WEB DESIGNING WITH 3 CORE TECHNOLOGIES OF WEB ZERO TO HERO







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<ZERO TO HERO />

- » Development environments and setup
- » Intro to HTML
- » Intro to CSS
- » Web designing fundamentals
- » Traveler project Part 1
- » How to think like a programmer
- » How to build architecture and structure for a web design project
- » How CSS works (Behind the scenes)
- » Advance CSS (SASS) + NPM

- » Traveler project Part 2
- » CSS advance feature Flexbox
- » Traveler project Part 3
- » CSS advance feature CSS-Grid
- » Traveler project Part 4
- » Intro to JavaScript
- » How JavaScript works (Behind the scenes)
- » Dom manipulation
- » Must-DO project, putting all together (HTML, CSS & JS)
- » Traveler project Part 5

LET'S GO AND START OUR AMAZING JOURNEY

02. DEVELOPMENT ENVIRONMENTS & SETUP



<WHAT WILL YOU LEARN />

- » Text editor setup
- » Browsers
- » NPM

TEXT EDITOR SETUP



BROWSERS & NPM



<WHAT IS NPM />

- » NPM stands for Node Package Manager.
- » NPM is the world's largest software registry(Library) that contains over 800,000 code packages.
- » First and foremost NPM is an online repository for the publishing of open-source Node.JS projects.
- » NPM is a command-line utility for interacting with said repository that aids in package installation, version management and dependency management.
- » https://www.npmjs.com

03 INTRO TO HTML



<WHAT WILL YOU LEARN />

- » What is HTML
- » HTML document structure
- » HTML tags
- » HTML self closing tags Images and links
- » HTML attributes
- » HTML ordered and unordered list
- » HTML form
- » HTML table
- » HTML entities

- Challenge
- » Solving challenge

WHAT IS HTML



<WHAT IS HTML />

- » HTML stands for Hyper Text Markup Language.
- » HTML is the standard markup language for web pages.
- » HTML elements are the building blocks of HTML pages.
- » HTML elements are represented by <> tags which begins with <> and ends with </>>.
- » All HTML documents must start with a document type declaration: <!DOCTYPE html>.
- » The HTML documents itself begins with <html> and ends with </html>.
- » The **<body>** and **</body>** contain the visible part of a HTML document.
- The name of an element inside a tag is case insensitive. That is, it can be written in uppercase, lowercase, or a mixture. For example, the **<title>** tag can be written as **<Title>**, **<TITLE>**, or in any other way.

HTML DOCUMENT STRUCTURE



HTML TAGS



HTML SELF CLOSING TAGS – IMAGES & LINKS



HTML ATTRIBUTES



HTML ORDERED & UNORDERED LIST



HTML FORM



HTML ENTITIES



CHALLENGE



SOLVING CHALLENGE



O4. INTRO TO CSS



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<WHAT WILL YOU LEARN />

- » What is CSS
- » How to use CSS
- » CSS properties
- » CSS selectors
- » Colors
- » Floating
- » Positioning
- » Margins
- » Paddings

- » Borders
- » Font and text
- » Styling and aligning text
- » Styling links
- » REM vs. EM vs. Px
- » Animations
- » Challenge
- » Solving challenge

WHAT IS CSS & HOW TO USE CSS



<WHAT IS CSS />

- » CSS stands for Cascading Style Sheet.
- » CSS contain all the styles for a HTML document(Describes how HTML elements are to be displayed).
- » CSS is consist of a sector and declaration block.



- » CSS is a logical language somehow.
- » CSS can be use inside a HTML tag, inside a HTML document and external file.

CSS SELECTORS



CSS PROPERTIES – PART 1



CSS PROPERTIES – PART 2



CSS PSEUDO ELEMENTS – PART 1



CSS PSEUDO ELEMENTS – PART 2





FLOATING



POSITIONING



<POSITIONING />

» **Position** property sets how an element is positioned in a document.



