Basic usage of CSS3

CSS3: Basic args

- Introduction to CSS
- CSS3 Text
- CSS3 Units
- CSS3 Selectors
- CSS3 Box Model
- CSS3 Flexbox

CSS3: Index

- introduction to css
- css text
- css selectors
- css box model
- css units
- css functions
- flexbox
- css grid
- responsive design
- positioning
- shadows and transitions
- css frameworks

CSS3: Texts

Basic args

- Styling
- Spacing
- Font
- Color
- Size

CSS3 Texts: Styling

- text-decoration:
    - line values: line-through, overline, underline, none
    - color values: named, hex, rgb
    - style values: double, dotted, wavy, solid, dashed
    - guidance: always remove underline from anchor tags and very rarely use text-decoration
- font-style
    - values: normal, italic, oblique, oblique 10deg
    - guidance: draw attention
- text-transform:
    - values: none, uppercase, lowercase, capitalize
    - guidance1: stick with sentence case
    - guidance2: make all uppercase for visual impact
- list-style:
    - values: none, disc, circle, square, decimal
    - guidance: always set list-style to none when they are used for structural purposes
- font weight: [100,900,100] - bold
    - guidance: heading 500-900, text 300-400

CSS3 Texts: Spacing

- line spacing: line-height:
  - values: unitless, percentage, pixels, ems
  - guidance: heading < 1.5, text 1.5 < x < 2 to improve readability
- letter spacing: letter-spacing:
  - values: pixels (common), percentage, ems
  - guidance: small negative px value
- text-align
  - values: center, left, right, justify
  - work with block element, but not inline elements
  - guidance: don't justify text, long blocks of text should be left-aligned and do not center arge blocks of text

CSS3: Size

- values: definito da CSS Units (absolute or relative)
- guidelines1: text 16px - 32px, headings > 60px
- guidelines2: sizing definito da TypeScale

CSS3 Texts: Font

- Font face Typeface
- Font Family
    - serif, sans-serif, monospace, cursive, display
    - per stile di prodotto
    - Guidance:
        - serif: luxury and reliability, extra details on the end of strokes; times
        - sans-serif: modern, clean and generic; straight ends and much cleaner; arial
        - monospace: technical service; letters are the same width; courier new
        - cursive: personal; joining strokes or mimic handwriting; comic sans ms
        - display: creative; attention grabbing and artistic; impact
    - font-family: first choice, fall back
    - sans-serif: roboto, open san, montserrat, poppins, inter
    - guidance: one or two font, no more
- Google font
    - cercare e aggiungere link

CSS3: Color

- definito in: rgb, rgba, hex, name, hsl
- sistema additivo o sistema sottrattivo
- almeno: primario e gray
- poi: secondario e/o terziario
- + 3 tinte scure e + 3 tinte chiare di ognuno di questi
- secondario e terziario per aggiungere variabilità
- messi in documentazione
- guidance:
    - primary colors: used typically on dominant elements such as buttons, background colors and more
    - secondary colors: add variety
    - tertiary colors: further variety
    - have at least 2 colors in your color palette, a primary and grey color
    - primary colors are used to highlight important parts of a page and tits and shades can be used to create contrast
    - grey color with tints and shades often used for fonts
    - color is used in images and illustrations for consistency
    - color is used throughout design dor components and sections
    - adding a secondary color introduces variety and contrast often making designs more appealing
    - secondary colors are used to add variety
    - tertiary color add further varety

General guidelines

- general text properties:
    - styling: font-weight
    - spacing: line-height, letter-spacing
    - font-family
    - color
    - font-size
- font-weight:
    - heading: 700
    - paragraph: 400
- line-height:
    - heading: 1.2
    - paragraph: 1.5
- letter-spacing: -2px
- font-family: 1 only
- font-size: typescale
- color:
    - primary,secondary, tertiary, grey
    - three for everyone

CSS3: Selectors

CSS3 Selectors: Main Topic

- type selector
  - css selectors
  - range of css selectors
  - the type selector
  - type selector guidance
- cascade
  - style priority
  - stylesheet priority
- grouping selectors
  - grouping selectors
  - grouping selectors and cascading
- id & class selectors
  - limitations with the type selector
  - the id selector
  - the class selector
  - selector guidance
- pseudo-classes
  - state pseudo-classes
  - conditional pseudo-classes

