WEB/samples/CSS/style2.css - Sublime Text (UNREGISTERED)
31 font-size: 1.2em;
32 font-family: 'Indie Flower', cursive;
33 }
34 #aboutImg{
35   width: 200px;
36   margin: 8px;
37   float: right;
38 }
39 footer{
40   text-align: center;
41   background-color: rgba(100,100,100,0.5);
42 }
```

Line 41, Column 1 Tab Size: 4 CSS

Les Images: float

The image shows a browser window on the left and two code editors on the right. The browser displays a page with a black header containing the word "About". Below the header is a paragraph of Lorem Ipsum text with some words in red and blue. To the right of the text is an image of people in a meeting. Below the image is a copyright notice "© Toto team". The top code editor shows the HTML for the page, including the header, a section with an image and text, and a footer. The bottom code editor shows the CSS for the image, setting its width to 200px, margin to 8px, and float to right. The footer CSS sets text-align to center and background-color to rgba(100,100,100,0.5).

Browser window (CSS - Mozilla Firefox) showing the rendered page:

Home [About](#) [Login](#)

About

Lorem ipsum dolor sit amet, consectetur adipisicing elit, ~~sed do eiusmod~~ TEMPOR incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco consequat.

© Toto team

Code Editor 1 (about.html):

```
18 </header>
19 <section>
20   <h2>About</h2>
21   
22   <p>Lorem ipsum dolor sit amet, consectetur adipisicing
23     elit, <span class="del">sed do eiusmod</span>
24     <span class="upper">tempor</span> incididunt ut labore et
25     dolore magna aliqua. Ut enim ad minim veniam,
26     consequat.</p>
27 </section>
28 <footer>&copy; Toto team</footer>
29 </body>
30 </html>
```

Code Editor 2 (style2.css):

```
32 }
33 #aboutImg{
34   width: 200px;
35   margin: 8px;
36   float: right;
37 }
38 }
39 footer{
40   text-align: center;
41   background-color: rgba(100,100,100,0.5);
42 }
```

Les Images: clear



```
~/EST/WEB/samples/CSS/about.html - Sublime Text (UNREGISTERED)
18 </header>
19 <section>
20   <h2>About</h2>
21   
22   <p>Lorem ipsum dolor sit amet, consectetur adipisicing
23     elit, <span class="del">sed do eiusmod</span>
24     <span class="upper">tempor</span> incididunt ut labore et
25     dolore magna aliqua. Ut enim ad minim veniam,
26     quis nostrud exercitation ullamco
27     consequat.</p>
28 </section>
29 <footer>&copy; Toto team</footer>
30 </body>
31 </html>

~/EST/WEB/samples/CSS/style2.css - Sublime Text (UNREGISTERED)
33 #aboutImg{
34   width: 200px;
35   margin: 8px;
36   float: right;
37 }
38 }
39 footer{
40   clear: both;
41   text-align: center;
42   background-color: rgba(100,100,100,0.5);
43 }
```

Box Model:



Box Model:

The image shows a browser window on the left and two code editors on the right. The browser displays a page titled "About" with a header, a paragraph of Lorem Ipsum text, an image of people in a meeting, and a footer. The code editors show the HTML and CSS files that create this page.

Browser Window (Mozilla Firefox):

- Address bar: `file:///T:/WEB/samples/CSS/`
- Page Title: CSS
- Navigation: Home About Login
- Section Header: **About**
- Text: Lorem ipsum dolor sit amet, consectetur adipisicing elit, ~~sed do eiusmod~~ **TEMPOR** incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco consequat.
- Image: 
- Footer: © Toto team

Code Editor 1 (Sublime Text): `~/EST/WEB/samples/CSS/about.html`

```
18 </header>
19 <section>
20   <h2>About</h2>
21   
22   <p>Lorem ipsum dolor sit amet, consectetur adipisicing
23     elit, <span class="del">sed do eiusmod</span>
24     <span class="upper">tempor</span> incididunt ut labore et
25     dolore magna aliqua. Ut enim ad minim veniam,
26     quis nostrud exercitation ullamco
27     consequat.</p>
28 </section>
29 <footer>&copy; Toto team</footer>
30 </body>
31 </html>
```

Code Editor 2 (Sublime Text): `~/EST/WEB/samples/CSS/style2.css`

