INTRODUCTION TO WEB DESIGN

INTRODUCTION

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Introduction

Over the next few weeks, I would like to introduce you to the fundamental concepts, learning approaches, and essential tools needed to help you as you move into the Web design industry. We'll explore some of the basics of Web design utilizing the fundamental technologies that drive Web development; HTML and CSS.

Web design is a massive field with multiple areas of specialization. Often the term 'Web design' is used to identify anything from creating the visual design of sites through the development of sophisticated Web applications. Because of this, it can be challenging to summarize which skillsets are necessary to master becoming a Web designer. However, there are some fundamental core skills that almost all Web designers need to learn.

> **CODING IS NOT AS HARD, AS YOU MAY THINK. AFTER YOU LEARN THE RULES, MOST OF YOUR LEARNING WILL COME FROM EXPERIMENTING, BUILDING, FAILING, AND FIXING.**
>
> *Most mistakes are small ones, look for the needle in the haystack!*

FAQ's

Throughout this course, we will cover quite a bit of information. For starters, let's get a few questions answered and learn some terms:

1. Where do I start?

Your particular starting point will no doubt depend on your background and goals. However, an excellent first step for everyone is to get a basic understanding of Web design (YOU ARE IN THE RIGHT PLACE).

There are many levels of involvement in Web design, from just building a site for yourself to making it a full-blown career. You may enjoy being a full-service Web site developer or just specializing in one skill.

If your involvement in Web design is purely at the hobbyist level, or if you have just one or two Web projects you'd like to publish. You could use pre-built templates, and customize them in Adobe Dreamweaver.

If you are interested in pursuing Web design as a career, you need to bring your skills up to a professional level. Employers may not require a Web design degree, but they will expect to see sample Web sites that demonstrate your skills and experience. These sites can be the result of class assignments, personal projects, or a simple Website for a small business. What's important is that they look professional and have clean, working HTML and CSS under the hood.

2. What Do I Need to Learn?

This one's a big question. The short answer is "not everything." A more accurate answer depends on where you are starting and what you want to do. As mentioned earlier, the term "Web design" has become a catch-all for a process that encompasses several different disciplines, from graphic design to serious programming.

There are also specialists out there whom you can hire to fill in the skills you don't have. For example, I have been creating Web sites for more than a decade, and I still contract programmers when my clients require those features out of my skill set. I believe in the motto, "Stay in your lane."

The following are some of the core disciplines involved in the Web design process,

GRAPHIC DESIGN

Because the Web is a visual medium, Web pages require attention to presentation and design. The graphic designer makes decisions regarding everything you see on a Web page: graphics, type, colors, layout. If you work as a graphic designer in the Web design process, you may never need to learn any back-end programming languages. However, If you are interested in doing the visual design of commercial sites professionally, I strongly recommend graphic design training. Strong proficiency in Adobe Photoshop and Adobe Illustrator (the industry standard) is a must-have. If you are already a graphic designer, you are well on your way, all you need to do is hone your skills for the Web!

INFORMATION DESIGN

One easily overlooked aspect of Web design is information design, the organization of content, and how you get to it. Information designers (also called "information architects") deal with flow charts and diagrams and may never touch a graphic or text file; however, they are a crucial part of the creation of the site.

It is possible to find courses specifically about information design, although they are likely to be at the graduate level. Again, some personal research and experience working on a team will go a long way toward rounding out this skill.

INTERFACE DESIGN

Interface design focuses on; usability, how easily visitors can accomplish their goals on the site, and the overall experience of using the site. In most cases, the interface, information architecture, and visual design of a site are tightly entwined. Often, the interface design falls into the hands of a graphic designer by default; in other cases, it is handled by an interface design specialist or the information designer.

DOCUMENT PRODUCTION

A fair amount of the Web design process involves the creation and troubleshooting of the documents, stylesheets (CSS), scripting, and images that make up a site. The method of writing HTML and stylesheets (CSS) documents is called authoring.

The people who handle production, need to have an intricate knowledge of HTML, stylesheets, and often additional scripting or programming skills. At large Web design firms, the team that handles the creation of the files that make up the Web site may be called the "development" or "production" department. In some cases, the tasks may be separated into specialized positions for CSS designers, HTML author/coder, and client-side programmer.

All of the images that appear on a site need to be optimized for Web delivery. On small teams, this is commonly covered by the graphic designer and/or programmer.

