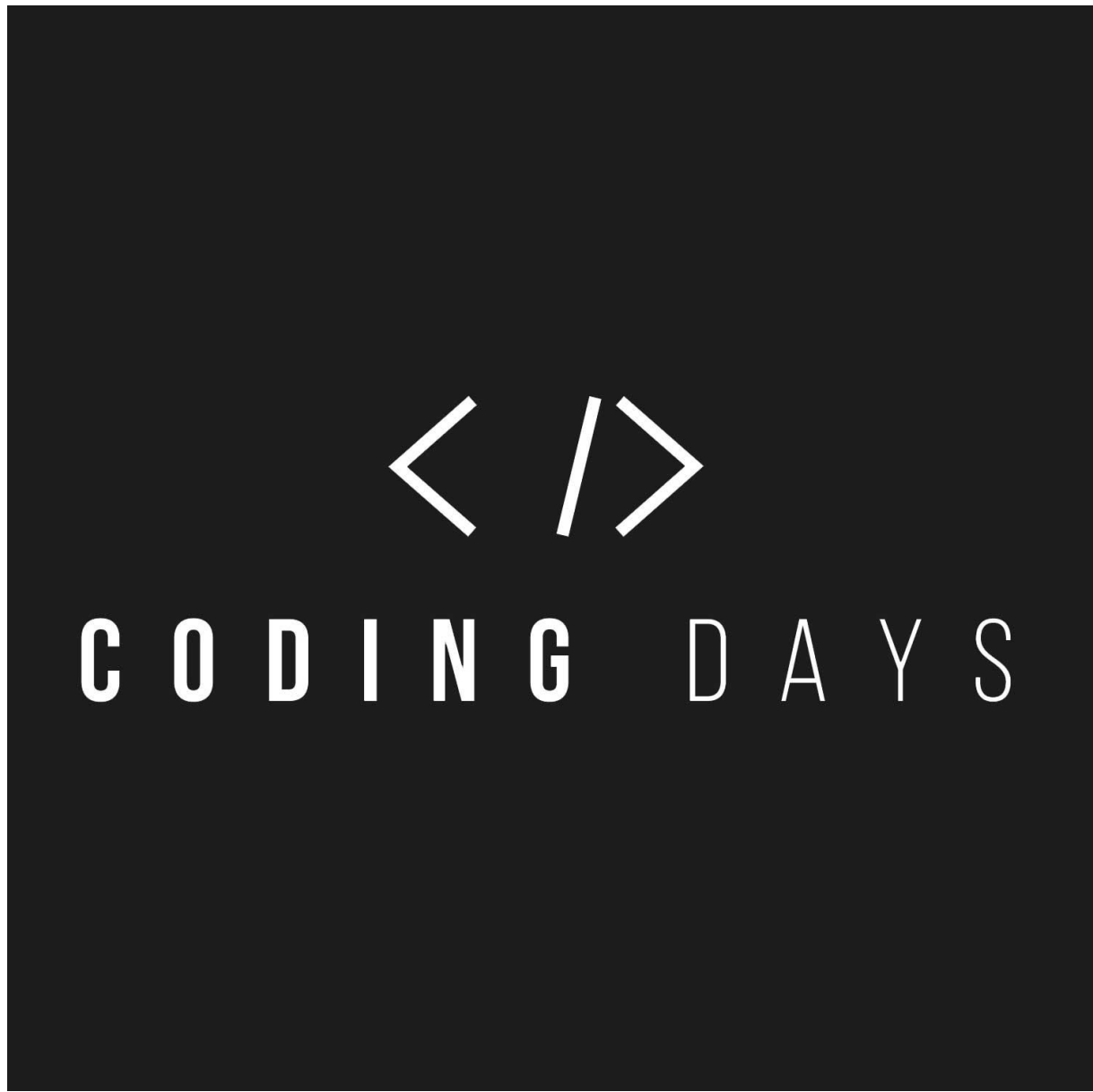


Internship report2017 : 3rd year



Internship during the period of 07/04/2017 to 31/07/2017

In the firm Coding Days.