```
33 #aboutImg{
34   border: 2px solid gray;
35   width: 200px;
36   margin: 8px 12px; /*top-bottom left-right*/
37   padding: 16px 8px 16px 8px; /* top right bottom left*/
38   float: right;
39 }
40 }
41 footer{
42   clear: both;
43   text-align: center;
```

Line 37, Column 16 | Tab Size: 4 | CSS

Px, em ou rem?



Home About [Login](#)

About

Lorem ipsum dolor sit amet, consectetur adipiscing elit. ~~sed do eiusmod~~ tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco consequat.



© Toto team

```
~/EST/WEB/samples/CSS/about.html - Sublime Text (UNREGISTERED)
21 <img id= aboutimg src= about.jpg >
22 <p>Lorem ipsum dolor sit amet, consectetur adipiscing
23 elit, <span class="del">sed do eiusmod</span>
24 <span class="upper">tempor</span> incididunt ut labore et
25 dolore magna aliqua. Ut enim ad minim veniam,
quis nostrud exercitation ullamco
consequat.</p>

~/EST/WEB/samples/CSS/style2.css - Sublime Text (UNREGISTERED)
login.html style2.css
1 body{
2   font-size: 20px;
3 }
4 nav{
5   text-align: right;
6 }
7 p{
8   text-align: justify;
9   font-size: 0.5em;
10 }
11 .del{
12   text-decoration: line-through;
13   font-size: 2em;
14 }
15 }
16 .upper{
17   text-decoration: underline;