- combinator operator
  - descendant selector
  - direct descendant selector
  - adjacent sibling selector
  - general sibling selector
- specificity
  - cascade and conflicting selectors
  - specificity
  - specificity calculations
- inheritance
  - inheritance
  - inheritance and specificity
  - what get inherited
  - inheritance and text-align
- universal selector
  - universal selector
  - universal selector
- pseudo-elements
  - pseudo-elements
  - text-styling
  - selection
  - content insertion

CSS3 Selectors: Type Selectors

- css selectors: permette di definire stili su blocchi html
- type selector: i principali tipi di selettori sono: basic selector, combinator selectors, pseudo-class selectors, pseudo-elements selectors
- guidance: it is useful for setting global styles to ensure consistency

CSS3 Selectors: Cascade

- style priority: la style priority dichiara che gli elementi dichiarati per ultimi sovrascrivono i primi
- style sheets priority: la style sheets priority dichiarare che i fogli di stili importati per ultimi hanno la precedenza su quelli importati prima

CSS3 Selectors: Grouping Selectors

- Grouping shared styles: la tecnica del grouping shared style permette di raggruppare tag per un foglio di stile comune
- guidance: we can use the css cascade to add new rules to previous rules

CSS3 Selectors: ID & Class Selectors

- limitation with the type selector: la limitazione nell'uso dei type selectors sta nel fatto che non si possono specificare comportamenti particolari per determinati elementi
- the id selector: associare il tag id ad un elemento html e richiamarlo con il tag . nel foglio css
- the class selector: associare il tag class ad un elemento html e richiamarlo con # nel foglio css
- selector guidance: è preferibile usare il tag class piuttosto che id perché riutilizzabile in diversi tag, diversi tag sono combinabili tra di loro
- linea guida generale: definire gli stili generali per tag e sovrascrivere gli elementi specifici attraverso class e id

CSS3 Selectors: Pseudo-Classes

- pseudo-classes: le pseudo-classes permettono di specificare un preciso stile per uno specifico stato o una condizione. Queste si specificano con tag:pseudo classe
- state pseudo-classes
    - :link, :visited, : hover, :active
    - i primi due tag sono specifici per gli anchor tags, gli ultimi due sono generici
    - good practice: creare una rule per pseudo-classe piuttosto che applicarla direttamente al tag
- conditional pseudo-classes
    - primo figlio
    - secondo figlio
    - n-mo figlio
    - secondo regola
- guidance1: it is best practice to style the pseudo-classes of anchor tags instead of styling the anchor element directly

CSS3 Selector: Combinator Selectors

- Descendant selector: si dichiare con " " ed ha effetto sull'elemento e tutti i suoi discendenti di tipo dichiarato
    - esempio: div p {...} affects div e tutti i suoi discendenti p
- Direct descendant selector: si dichiara con > ed ha effetto sull'elemento e tutti i suoi figli diretti di tipo dichiarato
    - esempio: div > p {...} affects div e i suoi figli p
- Adjacent sibling selector
    - esempio: div + p {...} affects div e il suo sibling adiacente p
- General Sibling Selector
    - esempio: div tilde p {...} affects div e tutti i suoi sibling p

CSS3 Selectors: Specificity

- the cascade and conflicting selectors: il problema del conflicting selector si ha quando più selettori si applicano allo stesso elemento
- specificity: la specificity è la proprietà che definisce la priorità di un selettore rispetto ad un altro
- specify calculations: con specificity calculations si intendo le regole che permettono di stabilire la priorità di una rule rispetto ad un'altra
- guidelines: non preoccuparsi troppo della specificità

CSS3 Selectors: Inheritance

- Inheritance: con Inheritance si definisce il meccanismo con la quale un blocco figlio eredita le rule di stile del blocco padre
- Inheritance and specificity: inheritance and specificity interagiscono mantenendo la priorità dell'uno e dell'altro
- What gets inherited: vengono ereditati tutti gli stili del testo, ma non del box
- inheritance guidance: global font style are setted in the body or in the html element
- inheritance guidance: override specific font style for specific element
- guidance2: global font styles are set on the body element so taht all child text elements inherit styles by default
- guidance3: nex, set global font styles on type selectors which will override inherited properties
- guidance4: inheritance is also often utilised for a container that requires specific text styling
-