- » The top, right, bottom and left properties determine the final location of positioned elements.
- » In the positioned elements when the **top** and **bottom** are defined the **top** win and if the **right** and **left** are defined **left** win if the document is **ltr** and **right** win if the document is **rtl**.

<TYPE OF POSITIONING />

- » **static:** It's the default position for all elements, in static position the element is positioned according to the normal flow of the document. The **top**, **right**, **bottom**, **left** and **z-index** properties have no effects.
- » **relative:** The element is positioned according to the normal flow of the document and then the offset relative to itself based on the values of **top**, **right**, **bottom** and **left**, the offset doesn't affect the position of any other elements.
- » **absolute:** The element is removed from the normal document flow and no space is created for the element in the page layout. It's positioned relative to its closest positioned ancestor and its final position is determined by the value of **top**, **right**, **bottom** and **left**.
- » **fixed**: The element is removed from the normal document flow and no space is created for the element in the page layout. It's positioned relative to the initial containing block established by the view port. In **fixed** position the element always placed in the same position even if the page is scrolled.
- » **sticky:** The element is positioned according to the normal flow of the document, and then offset relative to its nearest scrolling ancestor and containing block, the offset doesn't affect the position of any other elements.

MARGINS, PADDINGS & BORDERS



<MARGINS />

- » Margins create extra space around an element.
- » The margin property specified using one, two, three or four values and each value is a length, percentage or keywork of auto.
- When one value is specified, it applies for all four sides
- When two values are specified, the first value applies for top and bottom and the second value for right and left.
- When three values are specified, the first value applies for **top** the second to the **right** and **left** and the third for **bottom**.
- » When four values are specified, the first value applies for **top**, second for **right**, third for **bottom** and fourth for **left**.
- » The top and bottom margins have no effect on none-replaced inline elements, such as or <code>.

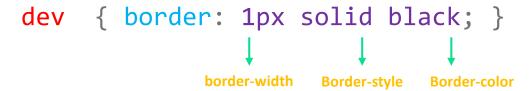


<PADDINGS />

- » Paddings create extra space within an element.
- » An element's padding area is the space between its content and its borders.
- » The values specification of **padding** property for four side of an element is the same as margins.

<BORDERS />

- » The **border** property sets an element's border.
- » The **border** property sets the value of **border-width**, **border-style** and **border-color**.



- » The border property sets the same design for all four sides of the border of an element but to make if different, use border-top, border-right, border-bottom and border-left properties.
- » The border will be invisible if its style isn't defined, this is because the style defaults to none.

FONT, TEXT AND LINKS



REM vs. EM vs. PX



<REM vs. EM vs. PX />

- » **px:** Pixels are the easiest measurement to use but it makes the work more difficult and its not affect to all elements, for example when you want to manage media queries you need to change all the elements that used **px**, may be good at spacing and layout but its not good for font size.
- » **em:** An **em** is equal to the font size of its parent element, for example if there is a **div** element defined with **font-size**: **16px** then for that **div** and for its children **1em** = **16px**, **em** works great with layouts like sidebar, menu and more but the most common way of using **em** is media queries.
- » rem: rem value are relative to the root html element, not to the parent element, if the font size of the root element is 16px them

 1rem = 16px for all elements inside the document. Setting root element font size in px will have some problems but the solution is to use percentage.
 - » Percentage: The default font size of root element is 16px and setting font-size: 100% will make 1rem = 16px but it will make calculations a little difficult. A better for this is to set font size to 62.5% because 62.5% of 16px is 10px which make 1rem = 10px easy for calculations.
- » Using of **rem** for spacing and font size and **em** for media queries make the work easy, simple and clean.