18   font-size: 2rem;

```

Line 8, Column 25 Tab Size: 4 CSS

Position

- La propriété `position` spécifie le type de méthode de positionnement utilisé pour un élément.
- Il existe cinq valeurs de position différentes :
 - *static*;
 - *relative*
 - *fixed*
 - *absolute*
 - *Sticky*
- Les éléments sont positionnés à l'aide des propriétés *top*, *bottom*, *left* et *right*.
- Ces propriétés ne fonctionnent que si la propriété *position* est définie en premier.
- Ils fonctionnent également différemment selon la valeur de *position*.

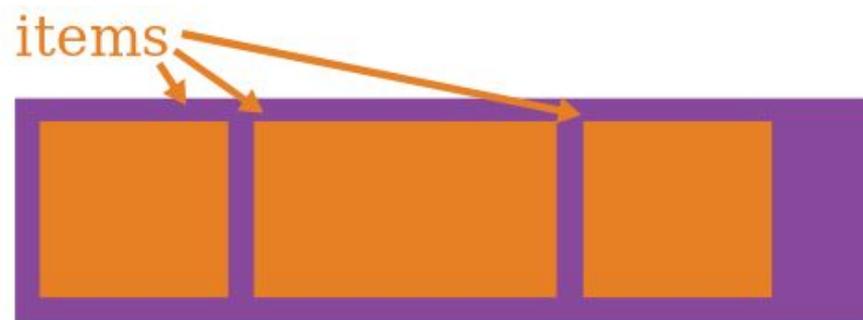
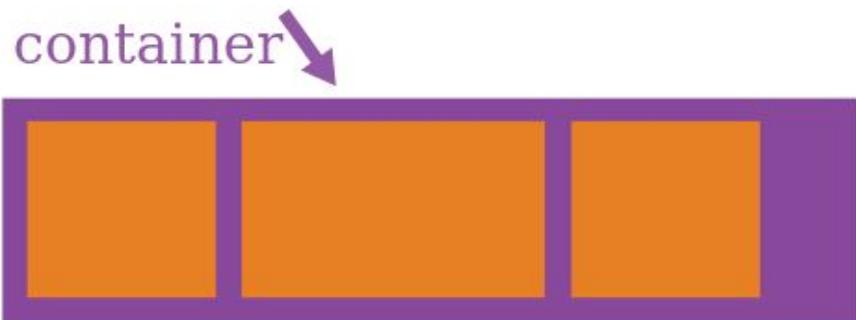
Position

- ***position : statique*** ; Les éléments positionnés statiquement ne sont pas affectés par les propriétés top, bottom, left et right. (par défaut)
- ***position : relative*** ; Un élément est positionné par rapport à sa position normale. Les autres contenus ne seront pas ajustés pour s'adapter à tout espace laissé par l'élément.
- ***position : fixed*** ; Un élément est positionné par rapport à la fenêtre d'affichage, il reste toujours au même endroit même si la page défile. Un élément fixe ne laisse pas de vide dans la page où il aurait normalement été situé.