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Epitech 3eme année

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Introduction:

Coding Days is a French start-up created in 2016, that teaches you how to make your own website or helps explain what a website is and how a website is run.

Indeed, in the world of today the web-world is more important day after day. In all fields, in firms across the world, from Banking, education, firm (b2b), commercial platform and media (tv, radio, information website.)

Compared to the world ten or twenty years ago, a lot of people today need to create their own website (for multiple reasons: professional project, association, to find a new job). Coding Days sells formations to people in order to teach them how to create their own website or, merely to help them understand correctly what is a website and how they can manage a project to create a website with a developer.

The office is located in Marcadet Poissonier in the north of Paris, but most of the work is done at Republic, in the center of Paris.

The Founder, Alexandre Zana, Co-Founder Fanchon Mayaudon-Nehlig, Sharon Adjedje (chief communication officer) and Matthieu Tirreli (lead developer) work in the office every day.

I found the internship at Coding Days by discovering it through a friend (Thomas Jamais) on Facebook. I was searching for new professors that needed help supervising and or helping their students during the weekend. During this time, Coding Days was looking to re-create their website and I decided to reach out to them.

Below you will find a description of the work I did with Coding Days, the website I created, how it is constructed, and what you can do with it in the future.

Part One: Coding Days Website

A) How did I meet Coding Days ?

At the beginning of the 2017, one of my friends had found an advertisement in Facebook from Coding Days saying “we need new mentors to give the Coding Days formation during the weekend ”.

My friend and I responded to the job announcement and met Alexandre Zana, the founder of Coding Days.

A few weeks later we started working on the weekends teaching CSS and HTML to the students.

After speaking with Alexandre, he explained that Coding Days needed to change its formations, and that it needed a new website for sell the training and lessons the company offered. I offered to help them and started my work design their website.

B) Objective of the internship

When I started working for Coding Days in April 2017, the firm needed a new website. Coding Days needed a new website because the old website was too static. (no animation with javascript)

They also needed a functionality update so the site would be easier for users.

My job was to re-create the site and make it more modern.

C) Technology used

To create the new website, I deconstructed each part of the old website and I re-constructed each new page on the skeleton of the old one.

The new website, like the old was constructed with the same CMS, WordPress.



(WordPress logo)

WordPress is useful because it gives to the admin-user an admin interface to easily manage a lot of things:

First, you can manage the pages you want show and not show on your website with one click.