ANIMATIONS



CHALLENGE



SOLVING CHALLENGE



05. WEB DESIGNING FUNDAMENTALS



<WHAT WILL YOU LEARN />

- » A Brief Introduction About Web Designing
- » What's UI/UX
- » Typography
- » Colors
- » Images
- » Icons
- » Layout and Spacing

A BRIEF INTRODUCTION ABOUT WEB DESIGN



<WHAT IS WEB DESIGN />

- » Web design refers to the design of websites that are displayed on the internet.
- » Web design used to be focused on the designing website for desktop, tablet and mobile browsers.
- » Web design is all about working on appearance, layout and in some cases content of a website.
- » Appearance is relates to colors, font and images used.
- » Layout refers to how information is structured and categorized.
- » A good web design must be easy to use, suits the user group and brand of the website and responsive.
- » Effective, efficient and visually pleasing display is the key of success in the web design.



<WHAT IS UX />

- » UX stands for user experience. A user's experience of the product is determined by how they interact with it.
- » User experience person's perceptions and responses resulting form the use and or anticipated use of a product, system or service.
- » A well-designed product that has got good user experience should be: useful, usable, desirable, accessible, credible, findable and valuable.
- » UX design has three main parts:
 - » Research
 - » User interface (UI)
 - » User testing

<WHAT IS UI />

- » UI stands for user interface and it's the graphical layout of an application.
- » UI design is consists of the buttons user click on, text, images, sliders, entry fields, screen layout, transitions, animations, interface animation, visual elements interaction and every single micro-interaction.
- » UI design has two main parts:
 - » Low fidelity
 - » High fidelity
- » Low fidelity: Working with text, layouts and screen sizing.
- » Hight fidelity: Working with colors, images, animations and all the rest of remaining things from low fidelity part.

TYPOGRAPHY



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<TYPOGRAPHY LIKE A PRO />

- » Typography plays a vital role in web design because more than 95% of information on the web is the form of written language.
- » Good typography makes the act of reading effortless, while poor typography turns user off.
- » Optimizing typography is optimizing readability, accessibility, usability and over all graphic balance.

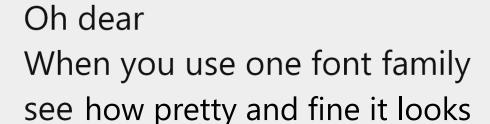
- » Keep the number of fonts used at minimum:
 - » Using more than 3 different fonts makes a website look unstructured and unprofessional.
 - » Limit the number of font families to a minimum (two is plenty, one is often sufficient).
 - » If you do use more than one font, ensure that the font families complement each other based on their character width.