- ***position : absolute*** ; Un élément est positionné par rapport à l'ancêtre positionné le plus proche . Si un élément en position absolue n'a pas d'ancêtres positionnés, il utilise le Body du document et se déplace avec le défilement de la page.

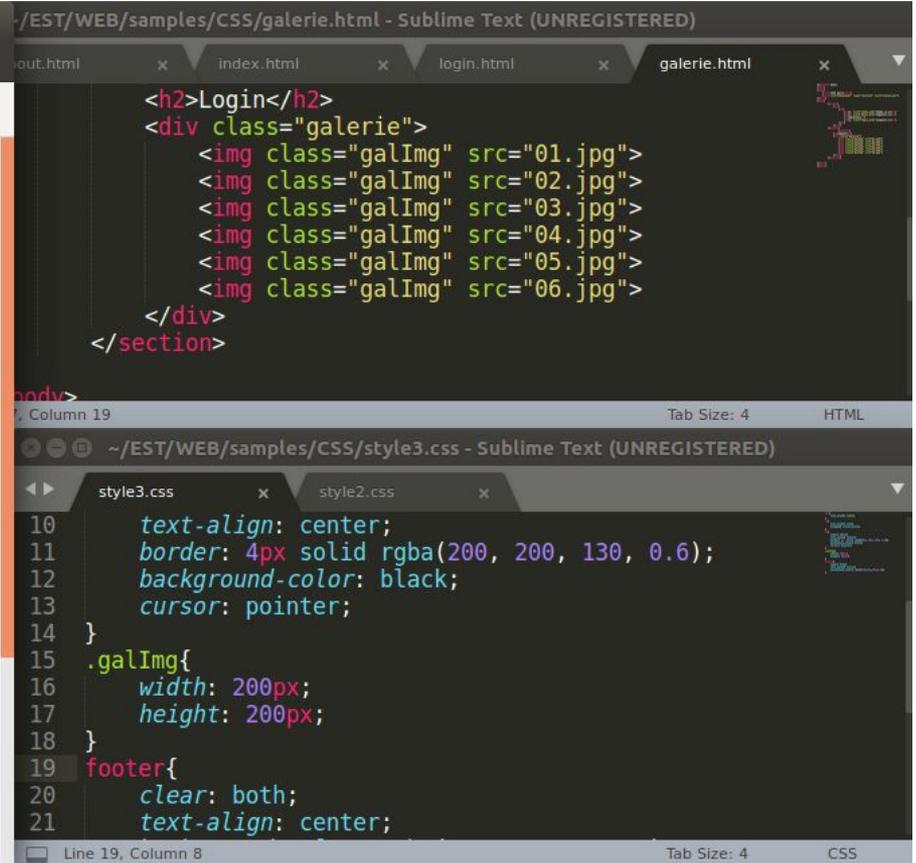
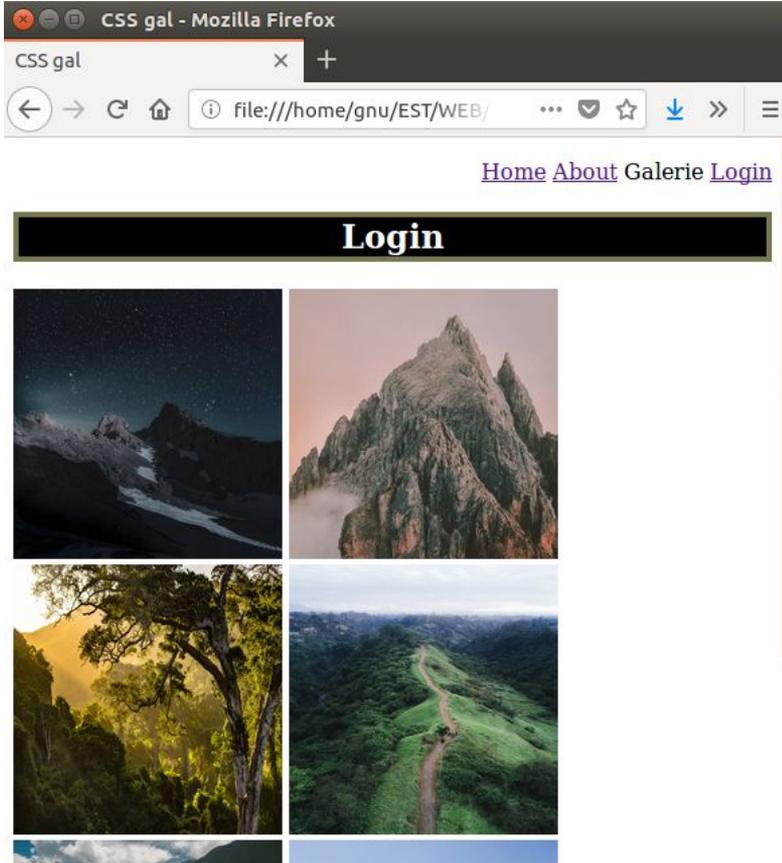
Position

- ***position : absolute*** ; Un élément est positionné par rapport à l'ancêtre positionné le plus proche . Si un élément en position absolue n'a pas d'ancêtres positionnés, il utilise le Body du document et se déplace avec le défilement de la page.
- ***position : sticky*** ; Un élément est positionné en fonction de la position de défilement de l'utilisateur. Il est positionné de manière relative jusqu'à ce qu'une position de décalage donnée soit rencontrée dans la fenêtre - puis il "colle" en place (comme position:fixed).

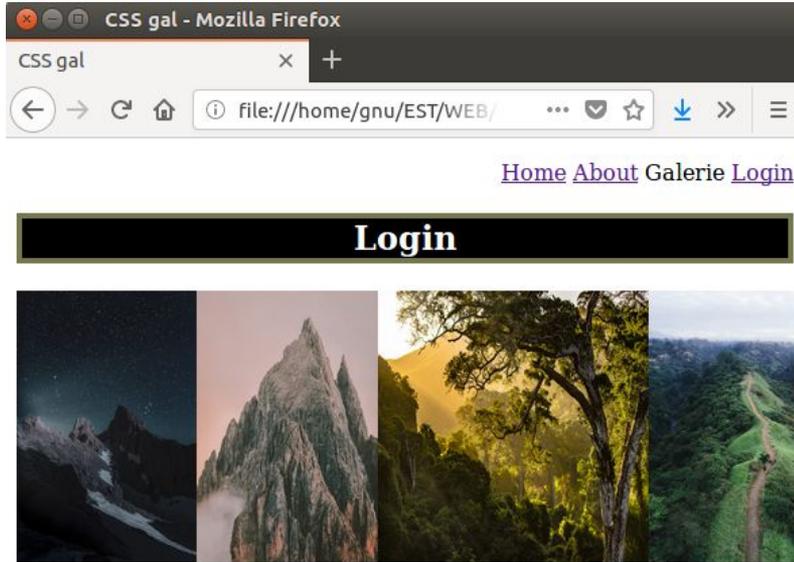
FlexBox



FlexBox



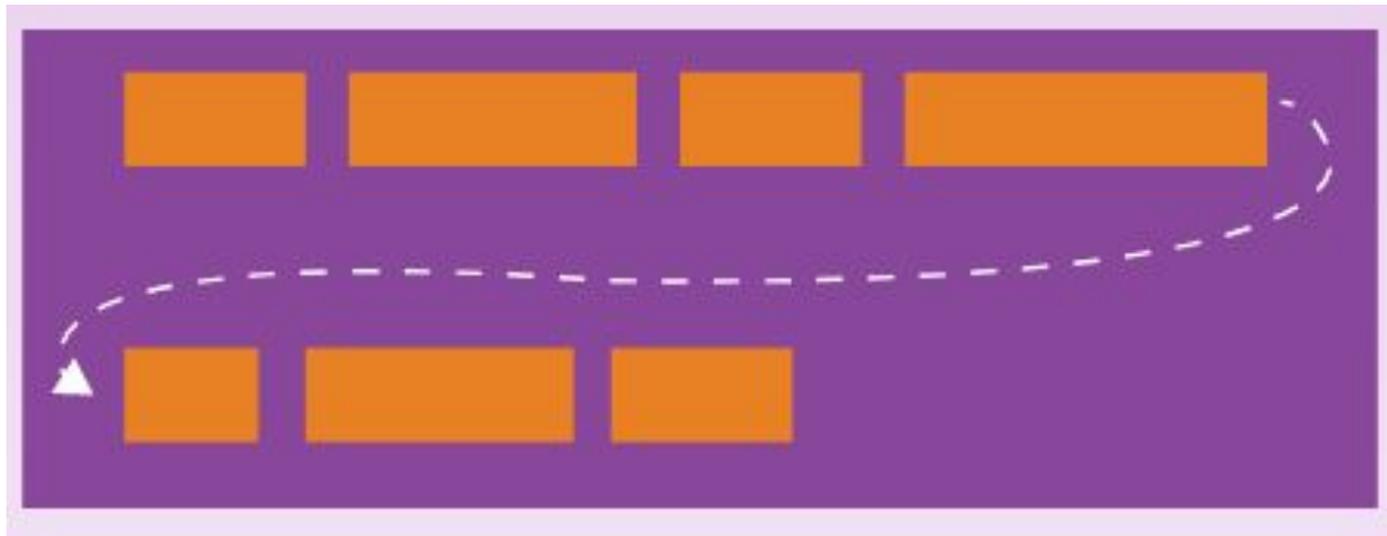
FlexBox: display



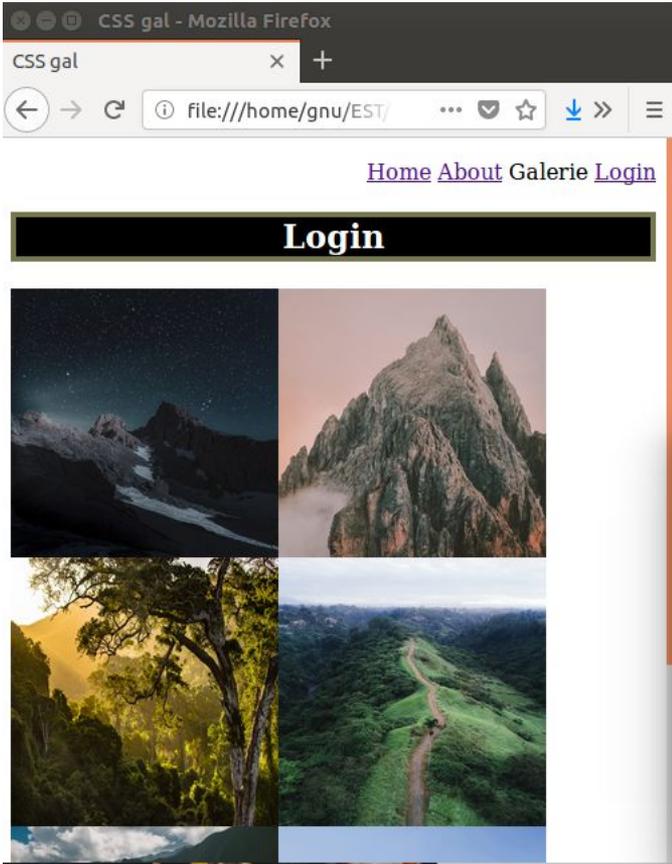
```
~/EST/WEB/samples/CSS/galerie.html - Sublime Text (UNREGISTERED)
out.html x index.html x login.html x galerie.html x
<h2>Login</h2>
<div class="galerie">
  