CSS3 Selectors: Universal Selector

- Universal Selector: il selettore universale si indica con * {..} e specifica delle regole da applicare a tutti gli elementi
- Guidance: Lo universal selector è utilizzato per rimuovere o resettare tutte o alcune proprietà globali del foglio di stile
- Universal Selector vs Body tag Inheritance: La differenza tra l'uso dello Universa selector e del body tag inheritance è che il primo rimuove proprietà, mentre il secondo ne aggiunge alcune globali
- it's more common to apply global text styles to the body element and relying on inheritance

CSS3 Selectors: Pseudo-Elements

- pseudo-elements: i pseudo element sono selectors che modificano specifiche parti di un testo
- text-styling: used to enhance visual appearance of text
    - i text styling pseudo elements sono: ::first-letter, ::first-line
- selection: used to visual enhance the text a user selects
    - i selection pseudo elements sono: ::selection
- content insertion: used for adding decorative elements without altering html structure
    - i content insertion pseudo element sono: ::before, ::after

CSS3: Box Model

Box model main args

- introduction to css box model
- background color
  - background color property
  - background color guidance
  - color vs background color
- width and height
  - default block and inline element dimensions
  - width and height property
  - width and height design property
- padding
  - what is padding
  - longhand
  - shorthand
- border, border-radius, box-sizing
  -
- margin
- spacing system
- display
- inline element, block element, inline-block element
- regular and replaced inline element
- box, border, margin, padding
- shorthand and longhand every component
- width, height, max-width, min-width, max-height, min-height
- box-sizing: border-sizing and content-sizing

Box Model CSS3: Introduction

- all element are treated as box
- every box has its own property: content, padding, border, margin

Box Model CSS3: Background Color

- background color property
    - extends also in the padding space
    - values: rgb, rgba, hex, hsl
- background color guidance
    - sometimes used to set the background color of entire page
    - commonly used to set the background color of page sections
    - commonly used in componets
- color vs background color
    - color: applies to text elements
    - background-color: applies to the background of an element

Box Model: Width and Height

- default block and inline element dimensions
    - block by default: stretch full width horizontally adn vertical cover the content
    - inline element: are just big enough to fits its contents vertically and horizontally
- width and height property
    - override the dimension of the element
    - usually setting the width of block element
    - for inline element: replaced inline element can apply width and height (img, input, select, textare,button)
    - for regulat inline element: cannot set width and height (span, a, sub, sup)

Box Model CSS3: Padding

- what is padding: space between content and border
- shorthand:
    - padding: 100px 100px 100px 100px: top, right, bottom, left
    - padding: 100px 100px 100px; top, horizontal, bottom
    - padding: 100px 100px: top-bottom, left-right
- longhand
    - padding-top, -bottom, -left, -right
- guidance
    - commonly used in buttons and text callouts to improve readability
    - commonly used on cards
    - commonly used on inputs

Box Model CSS3: Border

- What is border
    - creates a visible boundary around an html element and can enhance visual appearance and separation from other elements
- Values
    - width: px, em, rem
    - style: dotted, dashed, solid, doubled
    - color: rgb, hex
- longhand
    - border-top, -bottom, -right, -left
- shorthand
    - border: radius(px), style(solid,dashed,weavy,...), color(HEX)
- individual border properties
    - setting all properties for single side border
- guidance:
    - borde help with grouping related content
    - individual borders help separate sections
    - borders can create outline buttons which are commonly used alongside solid filled buttons
    - it is common to add a border on a filled button which matches its background color when used algonside an outline button

Box Model CSS3: Border radius

- What is border radius: round the corners of an elements border
- values:
    - border-radius: 12px;
    - px, em, rem, %
    - effect: a quarter of circle is placed tagently to the corner
- guidance:
    - square corners are more formal
    - rounding corners can be perceived as more friendly
    - fully rounding corners can be perceived as playful
    - it is important to have consistent rounding across all elements

Box Sizing CSS3:

- default box dimensions
  - content-box
  - by default the total width and height of a box will be the sum of the content width and height, padding and border
  - values: content-box, border-box
- box sizing property
- border box
- box sizing design guidance
  - set the border-box on the universal selector