SCRIPTING AND PROGRAMMING

Advanced Web functionality like forms, dynamic content, and interactivity; require Web scripts and sometimes special programs and applications running behind the scenes. Web programmers or developers handle scripting and programming.

Developers who specialize in the programming may never touch a graphic file or have input on how the pages look. Although, they need to communicate with the information and interface designers to make sure their scripts meet intended goals and user expectations.

Web scripting and programming requires some traditional computer programming prowess. While many Web programmers have degrees in computer science, it is also common for developers to be self-taught.

MULTIMEDIA

One of the cool things about the Web is that you can add multimedia elements to a site, including sound, video, and animation, for interactivity. You may decide to add multimedia skills to your Web design tool belt, or you may choose to become a specialist.

3. Do I Need to Learn Java?

You don't need to know Java programming (or any programming, for that matter) to make Web sites. There are so many tools out there that can allow you to create Web pages from the design side and not the coding side.

The following is a list of technologies associated with Web development. They are listed in general order of complexity and in the order that you might want to learn them. The only requirements are HTML and Cascading Stylesheets (CSS). Where you draw the line after that is up to you.

HTML

HTML (Hypertext Markup Language) is the language used to create Web page documents. Everyone involved with the Web needs a basic understanding of how HTML works. The best way to learn is to write out some pages by hand. Even hobbyists benefit from knowing what is going on under the hood. The good news is that it's simple to learn the basics.

CSS (CASCADING STYLESHEETS)

Cascading Stylesheets (CSS) describe how you want your content to look. The way the page looks is known as its presentation. CSS is now the official and standard mechanism for formatting text and page layouts. CSS also provides methods for controlling how documents are presented in media, such as in print and on handheld devices. It also has rules for specifying the non-visual presentation of documents, such as how they sound when read by a screen reader.

Stylesheets are also an excellent tool for automating production. You can make changes to all the pages in your Website by editing a single style sheet document.

JAVASCRIPT

Despite its name, JavaScript is **not** related to Java. JavaScript is a scripting language that is used to add interactivity and behaviors to Web pages. Below are a few examples of what JavaScript can do.

- Checking form entries for valid entries
- Swapping out styles for an element or an entire site
- Making the browser remember information about the user for the next time they visit

JavaScript is a language that is commonly used to manipulate the elements on the Web page or certain browser window functions. There are other Web scripting languages, but JavaScript (also called ECMAScript) is the standard and most widely used.

Writing JavaScript may be time-consuming to learn if you have no prior programming experience. Many people teach themselves JavaScript by reading books and following and modifying existing examples. Most Web-authoring tools come with standard scripts that you can use right out of the box, so you don't have to be fluent in JavaScript to use them.

SERVER-SIDE PROGRAMMING

Some Web sites are collections of static (X)HTML documents and image files. Most commercial sites have more advanced functionality, such as form handling, dynamically generated pages, shopping carts, content management systems, and databases. These functions are handled by special Web applications running on the server. Several scripting and programming languages are used to create Web applications, including:

- CGI Scripts (written in C+, Perl, Python, or others)
- Java Server Pages (JSPs)
- PHP
- VB.NET
- ASP.NET
- Ruby on Rails

Developing Web applications is programming territory and is not expected of all Web designers. However, that doesn't mean you can't or shouldn't put them in your toolkit. It is possible to get shopping carts, content management systems, mailing lists, and guestbooks as prepackaged solutions, without the need to program them from scratch.

XML

If you hang around the Web design world at all, you're sure to hear the acronym XML, which stands for eXtensible Markup Language. XML is not a specific language in itself, but rather a robust set of rules for creating other markup languages.

To use a simplified example. If you were publishing recipes, you might use XML to create a custom markup language that includes the elements <ingredient>, <instructions>, and <servings> that accurately describe the types of information in your recipe documents. Once labeled correctly, that information can be treated as data. XML has proven to be a powerful tool for sharing data between applications. Although, XML was developed with the Web in mind, it has actually had a more significant impact outside the Web environment because of its data-handling capabilities.

JAVA

Although Java can be used for creating small applications for the Web (known as "applets"), it is a complete and complex programming language that is typically used for developing large, enterprise-scale applications. Java is considered one of the "big guns" and is overkill for most Web site needs.

Learn Java only if you want to become a Java programmer. You can live your life as a Web designer without knowing a lick of Java (most Web designers and developers do). - I have.