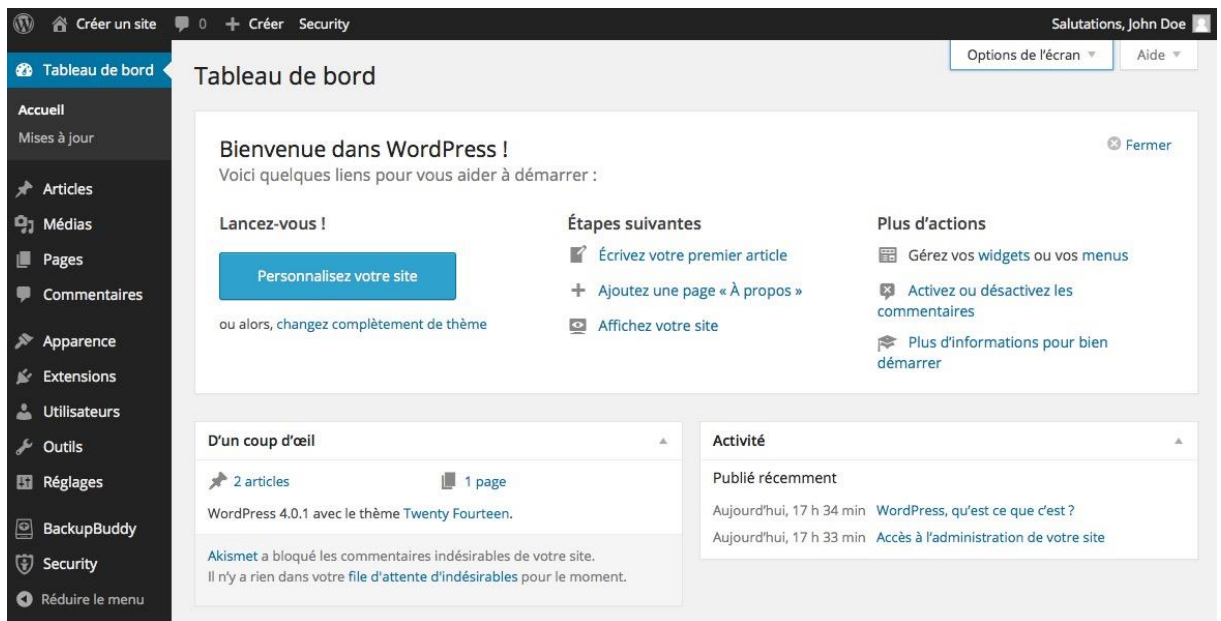
Secondly, for each page you can manage the content without knowledge in web development. Indeed, if the web-developer has done his job correctly, he has set up a lot of options to personalize the content of the page without having to use code.

Finally, WordPress gives you access to many extensions to solve any problems you face.

For example, you have access to an extension to set up a commercial platform. With this extension, you can manage an online shop where Coding Days can sell the formations, meaning the customer can pay and reserve a date of formation online.

Other extensions are useful for creating secure formulas (like contactForm). Some extensions help you to optimize your website, extensions like wp-rocket. This kind of extension is used for compressing your images, minimize your code, and helping you to optimize your site without a side application.

These advantages make WordPress a very powerful CMS and a good choice for developer who need to work on a website but don't want to worry about coding.



(Image de l'interface admin de wordpress)

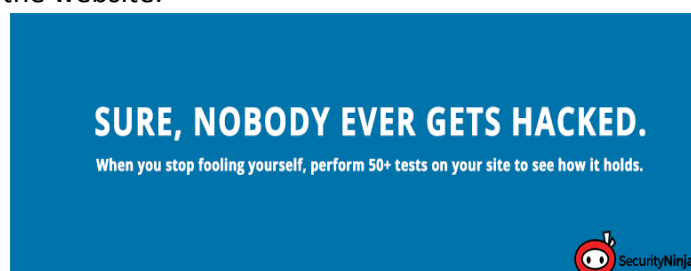
On the website for Coding days, I used the following extensions:

-Woocommerce: I used this extension to create the shop. In fact, this extension gives you the tools needed to add and manage “product”. For each product you can configure a lot of parameters, like an image, a description, a price and variation price (if you buy the formation for three people at the same time for example), different methods of payment and you can configure some tools (like Stripe) to manage the online payment from your customers (with their credits cards). Also, you can create a page for present your products.



-ContactForm: This extension is uses for creating easily secure formulas.

-WpRocket: WpRocket is very powerful because this extension helps optimize the website. WpRocket manages some settings of cloudflare. It introduces the “lazy loading”, which means the pictures, animations and videos the users don't see are not loaded directly when they go on the website page. All of that considerably increases the performance of the website.



-NinjaSecurity: This extension helps the developer detect problems of security and describe what is the solution for the security problem.

-Imagify: Imagify compresses images on the website to reduce their size.

-NextGenGallery: This extension gives the possibility to create gallery-photo.

-AjaxLoadMore: Is useful for creating a good blog page.

With WordPress, I have also used different languages of programming.

PHP : This language is used to communicate with the server. I use PHP to get data through WordPress.