Box Model CSS3: Margin

- What is margin
  - margin is the space outside of an elements border creating distance between it and neighboring elements
- longhand margin
  - sets the margin on individual sides
- shorthand margin
  - sets the margin on individual sides
  - margin: 20px; top,right,bottom,left
  - margin: 20px 40px; top-bottom, right-left
  - margin: 20px 40px 60px; top, bottom,right,left
  - margin: 20px 40px 60px 80px;top,right,bottom,left
- margin design guidance
  - use margin to apply whitespace between groups of elements
  - use margin to apply whitespace between sections
  - it is common to control spacin between elements with margin and other more modern techniques
  - spacing system

Box Model CSS3: Display

- How the box model applies to block and inline elements
    - difference between inline element and block element
    - block element follow the box model
    - inline elements do not follow the box model rules so applying some properties do not work as expected
- block - inline-block - inline element comparison
    - block
        - starts on a new line
        - full width
        - width and height can be set
        - padding, border, margin applies
    - inline-block
        - not start on a new line
        - only width of the content
        - width and heigh can be set
        - padding, border, margin applies
    - inline
        - not start on a new line
        - only width of the content
        - width and height can be set
        - padding, border margin work only horizontally
- display design guidance
    - it is common to apply inine-block to inline elements so the flow inline but all box propeoerties can be applied
- regular inline elements and replaced inline elements
    - regular: a, span sub, sup: width and height cannot be set, padding borders and margin do not apply as expected
    - replaced: img, input,, select, textarea:width and height can be set, padding, margin, borders apply as expected

Box Model CSS3: CSS Reset

- browser default properties
    - browsers have built-in css default rules that style html elements
- css global reset
    - with * selector
- normalize file css
    - creates uniform default style for html elements without removing all styles like a reset does
-

Box Model CSS3: Main Container

- Main Wrapper Container
  - it is very commo for a webpage to have a wrapper which adds margin left and right as well as centers all the content
  - to create a container, a suitable width is chosen to prevent content from excessively stretching on larger screen sizes
  - to center the container, use auto
- Auto Value
  - margin-left, margin-right: auto
  -

Box Model CSS3: Width, Min-Width, Max-Width

- Block element
  - Width: set a fixed width for the block element. The element is NOT responsive
  - Min-Width: set a fixed width the block can not shrink. The element is ?? responsive
  - Max-Width: set a fixed width the block can not exceed. The element is responsive.
- Inline element
  - Width: set a fixed width for the inline element. The element is not responsive.
  - Min-Width: as the width, but the text won't wrap. The element is not responsive
  - Max-Width: as the width. The element is not responsive.

Box Model CSS3: Height, Min-Height, Max-Height

- Block element
    - height: set the height of the element. The element is NOT responsive.
    - Min-height: set the height the element won't shrink. The element is ?? responsive.
    - Max-height: set the height the element won't exceed. The element is ?? responsive.
- Inline element
    - height: set the height of the element
    - Min-height ??
    - Max-height ??

CSS3: Units

CSS3 Units: Main Topic

- Absolute & Relative Units
    - Absolute and relative units
    - Importance of relative units
- Percentages
    - what are percentages
    - percentages design guidance
    - common percentage value use cases
- Rems & Ems
    - what are rems and ems
    - rems guidance
    - ems
    - ems guidance
- VW & VH
    - what are vh and vw
    - vh and vw guidance

CSS3 Absolute & Relative Units: What are

- absolute units: absolute units are fixed values that don't change with the size of the screen
    - absolute units are px, pt, cm, mm
- Relative units: relative units are units that can dynamically adjust for different screen sizes
    - relative units are %, rem, em, vh, vw
- pixels are usually used for: border radius, border, letter spacing, logo and icons, max-width, shadows

CSS3 Units: Percentages

- Percentage: percentage is a unit that is always relative to some other value
- Percentage can be relative to parent or relative to the element itself
    - relative to parent: dimension that are relative to parent are: width, height, margin and padding
    - relative to itself: line-height
- Percentages Guidance: percentages are used in conjunction with max-width on main container so that the webpage is fully responsive
- Percentages Guidance: percentages are used in conjunction with max-width on standalone images so that the webpage is fully responsive
- percentages guidance: it is common to set images inside a grid or flex container to 100% so it fill the cell and adapts responsively
- percentages guidance: there are cases when you want to set a button width to 100% so it fills its container and adapts responsively
- percentages guidance: percentage values are used for fully rounded corners as pixels require manual calculation