Oh dear

When you use too many fonts

see how they all fight for attention





Hello World Hello World



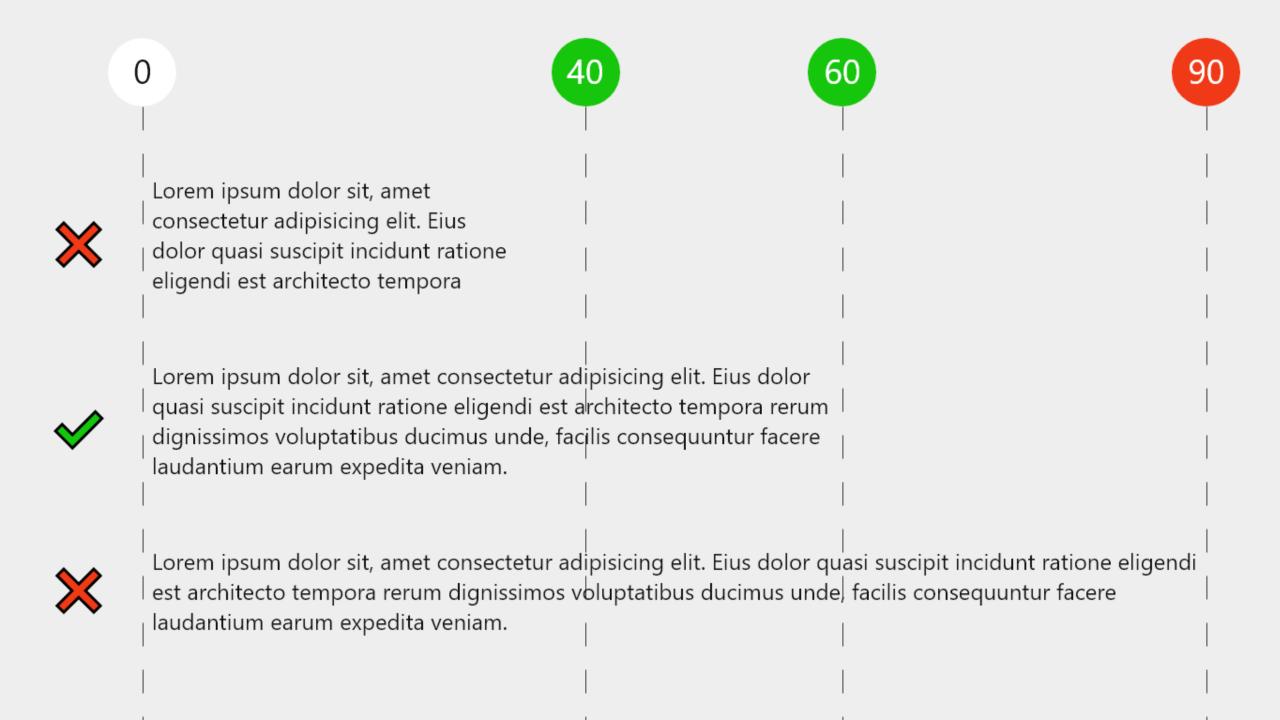


» Use standard fonts:

- » Users are more familiar with standard fonts and can read them faster.
- » Font embedding services like: **Google Fonts** or **Typekit** have a lot of interesting fonts that give your designs something new and fresh.
- If your website need for a custom font such as for branding purpose or to create an immersive experience, its usually best to stick with system fonts like: **Arial**, **Calibri** and etc.
- Sood typography draws the reader to the content, not to the type itself.

» Line length:

- » Having the right amount of characters on each line is key to the readability of your text.
- » Having around 40 60 characters per line for a good reading experience.
- » For mobile devices there must be around **30 40** characters per line.



» Choose a typeface that works will in different sizes:

- » Using of fonts that works in different sizes and resolutions is a good experience, because users will access your site from devices with different screen sizes and resolutions.
- » Its important to choose a typeface that works well in multiple sizes and weights to maintain readability and usability in every sizes.
- » Make sure that the typeface you choose is legible on smaller screens.
- » Avoid from fonts that use cursive script, although they are beautiful but they are difficult to read.



Display 4

Light 112sp

Regular 56sp

Regular 45sp

Display 1 Regular 34sp

Headline Regular 24sp

Title Medium 20sp

Subheading Regular 16sp (Device), Regular 15sp (Desktop)

Body 2 Medium 14sp (Device), Medium 13sp (Desktop)

Body 1 Regular 14sp (Device), Regular 13sp (Desktop)

Caption Regular 12sp

Button MEDIUM (ALL CAPS) 14sp



Regular 56sp Regular 45sp



» Use font with distinguishable letters:

- » Many typefaces make it too easy to confuse similar letter forms, specially with "I" and "L" and poor letter spacing, such as when "r" and "n" look like a "m".
- » When choosing your type, be sure to check out in different contexts to make sure it won't cause an issue for users.

» Avoid all caps:

- » All caps text meaning text with all the letters capitalized.
- » Don't force your user to read all caps text its not a good experience.
- » Its fine to use all caps in contexts that don't involve reading such as logo.





Illusion

Illusion



LOREM IPSUM DOLOR SIT, AMET CONSECTETUR ADIPISICING ELIT. EIUS DOLOR QUASI SUSCIPIT INCIDUNT RATIONE ELIGENDI EST ARCHITECTO TEMPORA RERUM DIGNISSIMOS.

» Line spacing:

- » Line spacing improve readability and make the reading of text effortless for the user.
- » In typography we have special rule for line spacing and there is two type of line spacing one for leading text and one for paragraph.
- » Leading text should be about **30%** more than the characters height for good readability.
- » Paragraphs must have about **20%** of line space.