For example, the blog page I created with PHP on WordPress shows what articles have been written and the author of each article. With this PHP request I can display on the page all the articles of CodingDays, and I can add filters to display only the articles that meet specific criteria.

HTML: The HTML language constitutes the skeleton of each page of the website. It is very important language because you are obligated to use this language to construct a website page. It is the base of the website programming. The HTML is the language with which you construct your page and it represents the logic of the content of your page.

Google looks (and judges) your HTML language to index your page. The more you respect logic in your HTML code the more google will reference you on the top of the search result.



CSS: If you don't use CSS, and only PHP and HTML then your page will not look its best. The CSS language gives you the ability to decorate the content of your page. However, be careful because the css language (like all the other languages) slows down the speed of your website. The more css code you have, the more time your page will take to load. You also need to use CSS carefully so you don't produce (and load) unnecessary CSS code.

JavaScript and JQuery: Javascript and JQuery is used for creating animation on your website. For example, on Facebook when you receive a new notification, Facebook uses Javascript to change the icon on the top of your screen to signal that you have a new notification.

Like CSS, Javascript (particularly the JQuery library) is very heavy code and will slow down your loading speed. You need to use this language only when it is not possible to use another language (like css) to create an animation.



I also used Sass language, which I will describe later.

Lastly, I used external services. I used this service for two things; the first, to increase the optimization and security of the website and the second, to send sms to the customers of the website.

The first service was Cloudflare and the second was twilio.

Cloudflare is a service that provides you with a DNS system, security against DDos attacks (and other kinds of web attacks), fire-wall is include in the DNS system and it gives you access to a cdn system to optimize the response time of your website.

The second, twilio is a service that sends sms to your customers. You can integrate twilio in an API or like me, you can use wordpress plugin to configure the twilio/wordpress compatibility. Now, on the Coding Days' website with Twilio, each time a customer buys a formation he receives a message on his telephone to confirm the order.



D) The architecture of the Website

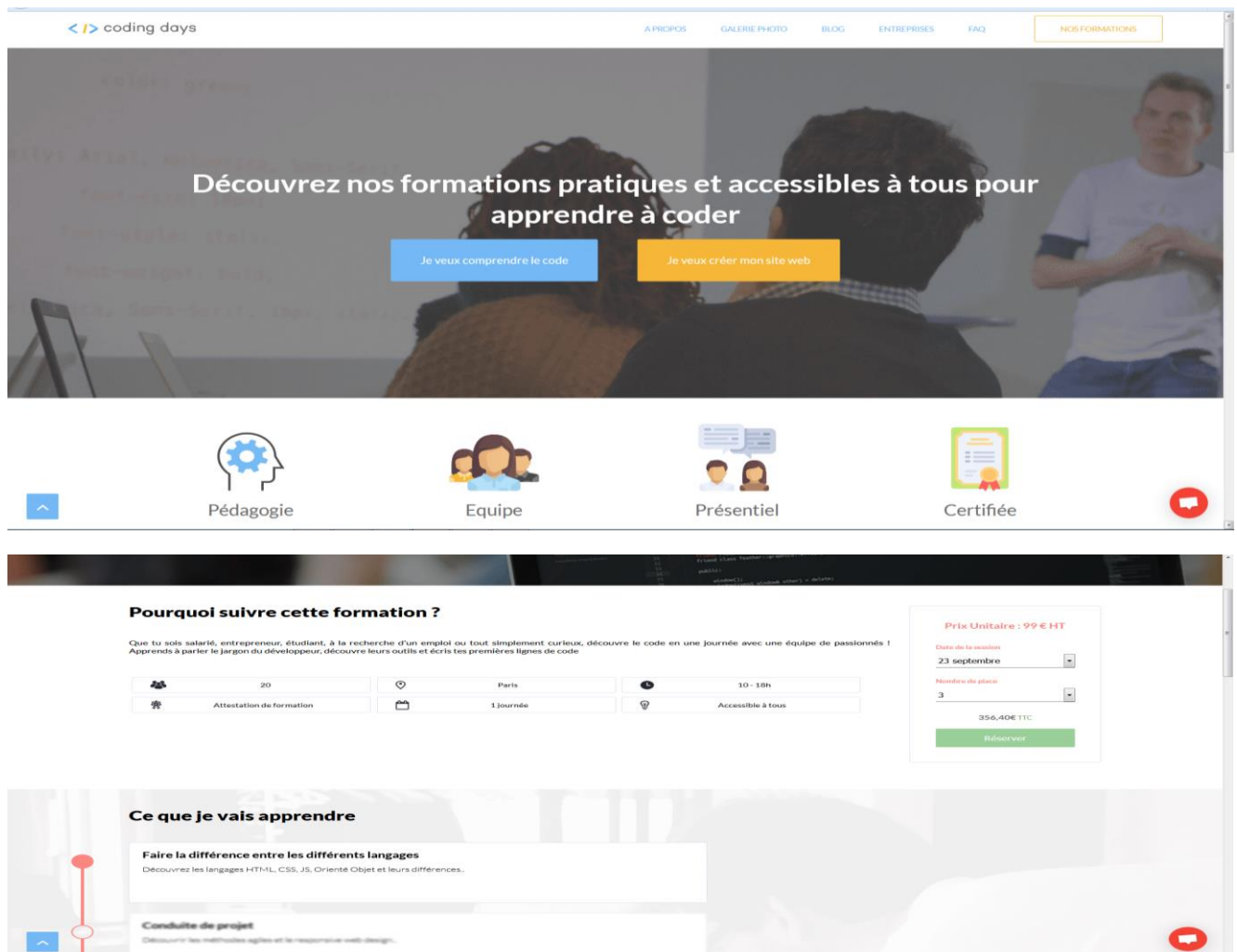
The Coding Days website has fifteen pages (approximately), these pages have different contents. The home page of course and then you also have some pages to talk about what Coding Days is and its employees.