CSS3 Units: Rems and EMS

- rem unit: unit relative to the root elements font size and are the key ingredient for creating responsive webpages
- rem guidance: working with a base 10px for rem units makes it simpler when working with rem, so set the html.font-size to 10px or font-size: 62.5%
- rems guidance: rems are commonly used on font-size, margins and paddings to create fully responsive webpages
- ems: unit relative that is relative to the font-size of the element itseld
- ems guidance: used for margin and padding when element are smaller
- vh and vw: view height and view width are units that are percentage of the browsers visible window
- vh and vw guidance: vh and vw can be used on hero sections in conjunction with min-height so content is always above the fold
- vh and vw guidance: vw can be useful for creating responsive text when it is a main standalone element and not confined within a container

CSS3 Functions

CSS3 Functions: main topics

- variables
    - how to set css variable
    - the root pseudo-class
- calculation
    - how to perform calculations
    - calculations and variables

CSS3: Variables

- allows us to store values to make it easier to maintain consistency and more easily make global style changes
- css variables are set on the root pseudo-class
- root pseudo-class is a special pseudo-class selector that matches the root element in a document's hierarchy

CSS3: Calculations

- perform dynamic calculations when setting values
    - ex: calc((100%/3)-50px)
- variable and calculations
    - it is common to use variable and calculations in combination

CSS3: Flexbox

CSS3 Flexbox: Main Topic

- Introduction to Flexbox
    - what is flexbox
    - flex container and flex items
    - display flex
    - main and cross axis
    - flex direction
    - flex direction guidance
- Normal Flow vs Flexbox
    - Normal Flow
    - Flexbox
    - Normal flow and alignment
    - Normal flow vs Flexbox
- Justify Content
    - aligning and spacing
    - flex container size
    - justify content property
    - Justify content values
    - Justify content and shifting main axis
    - Justify content Guidance
- Align Items
    - align items property
    - align items values
    - align items and shifting main axis
    - align items guidance

- gap
    - flexbox and the box model
    - gap property
    - margin and gap guidance
- Nested Flexbox
    - nested flexbox
    - nested flexbox guidance
- Centering
    - centering with flexbox
    - horizontal centering methods
    - vertical centering methods
    - box model vs. flexbox centering

CSS3 Flexbox: Introduction

- what is flexbox: flexbox è un one dimensional layout model in css definito per assi e container
- flex container and flex items: flexbox si basa su due componenti principali flex container e flex items. I flex container contengono i flex items
- per utilizzare il flexbox layout specificare nel container "display:flex"
- main and cross axis: flexbox si basa su due assi fondamentali la main axis e la cross axis: la main axis è l'asse sulla quale vengono distribuiti gli elementi, la cross axis è la perpendicolare a questa
- flex direction: la proprietà flex direction definisce l'asse fondamentale del flexbox: row (default) o column;

CSS3 Flexbox: Justify content

- Flex container size: la dimensione di un flex container determina width e height. Se la width non è settata allora prenderà tutto la spazio disponibile (l'intera riga) mentre la height del flex container, se non settata, è determinata dal flex items.
- Justify content property: la proprietà justify-content determina il modo con la quale gli elementi sono distribuiti lungo l'asse principale.
- Justify content values: i valori da poter attribuire a justify-content sono: flex-start, flex-end, space-between, space-around, center, space-evenly
- justify content guidance: often used to align and space navigation bars
- justify content guidance: can be used to align entire sections
- justify content guidance: often used for spacing and alignment of simple one-dimensional components

CSS3 Flexbox: Align Items

- align items property: la proprietà align-items setta il modo in cui gli elementi sono distribuiti lungo la CROSS axis
- align items values: i possibili valori sono: stretch, flex-start, flex-end, center, baseline;
- align items and shifting main axis
- align items guidance: commonly used on navigation menus and footers
- align items guidance: positioning items inside a component in a flex row