4. What Do I Need to Buy?

It should come as no surprise that professional Web designers require a fair amount of gear, both hardware, and software. One of the most common questions I'm asked is, "What should I get?" I can't tell you precisely what to buy, but what follows is an overview of the typical tools of the trade.

While I've listed the most popular commercial software tools available, many of them have freeware or shareware equivalents.

EQUIPMENT

For a comfortable Web site creation environment, I recommend the following equipment:

A solid, up-to-date computer. Windows, Linux, or Macintosh is fine. Creative departments in professional Web development companies tend to be Mac-based. Although it is nice to have a super-fast machine, the files that make-up Web pages are tiny and tend not to be too taxing on computers. Unless you're getting into sound and video editing, don't worry if your current setup is not the latest and greatest.

Extra memory. Because you'll tend to bounce between several applications, it's a good idea to have enough RAM installed on your computer that allows you to leave several memory-intensive programs running at the same time.

A large monitor. While not a requirement, a large or high-resolution monitor makes life easier. The more monitor real estate you have, the more windows and control panels you can have open at the same time. You can also see more of your page to make design decisions. Just make sure if you're using a high-resolution monitor that you design for users with smaller monitors in mind.

A second computer. Many Web designers find it useful to have a test computer running a different platform than the computer they use for development (i.e., if you design on a Mac, test on a PC). Because browsers work differently on Macs than on Windows machines, it's critical to test your pages in as many environments as possible, and particularly on the current Windows operating system.

A scanner and/or digital camera. If you anticipate making your graphics, you'll need some tools for creating images or textures.

Software. Today, there is a wide range of tools explicitly created with Web design in mind that make the process more efficient. Research what is best for your goals, you may also find quite a few free and shareware products.

**Note, sometimes you can download trial versions before you buy*

Web page authoring

Web-authoring tools are similar to desktop publishing tools, but the end product is a Web page (an HTML file and its related style sheet and image files). These tools provide a visual "WYSIWYG" (What You See Is What You Get; pronounced "whizzy-wig") interface and shortcuts that save you from typing repetitive HTML and CSS.

- Google – Web Authoring Tools

HTML editors

HTML editors (as opposed to authoring tools) are designed to speed up the process of writing HTML by hand. They do not allow you to edit the page visually, as WYSIWYG authoring tools do. Many professional Web designers actually prefer to author HTML documents by hand.

- Coda
- Brackets
- For more just Google – HTML Editors

Graphics software

You'll probably want to add pictures to your pages, so you will need an image editing program. Here is a brief list

- Adobe Illustrator
- Adobe Photoshop
- Corel Draw

Here is a link to research a few more: https://www.digitalcameraworld.com/buying-guides/the-best-photo-editing-software

Planning for a Website

You are all ready to build that awesome incredible Website. The ideas are flowing, and we are prepared to jump in; all you want to do is get started. More often than not, we leave out the more critical aspect of planning and jump right in. To create a Website, we must understand some logistics and then plan the layout of our development.

Before you choose a means of communication in the design process, you need to:

- specify the problem that you're trying to solve
- define your target audience
- have a look at what competitors have done in this area
- set overall product requirements

SPECIFY THE PROBLEM

You have a resume and portfolio work that you want to showcase digitally for potential clients and job interviews. For starters, you could add your information to a few online portfolio sites, Behance is an example of one, and it comes with your Adobe Creative Cloud subscription. Behance is also a good source of creative inspiration.

Second, get a domain and create your Website, which is what we will do.

DEFINE YOUR TARGET AUDIENCE

> *Creating a content strategy without a clear understanding of your audience is a bit like setting a boat adrift without navigational tools. You're out there, and you're taking action, but you're not working toward a specific goal. These are the situations that marketers dread: huge amounts of time and money, without a clear potential for good ROI.*
>
> Jayson DeMers

The people who will be visiting and interacting with your Web site provide essential context to the design process. By understanding their motivations, their goals, their habits, their expectations, their assumptions, you can create a successful design. The design community is continually coming up with new methods and techniques for understanding users.

Regardless of the approach, this process usually ends in generating a profile of the audience, also known as personas. These profiles are relevant because they help everyone on the team have the same understanding of the target audience.

Besides seeking to understand users independently of the Website, you may want to see how the audience responds to the design itself. Conducting a usability test is a project in and of itself and can vary in size or purpose, depending on your needs.