You have the blog page of Coding Days where the firm posts two articles each week to speak about new technology and education. You have general conditions and the legal mentions pages along with a page for downloading the “press kit” by Coding Days. There is also a gallery page to show pictures of the past session of Coding Days. There is a page dedicated for the b2b with private firm. Then another page to see the description of each formation and other pages to order and buy the formation.

It's important to consider the totality of pages and their different content to understand the amount of work necessary to develop and maintain the entire website.

Of course every page is not used by all users but is necessary when looking at the website overall.

Now you can see two screenshots of the website Coding Days



Below is the answer the question “how is the folder of the website organized?”

| -wp-content

| |-Assets

| |-CSS

| |-JS

| |-SCSS

| |-Build

| |-CSS

| |-JS

| |-theme (Here you have all the pages included in the WordPress theme like the home-page)

| |-pages-templates

| | Here you have all the pages not included in the original

| WordPress theme, like the page “a-propos” of the site

| |-Woocommerce

| |- Here you have all the folders and files needed by the

| Woocommerce theme, like the page for display product.

|

| -wp-includes

|

|

|

| -wp-admin

|

You might have noticed, the section where it's says "SCSS", and noticed "SCSS" is presented like CSS and JS in the folder "Assets" but not in the folder "Build".

So, what is SCSS ?

The "SCSS" comes from the file extension .scss and the expression "Sassy CSS". Some files have this extension because these files uses code "SASS"

Sass is a different way to code in CSS, it's means Sass provides the developer with a different syntax to write css code (obviously not the same as the css syntax). The "SASS Syntax" is easier to write css code and reduce the quantity of code you need to write for the same result.

SASS is a compiled language which means Sass is compiled to generate the css code you will use for the website.