  
  
  
  
  
</div>
</section>
</body>
Column 19 Tab Size: 4 HTML

~/EST/WEB/samples/CSS/style3.css - Sublime Text (UNREGISTERED)
style3.css x style2.css x
10 text-align: center;
11 border: 4px solid rgba(200, 200, 130, 0.6);
12 background-color: black;
13 cursor: pointer;
14 }
15 .galImg{
16 width: 200px;
17 height: 200px;
18 }
19 .galerie{
20 display: flex;
21 }
```

FlexBox: flex-wrap



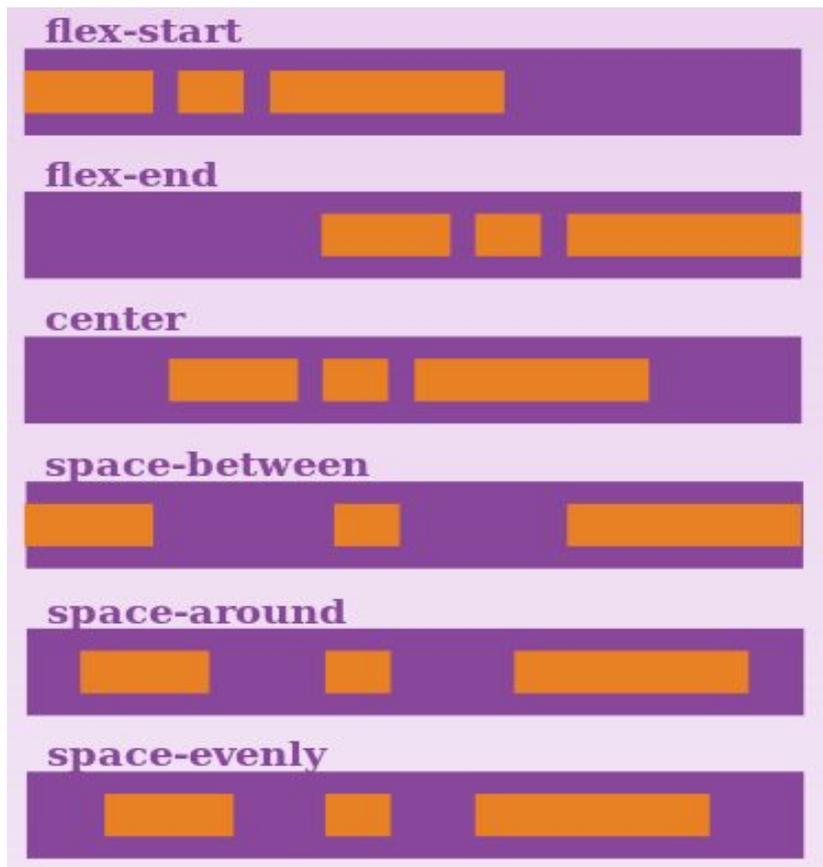
FlexBox: flex-wrap