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» Color contrast:

- » Don't use the same or similar colors for text and background.
- » The more visible text is easy for user to scan and read it faster.
- » Contrast ratio recommends by W3C for body text and image text.
 - » Small text should have a contrast ratio of at least 4.5:1.
 - » Large text (14pt bold / 18pt regular and up) should have a contrast ratio of at least 3:1.



Lorem ipsum dolor sit, amet consectetur adipisicing elit

Lorem ipsum dolor sit, amet consectetur adipisicing elit



Lorem ipsum dolor sit, amet consectetur adipisicing elit

Lorem ipsum dolor sit, amet consectetur adipisicing elit

» Avoid coloring text in red or green:

- » Color blindness is a common condition, especially amongst men(8% of men are color blind), its recommended to use other cues in addition to color, to distinguish important information.
- » Avoid using red and green colors alone to convey information because red and green color blindness is the most common form of color blindness.

» Avoid using blinking text:

» Content that flashes or flickers can trigger seizures in susceptible individuals, not only can it cause seizures, but its likely to be annoying or distracting for users in general.

Login Form Required fields are in red Name **Email**

Login Form Required fields are in red and marked with an * Name * Email *



<USING COLORS LIKE A PRO />

- » In branding and website color is really matter.
- » 90% of snap purchase decisions are driven purely by the perception of colors.
- » Choosing the right website color scheme is what makes it memorable, trustworthy, attractive and profitable.
- » Different colors will send different messages to your visitors, changing their understanding of your website, even when it wasn't intended.
- » Choosing the right color scheme for your web design will help you engage the users with color accent, sharp navigational elements and memorable branding.

» Finding your primary color:

- » If you have a logo or any existing branding in place, there's probably one main color that's dominating the designs and this is the color that your brand will be associated with your primary brand color.
- » Do some market research.
- » Use sites like **Dribbble** or **Behance** for a bit inspiration.
- » Use color plate tools

» Number of colors:

- » Its recommended to use a 3 color combination.
- » A triadic color scheme, which comprises three colors spaced out evenly around the color wheel is a good starting point.
- » A triadic palette can be quite dramatic if it features three primary vibrant colors.
- » Use the **60-30-10** rule.
- » **60-30-10** rule advises not to use equal amounts of the colors selected, rather divide them into percentages and apply accordingly, for example: A man suit: the blazer and stacks take up around **60%** of the look, the shirt represents another **30%** and the tie represents the remaining **10%** of look.

» Secondary color when needed:

- » Sometimes a design will required more than just a few primary colors, this is especially true for websites that are packed with content and landing pages, products, enablement materials, downloadable assets and more.
- » Match secondary color to your main brand color can be a struggle, but using of some tools like: **ColorSpace** make it easy and simple.
- » The ability to visually separate headings, sidebar, cations, buttons and other elements increases the conversation rate and improve the user experience.

» Neutral Colors:

- » You will need neutral colors for text, to create contrast for important elements or as a background colors.
- » The function of neutral colors in modern web design is much like: white space, dark and light mode, shadow and etc.

» Add primary, secondary and neutral colors in the following places:

- » Primary color go to the **hot spots** on your webpage, you should use these vibrant colors to attract users attention and prompt them to take action. CTA buttons, headlines, benefits icons, download forms and other important information should be highlighted with primary colors.
- » Secondary colors are used to highlight the less important information on the website, such as: secondary buttons, sub headings, active menu items, background or supporting content like FAQ's and testimonials.
- » Neutral colors will most likely be used for text and background, but could come in handy in particularly colorful sections of the site just to help tone it down and refocus the eye.

» Go through the process several times:

- When you finally select your color palette put it to the test in various scenarios, will it work in print? Does it have an effect on visitors you expected it to have?
- » It's best to go through this process a couple of times and create a few different color palettes, if one fails to meet all you requirements, you'll have a plan **B**.