CSS3 Selectors: Gap Property

- flexbox and the box model: box model properties can still be used in a flexbox layout to control spacing (margin can be used to space items, padding can be used in flex items)
- gap property: la proprietà gap setta un valore di gap uguale per tutti gli elementi disposti lungo la main axis
- margin and gap guidance: margin is used when you want different spacing values between flex items
- margin and gap guidance: gap is used when you want uniform spacing values between flex items

CSS3 Flexbox: Nested Flexbox

- nested flexbox: con il termine nested flexbox si intende il fatto di avere un flexbox layout dentro un altro flexbox layout
- nested flexbox guidance: commonly used in sections and components

CSS3: Grid Layout

Grid Layout: main args

- introduction to grid
- grid container
- grid cells, grid items
- grid lines
- index
- rows, columns
- order, rowspan, colspan
- guidance

- introduction to css grid
    - what is css grid
    - css grid terminology
    - css grid design guidance
    - css grid vs flexbox
- grid columns and rows
    - grid template columns and rows
    - fractional unit
    - repeat function
    - grid column and row design guidance
- grid gap
    - default spacing between grid items
    - gap property
    - gap design guidance
- grid alignment
    - justify content
    - align content
    - items vs content
- grid items
    - placing grid items
    - spanning grid cells
    - aligning grid itmes

CSS3 Grid Layout: introduction

- 2-D flow layout
- for complex layout
- css grid is a two dimensional layout model making it simple to arrange items in rows and columns
- css grid has two main components: grid container and grid items
- grid axis: column axis and row axis
- grid vertical gap and horizontal gap
- comparison:
    - grid for: larger ui, two-dimensional
    - flexbox: smaller ui, one-dimensional

CSS3 Grid: Guidance

- css grid can be used for complex two dimensional layouts
- grid is also commonly used for major sections
- grid is also commonuly used for ui elements with consistent spacing in a one-dimensional row or column

- grid template columns
- grid template rows
- fractional unit
- fractional unit and rows
- repeat function
- column and row guidance
    - columns are often set with fr units and the width of grid container is usually not set but extends width og the page
    - the number of rows are not usually set but are automatically defined bu the number of grid items
    - the height of the grid container is not usually set but defined by the sum of the height of the grid items
    -
-

Grid Gap

- default spacing between grid items
    - no spacing between them
- row gap
    - create space between grid rows
- column gap
    - create space between grid columns
- gap property
    - gap property create equally space between rows and cols
- guidance
    - commonly used to space grid items in major sections
    - commonly used for spacing in card layouts such as testimonials and features

grid alignment

- grid alignment
    - entire grid tracks can be aligned and distributed when there is extra space in the grid continaer
- justify content
    - aligns entire grid columns along the row axis
    - values: start, end, center, space-between, space-around, space-evenly
- align content
    - aligns entire grid rows along the column axis
    - values: start, end, center, space-between, space-around, space-evenly
- items vs content
    - justify items and align items
        - aligns grid items when grid cells have extra space
        - row axis: justify-items
        - column: align-items
        - values: start, end, center, stretch
    - justify content, align content
        - aligns grid tracks when the grid itself has extra space
        - row axis: justify content
        - column:: align-content
        - svalues: start, end, center, space-around, space-evenly, space-between

Grid items

- placing grid items
  - grid items are automatically placed in a grid based on the order they appear in the html
  - grid items can be moved to different cells
  - grid-row: 1 / 2; (startline, end line)
  - grid-column: 2/3; (start line, end line)
  - guidance: placing grid items is used to achieve specific layouts:
    - alternating text and image in each row
    - grid items need to change position on mobile
- spanning grid cells
  - grid-row and grid-column can be used to have grid items span multiple rows or columns
  - grid-column: 1/ 4
  - guidance: grid cells can be spanned to create visually interesting designs
- aligning grid items
  - grid cell alignment can be overridden for individual items
  - grid container: justify-items:center, align-items:center
  - justify-self: end; align-self:start
  - values: start end center stretch

CSS3: Responsive Design

Domande

-    come faccio a capire a chi è relativa la percentage? padre o elemento?