```
~/EST/WEB/samples/CSS/galerie.html - Sublime Text (UNREGISTERED)
19 <h2>Login</h2>
20 <div class="galerie">
21   
22   
23   
24   
25   
26   
27 </div>
28 </section>
29
30 </body>
Line 27, Column 19 Tab Size: 4 HTML

~/EST/WEB/samples/CSS/style3.css - Sublime Text (UNREGISTERED)
14 }
15 .galImg{
16   width: 200px;
17   height: 200px;
18 }
19 .galerie{
20   display: flex; /*inline-flex;*/
21   flex-wrap: wrap;|
22 }
23 footer{
24   clear: both;
25   text-align: center;
Line 21, Column 21 Tab Size: 4 CSS
```

FlexBox: justify-content



FlexBox: justify-content

Screenshot of a web browser and code editors demonstrating FlexBox's justify-content property.

Browser View (Left): Shows the rendered page titled "Galerie". The page features a header with the word "Galerie" and a grid of six landscape images arranged in two rows and three columns.

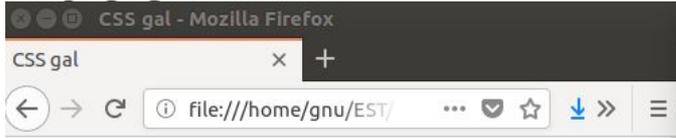
Code Editor View (Right): Shows the HTML and CSS code used to create the gallery.

HTML Code (~/EST/WEB/samples/CSS/galerie.html):

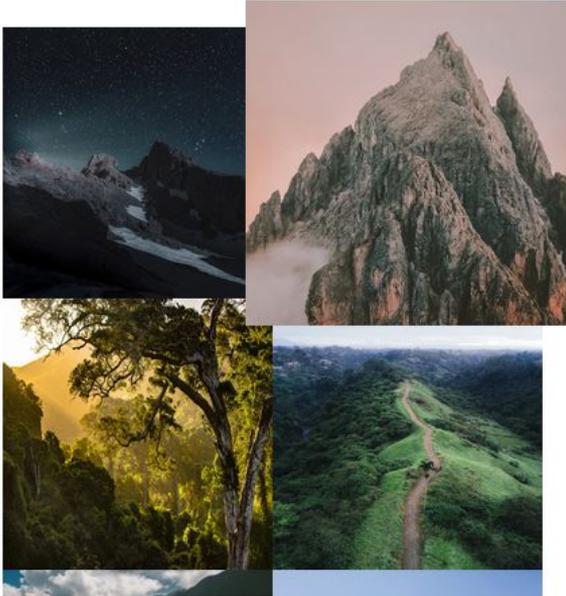
```
19 <h2>Galerie</h2>
20 <div class="galerie">
21   
22   
23   
24   
25   
26   
27 </div>
28 </section>
29
30 </body>
```

CSS Code (~/EST/WEB/samples/CSS/style3.css):

```
14 }
15 .galImg{
16   width: 200px;
17   height: 200px;
18 }
19 .galerie{
20   display: flex; /*inline-flex;*/
21   flex-wrap: wrap;
22   justify-content: center;
23 }
24 footer{
25   clear: both;
```



Galerie