(you can see two examples of differences between CSS and SCSS)

SCSS	CSS
<pre>1 section { 2 height: 100px; 3 width: 100px; 4 5 .class-one { 6 height: 50px; 7 width: 50px; 8 9 .button { 10 color: #074e68; 11 } 12 } 13 }</pre>	<pre>1 section { 2 height: 100px; 3 width: 100px; 4 } 5 6 section .class-one { 7 height: 50px; 8 width: 50px; 9 } 10 11 section .class-one .button { 12 color: #074e68; 13 }</pre>
<pre>button, .button { position: relative; @include appearance(none); display: inline-block; padding: em(10, 13) em(20, 13); border: 0; @include border-radius(2px); font-size: em(13); font-weight: bold; color: \$button-color; text-align: center; text-decoration: none; background: \$button-background-color; cursor: pointer; &:hover, &:focus { @include background(linear-gradient(mix(\$button-background-color, \$white, 90%), mix(\$button-background-color, \$black, 90%))); @include box-shadow(0 1px 3px rgba(\$shadow, 0.3)); } &:active { @include background(linear-gradient(mix(\$button-background-color, \$black, 90%), mix(\$button-background-color, \$white, 90%))); @include box-shadow(0 0 10px rgba(\$shadow, 0.2) inset); } }</pre>	<pre>button, .button { position: relative; -webkit-appearance: none; -moz-appearance: none; appearance: none; display: inline-block; padding: 0.76923em 1.53846em; border: 0; -webkit-border-radius: 2px; -moz-border-radius: 2px; border-radius: 2px; font-size: 0.86667em; font-weight: bold; color: white; text-align: center; text-decoration: none; background: #d2232d; cursor: pointer; } button:hover, button:focus, .button:hover, .button:focus { background: -webkit-linear-gradient(top, #d63842, #bd1f28); background: -moz-linear-gradient(top, #d63842, #bd1f28); background: -o-linear-gradient(top, #d63842, #bd1f28); background: linear-gradient(to bottom, #d63842, #bd1f28); -webkit-box-shadow: 0 1px 3px rgba(0, 0, 0, 0.3); -moz-box-shadow: 0 1px 3px rgba(0, 0, 0, 0.3); box-shadow: 0 1px 3px rgba(0, 0, 0, 0.3); } button:active, .button:active { background: -webkit-linear-gradient(top, #bd1f28, #d63842); background: -moz-linear-gradient(top, #bd1f28, #d63842); background: -o-linear-gradient(top, #bd1f28, #d63842); background: linear-gradient(to bottom, #bd1f28, #d63842); -webkit-box-shadow: 0 0 10px rgba(0, 0, 0, 0.2) inset; -moz-box-shadow: 0 0 10px rgba(0, 0, 0, 0.2) inset; box-shadow: 0 0 10px rgba(0, 0, 0, 0.2) inset; }</pre>

E) SEO

Maybe it's the most important part. What is SEO ?

SEO "**Search Engine Optimization**", is the science use for developing a website he appears on the top result of your browser.

For example if you search "Facebook" in your computer, Facebook is the first result of the result page of your browser.

The SEO or "**natural referencing**" is a set of good practices you need to do when you develop a website. And it's a way for rewards websites with lot of links who spoke about your activity and your website.

The SEO is the science to say at google (and other browser like Mozilla Firefox) "I'm the best website you can propose for peoples who uses this kinds of key words".

This set of good practices includes rules like this.

- Each page must be had between 500 and 1000 words in his content.
- The words in the content of the page must use the same words configured like keywords of the website, or the same words use in the title of the website.
- The content of the website change frequently ?
- How many time is needed for load each page of the website ?
- The website have responsive design ?
- The number of link on your website they redirect in social network or articles they speak about your activity or your website.
- Have you a lot of visit on your website each day/week/month ?
- The HTML code is-it logic ?

If the website you develop respect lot of these rules your natural referencing or SEO is good and your website appear on the top of result search browser.

The respect of these rules is frequently checked by bots who inspect all websites on internet, for organized the search result of the browser you use.