Punti da migliorare

- migliore gestione delle variabili di typescale, colors, spacing system, radius
- migliore organizzazione del file css: more mantenaible and scalable and standardized
- standardizzazione creazione file css
-

CSS3 Responsive Design: Main Topics

- media queries
- breakpoints
- relative units in media queries
- fluid layout
- pixel, physical pixel and css pixel
- da migliorare

CSS3: Media Queries

- cosa sono: query al browser per ricavare il valore corrente della proprietà passata a parametro
- come si dichiarano: @media(max-width: 1000px)
- come si definiscono: ordinati nel foglio css per max-width decrescente, in modo tale che l'ultimo valore è quello applicato

CSS3: Breakpoints

- cosa sono: valore di max-width per il cambiamento di layout
- come sono definiti: valori ricavati per range di risoluzione dei dispositivi
- range usuali:
    - > 1536 2xl
    - > 1280 xl
    - > 1024 lg
    - > 768 md
    - > 576 sm
    - > 375 xs
- guideline 1: la definizione dei breakpoint è guidata dal design
- guideline 2: può cambiare anche un solo elemento tra un range ed un altro, non necessariamente l'intero layout
- guideline 3: observing where the layout naturally breaks
- guideline 4: style not inside any media query applied automatically for larger screen than max-width

CSS3: CSS & Physical Pixels

- cosa sono i pixel: picture element
- cosa sono i pixel fisici: un pixel fisico è l'effettiva dimensione di un pixel all'interno dello schermo. Questo si misura in ppi (point per inch)
- problema dei pixel fisici: variano con la risoluzione e la dimensione dello schermo. La dimensione di un font varia quindi con la risoluzione dello schermo.
- cosa sono i css pixel: pixel in un schermo di dimensione fissa e decisa a priori a 0.096ppi
- cosa risolvono i css pixel: la dimensione di un font non varia con i ppi, proprio perché viene settato con i css px e non con i pixel effettivi dello schermo. La dimensione di un font apparrà uguale in uno screen da 3000x2000 da 16" così come in uno schermo da 1000x500 da 16"

CSS3 Physical Pixel and DevTools Pixel

- What is a pixel
    - a single point of light on a digital display
- physical pixels
    - pixels have different length and varies between screens
- css pixels
    - a css pixel has a length of 1/96 inch
- pixels in dev tools vs device
    - pixel values in dev tools are not the same as device pixel values
    - css pixels are scaled depending on screen resolutions
    - scaling across different devices happens automatically

CSS3: Positioning

CSS3: Positioning

- static
    - default value
- relative
    - out of normal flow
    - relative to the initial point in the flow
    - affected by scrolling
- absolute
    - in normal flow
    - relative to the root element or container element
    - affected by scrolling
- fixed
    - in normal flow
    - relative to the viewport
    - not affected by scrolling
- sticky
    - in normal flow
    - relative to the viewport
    - fixed after a certain scroll value

CSS3: Z-Indexing and Stacking context

CSS3: Z-Indexing

- What is: lo z-index è il piano nella terza dimensione in cui viene posto un elemento grafico
- how you can use: l'elemento con z-index maggiore viene renderizzato per ultimo all'interno del container

CSS3: Stacking context

- how it works: lo z-index settato per un item non è universale, ma è relativo al contenitore in cui è posto
- implicazioni: un elemento con z-index più alto rispetto ad un altro potrebbe non sovrascrivere un altro con z-index inferiore perché appartenente ad un container con z-index inferiore

CSS3: Transform

CSS3 Transform: Translate

- cosa fa: trasla elementi di un certo vettore rispetto alla sua posizione
- come si definisce: transform: translate(10px, 10px);
- un use case centrare un elemento fissato:
    - .container {
            top: 50%;
            right: 50%;
            transform: translate(-50%, -50%);
        }
    - osservazione allo use case: usato assieme al positioning

CSS3 Transform: Scale

- scale
    - come si definisce: transform: scale(10, 2);
- rotate
    - come si definisce: transform: rotate(10deg);
- skew
    - come si definisce: skew(10px,2px);