IMAGES Lecture 037

<WORKING WITH IMAGES />

- » A website without any images is boring, even with a nice design.
- » Images are attractive.
- » Visual information is very convenient.
- » Instead of reading a lot of text, which takes time and effort, we rather quickly scan an image or a graph.
- » Images can trigger all sorts of emotions and memories.
- » Images can cross language barriers a lot better than text can.
- » Images are an easy way to improve the user experience of your website.

<WORKING WITH IMAGES />

- » People prefer images over text:
 - » 37% of the population are visual learners.
- » Images draw attention and trigger emotion:
 - » 90% of information that we perceive and that gets transmitted to our brain is visual.
 - » Images can help you to attract attention and to guide your visitors line of sight.
 - » Images can be of great value when it comes to presenting important information.
 - » Images are great emotion trigger that draw your visitors in and get them engaged in your content.

< WORKING WITH IMAGES />

» Logos help users to orientate:

- » The one image that you are most likely to find on any website is the company logo.
- » Logos takes in a very special role, doing two things: **A.** Help visitors to identify a website and gives them the safe feeling that they are where, they want to be. **B.** Showing your logo on every page of your site, your visitors can be certain they have not yet left your site.
- » Try to always position in the same spot, especially when you offer different content that requires a different site layout, it can be very valuable to offer this consistent element of recognition.

» Large images above the fold:

- » Web users spent 80% of their time looking at information above the page fold.
- » The space of a web page that is above the fold, so the part that people see without having to scroll, is the most valuable real estate of your site, not because people are not willing to scroll, but because this area is the first part people see when coming to your site.
- » Give people a reason to scroll and look at the rest of your site.

< WORKING WITH IMAGES />

» Use meaningful images:

- » When using images its important that you know why to use this image.
- For every image on your site you should be able to answer two questions: A. Why did you choose that image and not a different one?B. Why did you place the image where you placed it, and not somewhere else?
- » Only use images that somehow support your content and show some relevant information.

» Show real people:

- » Humans images are very effective way to get your visitors engaged.
- » Real images of people make us feel like we are actually connecting with other humans, not only with some coded website.
- » Faces of other humans draw our attention and not only that, we even follow their line of sight.
- » When using images with faces in your design, double check where they might attract attention to.
- » Use high quality photographs of people who really match your site's character.

<WORKING WITH IMAGES />

» Background images create atmosphere:

- » Background images are a great way to create a unique atmosphere on your site or give your visitors an immediate impression of what your site is about.
- » Make sure you know exactly what effect you want your background image to have on your visitors, then implement it in your design and test it to make sure it has the desired effect.

» Don't let graphics look like banner ads:

» Something you really want to avoid is to make images on your site look like banner ads, people don't like ads and over the years they have successfully learned to ignore them.

< WORKING WITH IMAGES />

» Label clickable images:

- » It has become a popular thing to use images instead of text for links.
- » In general this is not a bad thing to use images as link because images have more potential to draw attention and usually they are also bigger and making it easier to click them.
- » Label your images, while good text links are already descriptive themselves, a lot of time images are not self explanatory and there fore need labeling to tell people where they link to.

» Insure that images don't slow down your site:

- » Images can slow down a site and by doing so counter act a positive experience.
- » Luckily, internet connection nowadays allow us to quickly load many images with high speed. However, if people access your website from mobile or if they use a connection that doesn't yet meet our usual standards, its important that you optimize your images.



<USING & CHOOSING BEST ICONS />

- » Icons are all around us, websites, smartphones and software.
- » Icons make a better look for websites and bring a better user experience.

» Benefits of icons:

- » Icons are easily recognizable.
- » Icons make good touch target.
- » Icons are universal.
- » Icon are aesthetically appealing.