The most of these bots belongs to Google, and these rules are edited by Google merely because Google is the most popular search browser (Google represent the most of the time the search browser used between 75% and 90% in a country).

I speak about SEO because during my internship (and the development of the Coding Days website), the team Coding Days and me have always thinking about the SEO of the website.

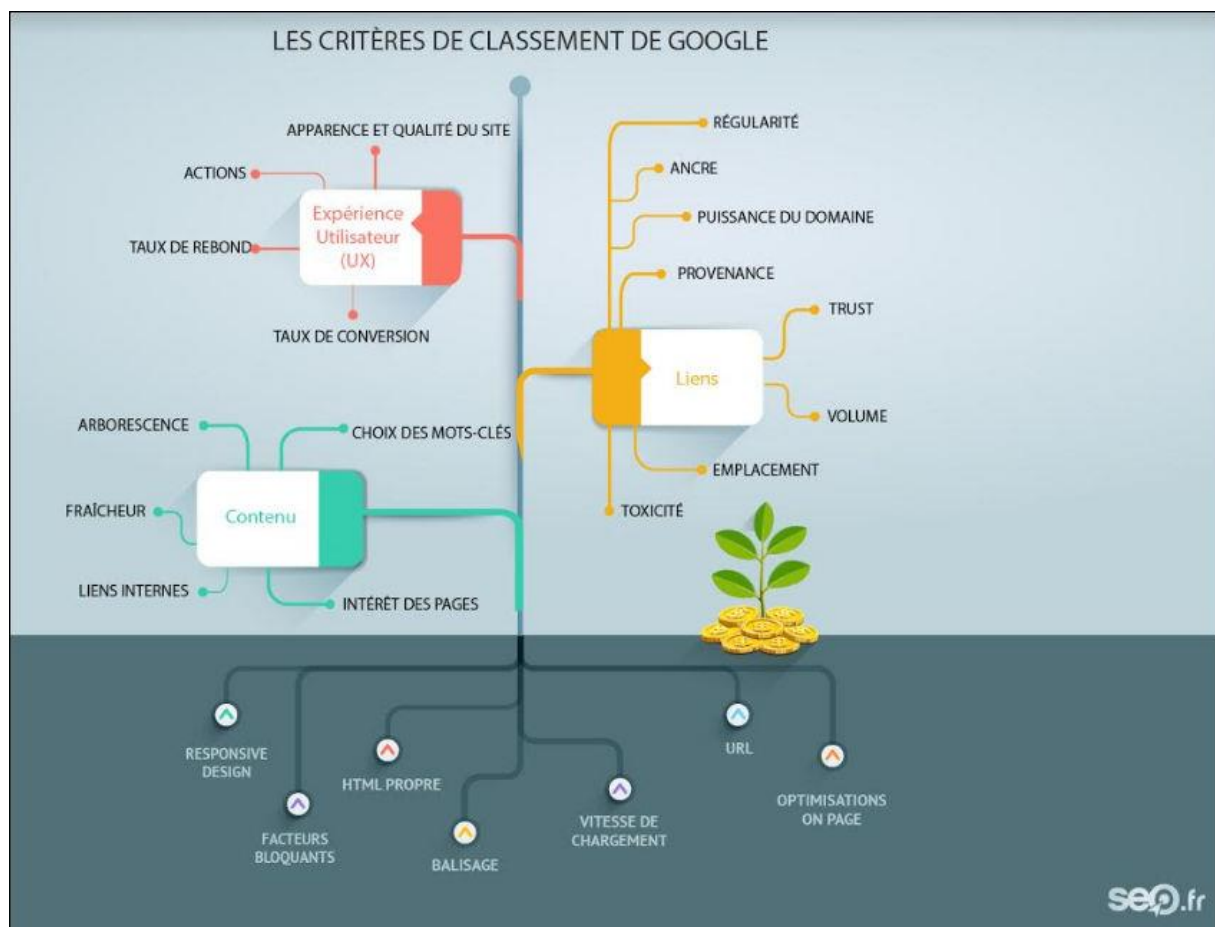
I said, “The team Coding Days” because SEO is not only the work of the developer. It’s also the work of people they create (write) the content of the website. The work of the developer is to produce a good HTML code, a dynamic site web (that is also the job of the “graphist” or “designer” of the firm), a page quickly loaded and raise awareness about SEO is colleagues.