```
~/EST/WEB/samples/CSS/galerie.html - Sublime Text (UNREGISTERED)
about.html x index.html x login.html x galerie.html x
19 <h2>Galerie</h2>
20 <div class="galerie">
21   
22   
23   
24   
25   
26   
27 </div>
28 </section>
29
30 </body>
```

```
~/EST/WEB/samples/CSS/style3.css - Sublime Text (UNREGISTERED)
style3.css x style2.css x
13 font-size: 3em;
14 }
15 .galImg{
16   width: 200px;
17   height: 200px;
18   transition: all 1s;
19 }
20 .galImg:hover{
21   transform: scale(1.2);
22 }
23 .galerie{
24   display: flex; /*inline-flex;*/
```

Les transformations

- Avec la propriété CSS ***transform***, vous pouvez utiliser les méthodes de transformation suivantes :

2D

- translate()
- rotate()
- scaleX()
- scaleY()
- scale()
- skewX()
- skewY()
- skew()
- matrix()

3D

- rotateX()
- rotateY()
- rotateZ()

- Exp: `div { transform: translate(50px, 100px); }`

Les transitions

1. Les transitions CSS vous permettent de modifier les valeurs des propriétés progressivement, sur une durée donnée.
2. Pour créer un effet de transition, vous devez spécifier deux choses :
 - a. la propriété CSS à laquelle vous souhaitez ajouter un effet.
 - b. la durée de l'effet

Les transitions

Exemple:

Dans L'élément <div> on spécifie un effet de transition pour les propriétés width et height, d'une durée de 2 et 4 secondes. L'effet de transition commencera lorsque la propriété CSS spécifiée changera de valeur.

```
div {  
  width: 100px;  
  height: 100px;  
  background: red;  
  transition: width 2s, height 4s;  
}  
  
div:hover {  
  width: 300px;  
  height: 200px;  
}
```

Autres propriétés: *transition-timing-function*, *transition-delay*

Les animations

- CSS permet l'animation d'éléments HTML sans utiliser JavaScript ou Flash !
- Une animation permet à un élément de passer progressivement d'un style à un autre.
- Vous pouvez modifier autant de propriétés CSS que vous le souhaitez, autant de fois que vous le souhaitez.
- Pour utiliser l'animation CSS, vous devez d'abord spécifier des Keyframes pour l'animation.
- Les Keyframes contiennent les styles que l'élément aura à certains moments.

Les animations

- Lorsque vous spécifiez des styles CSS dans `@keyframes`, l'animation passera progressivement du style actuel au nouveau style à certains moments.
- Pour qu'une animation fonctionne, vous devez lier l'animation à un élément.

Les animations

- L'exemple suivant lie l'animation "exemple" à l'élément <div>. L'animation durera 4 secondes et changera progressivement la couleur d'arrière-plan de l'élément <div> de "rouge" à "jaune":

```
/* definition de l'animation */  
@keyframes myAnima {  
  from {background-color: red;}  
  to {background-color: yellow;}  
}
```

```
/* l'élément sur lequel on applique l'animation*/  
div {  
  width: 100px;  
  height: 100px;  
  background-color: red;  
  animation-name: myAnima;  
  animation-duration: 4s;  
}
```

Les animations

Exemple 2

```
@keyframes myAnima {  
  0% {background-color: red;}  
  25% {background-color: yellow;}  
  50% {background-color: blue;}  
  100% {background-color: green;}  
}
```