CSS3: Shadows

CSS3 Shadows: Main Attributes & Guidelines

- come si definisce:
  box-shadow: offset-x, offset-y, blur-radius, spread-radius, color;
- guidelines 0: small shadows to add little depth to the element
- guidelines 1: light shadows: add light shadows and not too much dark
- guidelines 2: small shadows: add small shadows to give little depth to the card or component
- guidelines 3: medium shadows: add medium shadows to medium size component when you want to highlight an important component
- guidelines 4: larger shadows: add large shadows to create the effect of fluttuating element behind the element
- guidelines 5: flat design vs shadows: flat design tends to add border to separate element, not shadows
- guidelines 6: don't overuse: don't overuse shadows to create a confusing layout

CSS3: Transition

CSS3 Transition: Main attributes & Guidelines

- transition: property-to-which-apply-transition timing transition-function;
- transition-function:
    - ease
    - linear
    - ease-in
    - ease-out
    - ease-in-out
- guidelines 1: make transition to animate some element in the page
- guidelines 2: make transition to pops out important (or hover) element in the page

General Structure of a CSS file

- comment as documentation:
    - typography: typescale, font weights, line heights, letter spacing, font family
    - colors: primary, secondary, tertiary, grey (with shades)
    - border radius (small, medium, big)
    - spacing system
- Global Style
    - :root
    - *
    - html
    - body
    - container
    - h1, h2, h3, h4, h5
    - h1
    - h2
    - h3
    - p
    - a
    - a:link, a:visited, a:hover, a:active
    - ul
    - span
    - .small-text
- Components
    - button (primary, secondary), highlight-(primary, secondary, tertiary), logo, chat-container, beta
- Sections
    - navbar, hero section, features section,cta section, footer

Common section of a product landing page

- hero
    - what you do
    - Why you're different
    - What the key benefits are
    - How to get started
- Unique value proposition
    - bullet points
    - grphics/infographics
    - statistics
    - Testimonials/reviews
    - Product demos, screenshots, or gifs
- Call to action
    - button
    - text lnik
    - form submission
    - popup
- Social proof
    - Customer testimonials
    - Case studies
    - User ratings and reviews
    - Customer logos
    - Social media mentions
    - User-generated content (UGC)
    - Trust badges
- The team
- Pricing
- FAQs
- Contact information and support

Fundamentals text property

- font-weight
- line-height
- letter-spacing
- font-family
- color
- text-decoration
- font-size

Fundamental Button props

- background color
- text color
- text align
- padding
- border
- hover-props
    - opacity
    - transitions

Main Variables

- spacing
- border
- font size
- font weight
- color
- fonts
- border size

Miglioramenti

- utilizzare più shortcut su keyboard
- utilizzare div p {}, div img {}....
- utilizzare box shadow generator
- introdurre gli elementi da sinistra a destra, dall'alto al basso, riproducendoli fedelmente in stile e dopo preoccuparsi del layout
- utilizzare servizio per import font:
- utilizzare spacing classici, anche in px, ma sempre multipli di 2
- migliorare notevolmente le conoscenze in responsive design, maggiore eloquenza
- when you are in the browser: inspect, calculed, go to style definition
- .navbar shortcut
- html:5 shortcut
- copy the img directly from the html
- guardare all'aspetto visivo, non a come è stato scritto il sito

Miglioramenti(2)

- ricerca e scelta font
- costruzione intero sito web, non solo landing page
- recupero immagini
- utilizzo di margin e padding
- migliorare absolute e relative units

Next topic related to CSS

- CSS Frameworks
    - Bootstrap
    - Tailwind CSS
    - Foundation
    - Bulma
    - Materialize
    - UIkit
- Preprocessor
    - Sass
    - LESS
    - Stylus
- CSS-in-JS
    - Styled components
    - Emotion
    - JSS (JavaScript Style Sheets)

- PostCSS
    - Autoprefixer
    - CSSnano
    - PostCSS-Preset-Env
- Design Systems
    - Material Design
    - Ant Design
    - Carbon Design System

Next topic related to CSS (2)

- CSS Grid Tools
    - CSS Grid Generator
    - Gridlex
- Frameworks for Styling with JavaScript Libraries/Frameworks
    - Vue.js (Vuex, Vue Router)
    - React (Styled-components, Emotion, CSS Modules)
    - Angular (Angular Material)
- How css process elements? CSSOM
- CSS Positioning context
- Jonas Schmedtmann
- Eric Meyer

Miglioramenti workflow

- per il positioning usa webflow
- spacing, font, imgs, icon, color, border-radius predefined and assigned