The work of “marketing” people is to select what keywords use for the website, what title give to the website, what description write for the website.

Is to write the content of the website for each page and try to use the same keywords each time.

The SEO is a very important subject because if you create a website and you don’t think about the SEO of your website, your website will probably be going to useless because nobody will see it.

For example, for increase the SEO of the Coding Days website, each week, Sharon the “**Chief Communication Officer**” of Coding Days will publish two articles about what is code, what is necessary to code, some news about new technologies and some subject like those one.



(Schema about what is SEO in 2016)

Part Two: Why I can continue to work at Coding Days

After this last four months in the startup Coding Days and the realization of the new website, I think I have a better comprehension of what is a start-up and how it's works.

During my last internship I worked for the CNRS in the laboratory APC, it's a public service. And the organization of the work is completely different.

Indeed, during lot of times (five years, ten years or more) the same people in the same services (or laboratory) work at the CNRS, but at Coding Days during my internship I can see two members quit the project, two new people join the firm for work in a job does not exist two months ago. And one other people maybe join the team for few months after the summer.

And more, between the moment I meet Coding Days and the moment I finish my internship, the firm change his location three times.

All these things demand to people they want works in a startup like Coding Days to have the faculty to change their condition of work frequently.

Also, these conditions of work demand a real implication of the Coding Days workers because is not the greater conditions of work, you don't have the same advantages (like "ticket-restaurant", Navigo pass, climatisation of the office .. and others stuff like that) the rewards each month is not present all the times, and it's possible If you work in your start-up you can't gain money during long time but you can lose money.

The positive point it's to do a very interesting job because the lake of people for do all the activity of the firm oblige you to do many activities in the same time.

You work in a small team, it's means all the production of your work is useful and you can see very quickly the effects of your works. You can also participate for find solution at some new problems who appears each time.

You have responsibility and if the firm grow you can be proud because you participate directly at the evolution of your firm, and your job change in the same time for always answer at the new activity of the start-up.

For my opinion work in a Start-up or work in a public service is completely different. I think the both is good but work in a start-up is maybe more motivated because the work is more interesting (but also more tiring).

I can continue to work for Coding Days because understand all these problematics is important I think, because it's can be very disruptive for some people not prepared for work like that.

Also, I have write before Coding Days is a small team, and only three members are here since the beginning of Coding Days, maybe after this three months and all the changes in the Coding Days team these last months and the change in the location. With the three new peoples they start to work for Coding Days in the next months, maybe new difficulty can

appear for keep the same mentality in the firm.

But me I have lived this last four months and maybe I can help to transmit the Coding Days mentality at the new members of the team.

The realization of the website Coding Days it's a good experience for me, it allowed me to develop a professional WordPress website (e-commerce) not in the totality but at 80% or 90%. The Coding Days website have a good optimization in result of my code and my work. The website has also a good SEO because all the team CodingDays understand the problematics of SEO.

This internship and this project provide me a better comprehension of how organize the work for build a website and what is important for construct a good website. I can discover some tools for test or optimize my website. I have also discovered tools I can use after for construct the model of future website maybe If I have contract for construct other websites in my activity of self-employed.

With all these elements, I think I can return work for Coding Days in September like a professor or "mentor" in the new formations that will give Coding Days. Now, I can share all this new experience with my students and I think it's a very good thing for them. I hope it's possible to work together another time after this summer for give Coding Days formations and continue to see the development of the Start-up CodingDays.