Explore this site: https://www.usability.gov/

Put yourself in the shoes of the Website visitors and ask yourself:

- Why would I use this designer over another?
- If I am thinking about buying their services is a price listed or a way to get a price
- Has anyone else used this designer, what did they think?
- Do they offer other services?
- Does their style match what I need or want?
- Can they print the work I want?
- Can I get a free initial consultation?

If you already have clients ask why they selected you and use that information as well.

Additional Resources to aid in defining your target audience:

http://www.inc.com/guides/2010/06/defining-your-target-market.html

https://www.quicksprout.com/the-complete-guide-to-building-your-personal-brand-chapter-2/

http://www.forbes.com/sites/jaysondemers/2013/08/27/6-steps-to-decoding-your-target-audience/#2a89266d1979

https://www.entrepreneur.com/article/225656

Okay - Here is what we have so far. We are creating a Website. We have researched our targeted audience. Now we need to do some research on what competitors have done in the past with their sites.

WHY DO WE CARE WHAT OUR COMPETITION HAS DONE?

While you're busy differentiating yourself from competitors near and far, you might want to remember that old adage about keeping your enemies closer. There's a lot to learn from other local businesses, particularly those in your industry when it comes to digital marketing.

Who's doing things right? Take a look at what they're doing and how they're making it work, and put that to work for your business.

Specifically, let's talk about 5 things your competitors can teach you about Website design.

1. THEY CAN TEACH YOU ABOUT THE FEATURES THAT YOU'D LOVE TO HAVE.

I'm not saying to go out and mirror the competition, but there's nothing wrong with knowing what you like and what works. Go out there and scope out competitor's sites. What tools are they using that customers are loving? How can you make these features your own?

Here is a useful link to see what competitors are using on their site: http://builtwith.com. This link can also help you to learn about different technologies out there.

2. THEY CAN TEACH YOU WHAT NOT TO PUT ON A WEBSITE.

Everyone has critics –including your competition. Pay attention to what those critics are saying about their site. Is it hard to maneuver? Is there information missing? Are there features that the customers are begging for? Let them teach you what not to do – then go and do the opposite. Learn from their mistakes.

3. THEY CAN TEACH YOU ABOUT WHAT'S MISSING.

When you go to build your own site, it's hard to dream up all the possibilities your Website can have without being able to see the big picture of all the moving parts together. If you take several big competitors, they are bound to have different sites and options on their sites. Poke around. Does anything feel like it's lacking to you? Is there anything you wish you could do or think you should be able to do on their site? Take notes. Compare several sites. Patch together a cohesive plan for yourself that won't be full of missing parts.

4. THEY CAN TEACH YOU THE IMPORTANCE OF KEEPING YOUR SITE UP TO DATE.

There's nothing worse than heading to a Website with an outdated look, and collateral that dates back to the early 2000's. We know how tacky an outdated site looks, but that isn't often enough motivation to keep the fire going and keep us updating our sites. Let the competition be your lesson. Don't be that guy.

5. THEY CAN TEACH YOU THE IMPORTANCE OF LETTING GO OF THE CONTROLS.

Maybe up until this point, you've been updating your site and feeling like it is really doing the job. It's… okay. It's not awful! You have the information, and all the links are working, it shows up well in all the browsers. But after seeing what the competition is up to, you might realize that it's finally time to take it to the next level. Get help or increase your skillset.

Note: There is a fine line between what is right design-wise and what the user expects to happen in certain places. We need to be open to that process in order to get and give the best user experience.

PROJECT REQUIREMENTS

Do your research know what the client wants, and know what you can deliver and when. Ensure you have all of this outlined in a contract that protects you and the client's best interests. No matter how close you may be to the client or how short the job may be, always have a contract in place with signatures to guarantee both parties are on the same page.

A good way to survey the clients' needs is to present them with a questionnaire asking them about their ideas and thoughts on colors, the logo, the layout, and deadlines. There are several Web sites that cover the Web Design Requirements and offer templates to craft your questionnaire and contracts.

Let's move on to our next step

Sketches, Wireframes, Mockups, Prototypes, BEARS, oh my!

We know what kind of site we are building we have researched our competitors and our target audience. We are ready to lay down some ideas about our proposed design. How do we do that? Let's talk about Sketches, Wireframes, Mockups, and Prototypes.

Here are a few resources to help with mockups digitally. When you have some time explore. We won't need it for this course.