<GUIDELINES FOR USING OF ICONS />

- » Don't reinvent the wheel. Familiar icons work best.
- » Use icons to save space and improve recognition in toolbars, functions and navigation.
- » Icons should be fast to recognize. Use icons that people have seen and used before.
- » Don't change file type icon for file download, for example use a **W** in a blue box for word.
- » Icons should always communicate meaning. Don't overuse them or use them for decoration.
- » Use the 5 second rule: if it takes more than 5 seconds to this of an icon, it will probably been ineffective.
- » Icons must visually describe the function and purpose. Make them simple, familiar and meaningful.
- » Always have at least 1cm x 1cm minimum around the icon for legibility and easy tapping on mobiles.
- » When large enough, icons make good targets on mobile where space is limited.
- » Use a single icon set and ensure that all your icons are consistent and cohesive.
- » Always use labels for icons and show them to the right or below the icon.
- » A good test for a effective icon is when users can tell what is represents without a label.
- » Don't use icons with conflicting meaning, icons that could represent multiple things should be avoided.
- » Keep icons design simple and schematic, minimize complex shapes and graphic detail.
- » Avoid using similar icons for different purposes or different icons for the same purpose.

LAYOUT & SPACING



<WORKING WITH LAYOUT & SPACING />

- » For a website or app, many different visual elements make up the layout like: typography, drawn lines, icons, images, and etc. And white space is the thing that holds the elements together and enable them to stand out.
- White space is an essential design element and a powerful tool for effective web design, in fact its equally important as website content.
- » White space helps to create a balanced interface that's easy to read and doesn't overwhelm your visitors.
- » Often referred to as negative space and it's the space left between other elements of a website. It covers everything from lines and letter spacing, to the space surrounding text and images, to margins and gutters.
- » White space holds your design together and helps to shape the overall flow of the page.
- » White space is an active element and a fundamental building block of a good design.
- » White space is categorized based on the density of micro and macro.

<MICRO & MACRO WHITE SPACE />

» Micro white space:

- » They are the small space between design elements like: between lines and paragraph, letters and words and grid images of menu links.
- » Micro white space has a direct impact on content legibility. For example: marginal white space surrounding paragraphs, affect the user reading speed and comprehensive.

» Macro white space:

- » Macro white space is the large space between major layout elements, and the space surrounding the design layout.
- » You will find macro white space to the right and left of most website's content or space between website's content block.
- » Macro white space acts as a container of the overall design.

<WHAT WHITE SPACE DOES />

» Improve the legibility of text:

» Text that tightly spaced feels cluttered and its difficult to read, while the correct use of white space in text can increase readability by up to 20%. Think about the margins and line-spacing in web design process.

» Organize your content:

- » The amount of white space between your content acts as a visual cue, showing visitors the relationship between different elements of content .
- » Objects can be grouped together by decreasing the white space between them, or divided by increasing it.

<WHAT WHITE SPACE DOES />

» Create focus and emphasis:

- » A cluttered interface overwhelms your visitors, confusing them with too much information and losing the core message of the page amongst all the noise.
- » But by removing these directions, you draw the visitors eyes to the most important element of the page.
- » The more white space surrounding an object the more the eye is drawn to it.

» Structure your content:

- » Masterful use of white space can direct the eye to flow from one element to another, giving a visual cue to the hierarchy of information on the page and guiding the reader on a path though it.
- » The popular formula of the **Z-Shaped** layout, which mimics natural scanning habits, readers start in the **top-left** corner, following a horizontal line to the right, then drop back to the **bottom-left** before following another horizontal line, that this is not a good user experience,
- » But an asymmetrical layout provides directional emphasis in a more unexpected, interesting form, which is great for directing focus to particular element of the page.

<WHAT WHITE SPACE DOES />

» Give an impression of luxury:

- White space gives an impression of elegance, luxury and sophistication.
- » The abundance of white space demonstrates that the product is for more exclusive and important than the real estate of the web page.

» It doesn't have to be white:

- » Despite its name, white space doesn't have to be white! You can use any color, or lack of, in your negative space.
- » You could even use a patterned or textured background or a background image.

!

White space isn't wasted space, it can be a website's best friend.



Effective use of white space creates a design that's enjoyable, comfortable and easy to interact with.

06 TRAVELER PROJECT - PART 1