```
div {  
  width: 100px;  
  height: 100px;  
  background-color: red;  
  animation-name: myAnima;  
  animation-duration: 4s;  
}
```

CSS3: les transitions

https://caniuse.com/#search=transition

Global 93.34%

Fired at the Window when the page's entry in the session history stops being the current entry. Includes the **pageshow** and **pagehide** events.

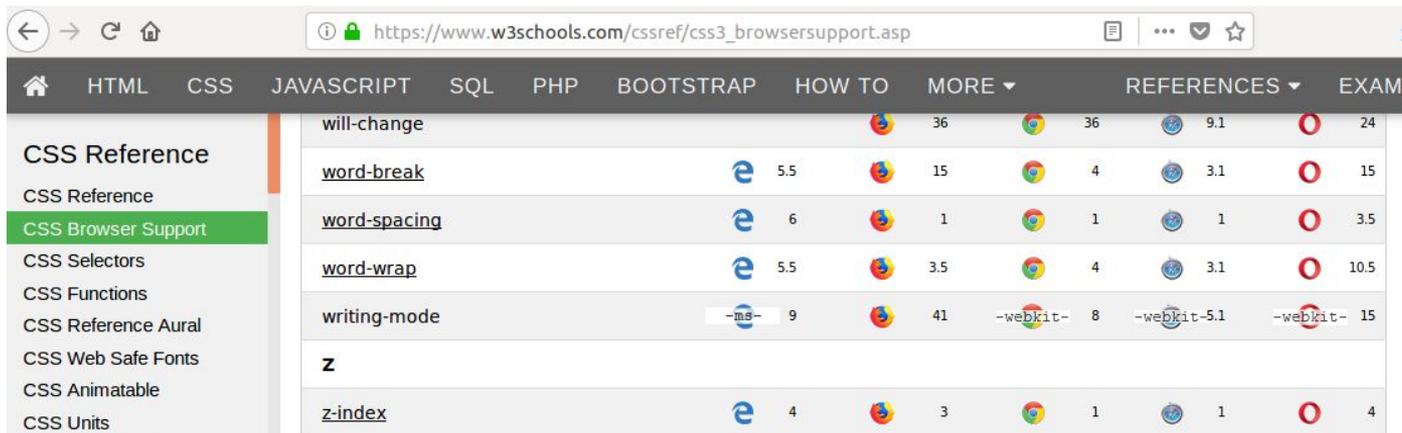
Current aligned Usage relative Date relative Showall ?

IE	Edge *	Firefox	Chrome	Safari	iOS Safari *	Opera Mini *	Chrome for Android	UC Browser for Android	Samsung Internet
			49						
			63						
			67						
		61	68	11.1	11.2				4
11	17	62	69	12	11.4	all	69	11.8	7.2
	18	63	70	TP	12				
		64	71						
			72						

Notes Known issues (0) Resources (3) Feedback

No notes

CSS3: Browser support

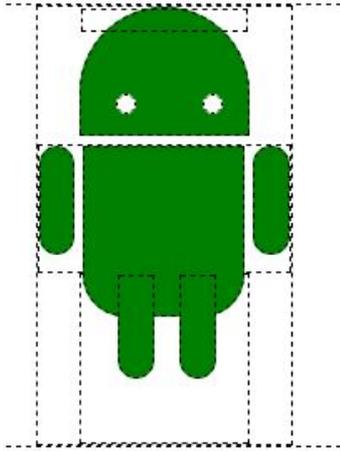


Property	Edge	Firefox	Chrome	Safari	Opera
will-change					
word-break	5.5				
word-spacing	6				
word-wrap	5.5				
writing-mode					
z					
z-index	4				

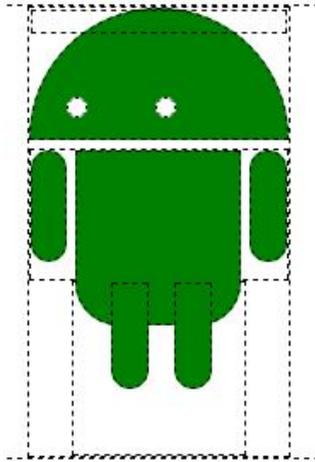
Icon Explanations

-  Supported by Edge/Internet Explorer
-  Supported by Firefox
-  Supported by Google Chrome
-  Supported by Safari
-  Supported by Opera
-  Supported by Edge/Internet Explorer with prefix -ms-
-  Supported by Firefox with prefix -moz-
-  Supported by Google Chrome with prefix -webkit-
-  Supported by Safari with prefix -webkit-
-  Supported by Opera with prefix -webkit-

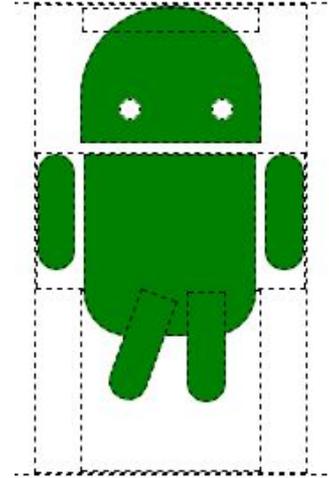
CSS3: Exercice



Normal



Pointeur sur la tête



Pointeur sur la jambe

Quelques propriétés css:

```
transform: rotate(-20deg);  
border-radius: 0 0 100px 100px;  
position: relative;
```