Adobe XD
inVision
Sketch
Balsamiq

1 sketch

Sketching has advantages; It's portable, approachable, creative, and time-tested. There's nothing simpler than paper and pencil, or pen.

Some clients tend to find the work informal enough that they can suggest changes and make edits. Fully rendered comps look "finished" or nearly complete and can hamper a client's willingness to suggest improvements or changes. Sketches are loose, friendly, informal. You can erase them and change them.

2 wireframe

A wireframe is a low fidelity representation of a design. It should clearly show the main groups of content (what?), the structure of information (where?), a description, and basic visualization of the user interface interaction (how?).

Wireframes are not just meaningless sets of gray boxes, though they may look exactly like that. Consider them as the backbone of your design and remember that wireframes should contain a representation of every important piece of the final product.

3 mockup

A mockup is a middle to high fidelity, static, design representation. Very often a mockup is a visual design draft or even the actual visual design.

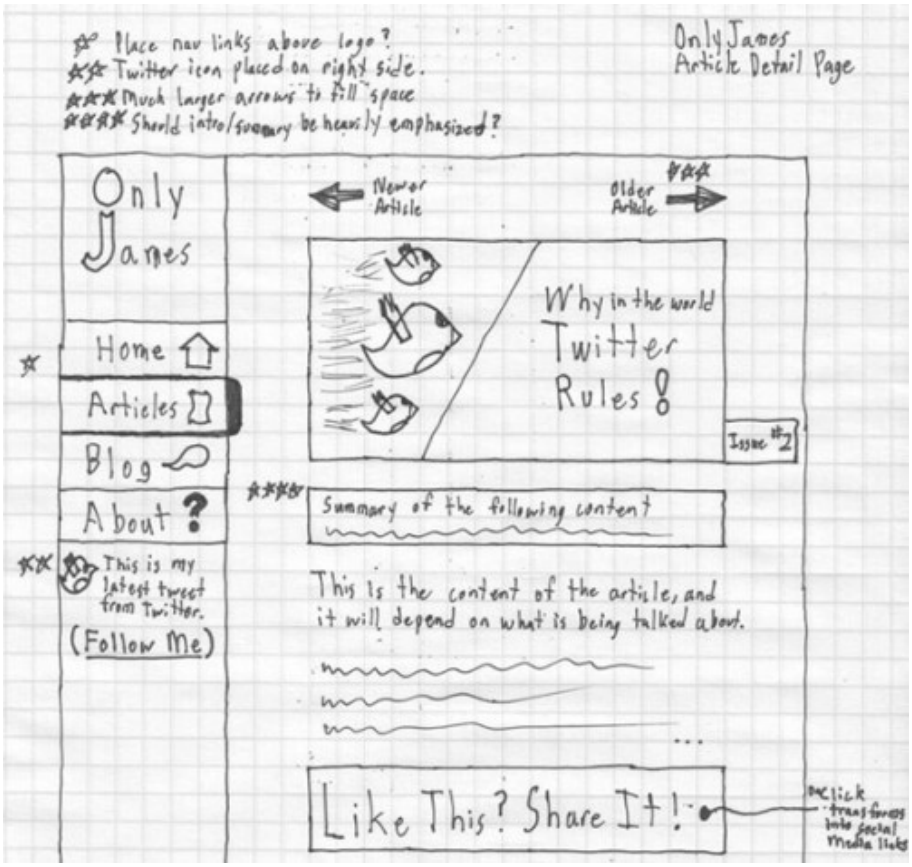
A well-created mockup represents the structure of information, visualizes the content, and statically demonstrates the basic functionalities. The mockup encourages people to review the visual side of the project.

4 prototype

A prototype, often confused with a wireframe, is a middle to high fidelity representation of the final product, which simulates user interface interaction. It should allow the user to experience content and interactions with the interface.

A prototype is a simulation of the final interaction between the user and the interface. It might not look exactly like the final product, but should be vastly similar (it's definitely not a grayish, sketchy thing).

EXAMPLES



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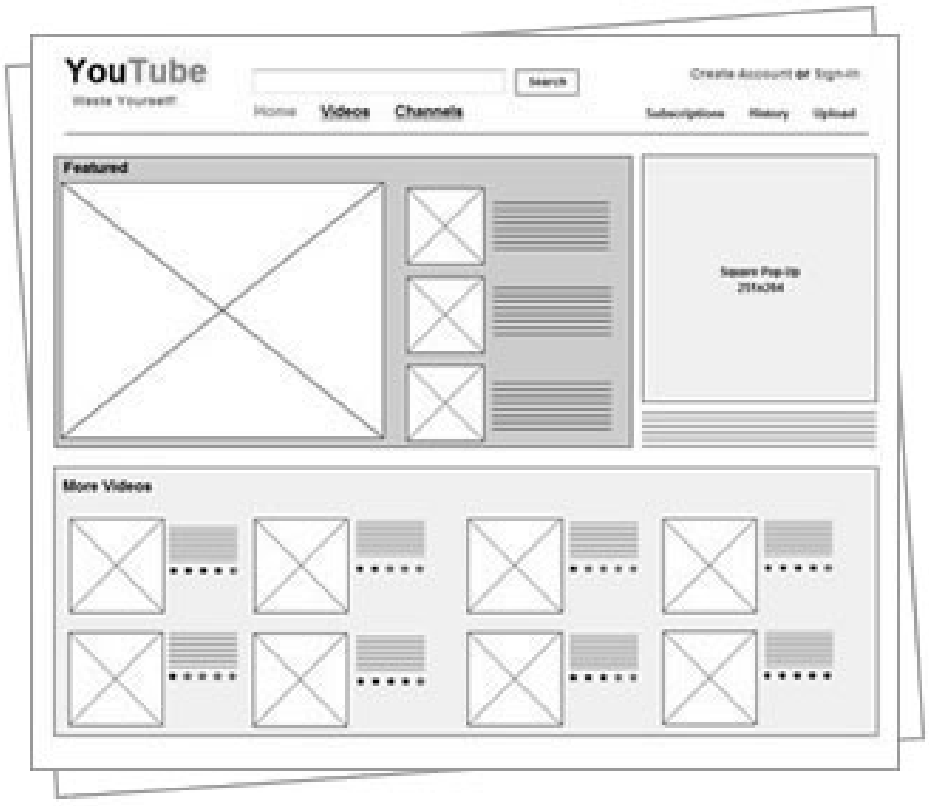

WIREFRAME

EXAMPLES

MOCKUP

Static visualization

PROTOTYPE

Interactive

A few extra tips:

WHEN TO USE WIREFRAMES?

Wireframes are typically used as the documentation of the project. Since they are static and fix interaction with an interface at a specific point in time, they should be accompanied by — short notes explaining interaction.

However, they might also be used less formally. Since they are quick and simple, they serve well as clear sketches for inner communication in the team. If developers ask how something should be done – the answer can be provided as a wireframe.

Wireframes are hardly used as a testing material, although they may help to gather some quick insights.

WHEN TO USE A PROTOTYPE?

Prototypes are used to their full potential in user testing. Such as a simulation of the final interactive material to check the usability of the interface, before development. A prototype is the most engaging form of design documentation as the interface is tangible and straightforward.

BUSINESS TALK

Let's talk right quick:

You got a client that wants some work done. Before you even say yes or ponder on the price, send them a questionnaire.

You need to vet your clients, find out how invested they are in this project. They have to understand what their business goal is or the Website will only live as far as their short-term vision and there is a strong chance it will not be easily adaptable to future goals.

Be the designer that brings their vision to life. Get a plan and do all the leg work you can on the front-end.

What kind of client is this?

This partnership is not one way; you need to know who your client is. How brief or in-depth they fill out the questionnaire gives you a clear sign of what they know about their business and vision. It can even show you how much time they are willing to invest in this process.

Most of us start out hungry, and we take any client and headache that comes with it. No matter your choice for taking the job, at least go in with a clear picture of your client.

No competition land.

When asked about competitors, you will get clients that say none, because they have a whole new idea. Yep, that idea is excellent, and the spin is pretty nifty. But, everyone has competition your client should know them, and we need to know them too.

Thinking long term.

One last note, Web work is not like graphic work. In graphic design, we can put out a few proofs. In Web work, we need to be clear in the design phase where we are going, so there are no structural revisions as we near the end of the project. IF we do need to make revisions, make sure that it's covered in the contract and ensure how you are getting paid for those revisions.

I have included a questionnaire for you to download. I have added to it over the years. Add or take what you will; it will give you a good benchmark for starting.

TEMPERATURE CHECK

How are you feeling so far?
Have you got questions or issues?