

CSS3

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SECTION-I

Training overview

Training agenda

CSS3

New features

Agenda

- Selectors
- Rounded corner
- Gradients
- Web Fonts
- 2D/3D transform
- Animations
- Multiple column
- User interface
- Box sizing
- Flexbox, Grid
- Media Queries
- Best practices

CSS3

- It is latest version of CSS
- Describes how elements to be displayed
- Control layout of html page
- Many features added in CSS3



New features

CSS3 added following features

- Rounded Corners
- Border Images
- Backgrounds
- Colors
- Gradients
- Shadows
- Text Effects
- Web Fonts
- 2D Transforms
- 3D Transforms
- Transitions
- Animations
- Tooltips
- Style Images
- object-fit
- Buttons
- Pagination
- Multiple Columns
- User Interface
- Box Sizing
- Flexbox
- Media Queries

SECTION-I ENDS

SECTION-II

Selectors

Usage

- Syntax: Selector { property: value; property: value }
- Selector are used to find element using id, name, class
- Class selector: .classname
- Id selector: #id
- Universal selector: *
- Selector grouping: h1, h2, p {....}
- Can added Inline , in separate block, in external file

CSS Combinators

- `div p` selects all `p` inside `div`
- `div > p` select all `p` which are children of `div`
- `div + p` select all `p` which are placed immediately after `div`
- `div ~ p` selects all `p` that are siblings of `div`

Pseudo classes

- Select special state of element
- `a:link`
- `a:visited`
- `a:hover`
- `a:active`
- Combined with classes
- `a.highlight:hover`
- `div:hover`
- Match first `<p>` element: `p:first-child`
- Match first `<i>` element in all `<p>`
- `p i:first-child { color: blue; }`

Pseudo-elements

- It is used to style parts of element
- `p::first-line { color: grey }`
- `p::first-letter { color: blue }`
- `p.intro::first-letter { color: grey }`

Attribute selectors

- Style elements with attributes
- Selects <a> with target: `a[target] { background-color: red; }`
- `[attribute="value"]` → select elements with attribute
- `a[target="_blank"] { background-color: yellow; }`

Forms selector

- Form selector can be used
- `input[type=text] {padding: 12px 20px }`
- Bordered: `input[type=text] {border: 2px solid red}`
- Colored: `input[type=text] {background-color: grey}`
- Focused: `input[type=text]:focus {background-color: lightblue; }`

Selectors level 3

- `h3~p` matches all `p` exactly after `h3`
- `:enable` selects enabled element
- `:disable` selects disabled element
- `:read-only` disabled elements
- `:valid` select valid element
- `:invalid` select invalid element
- `:required{}` selects required attribute elements

Cont...

- :focus-within select element when child element is being focused
- :last-child targets only last child
- :nth-child(n) selects only nth child
- :nth-child(odd) only odd child
- :nth-child(even) only even child
- :empty select element having no child
- :lang() selects element having lang attribute

SECTION-II ENDS

SECTION-III

CSS units

CSS colors

Color

- Color name red, green, blue
- Rgb `rgb(255, 0, 0)`
- Hex `#ff0000`
- Rgba `rgba(255, 0, 0, 0.3)`
- HSL `hsl(120, 100%, 50%)`
- HSLA `hsla(0, 100%, 50%, 0.3);`

CSS units

- Centimeter: cm
- Millimeters: mm
- Inches: in
- Pixel: px
- Points: pt
- Relative to the font-size of element: em
- Relative to width of "0" (zero): ch
- Relative to 1% of width of the viewport*: vw
- Relative to 1% of height of the viewport*: vh
- Relative to parent element: %

SECTION-III ENDS

SECTION-IV

Border

Margin

Padding

Height, width

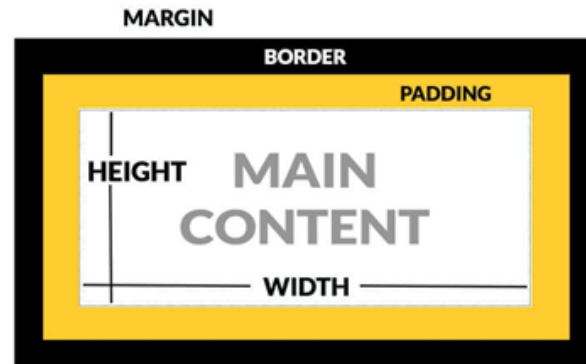
Box model

Border

- Add outline to element
- Border-style: dotted, dashed, solid
- Border-width
- Border-color
- Shorthand border: width style color

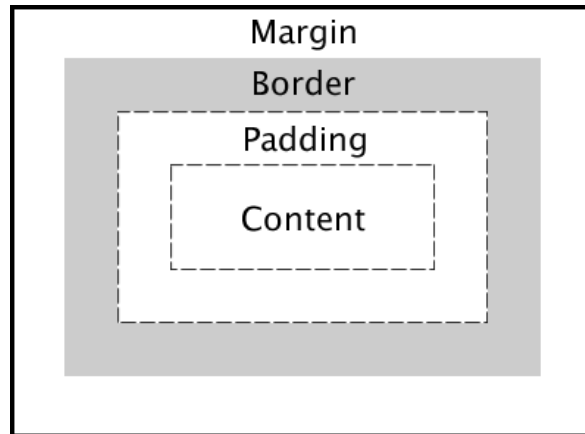
Margin

- Create space around element
- Margin can be added to top, bottom, left, right
- Shorthand margin: top right bottom left



Padding

- Generate space around content
- Padding can be added to top, bottom, left, right
- Shorthand Padding : top right bottom left

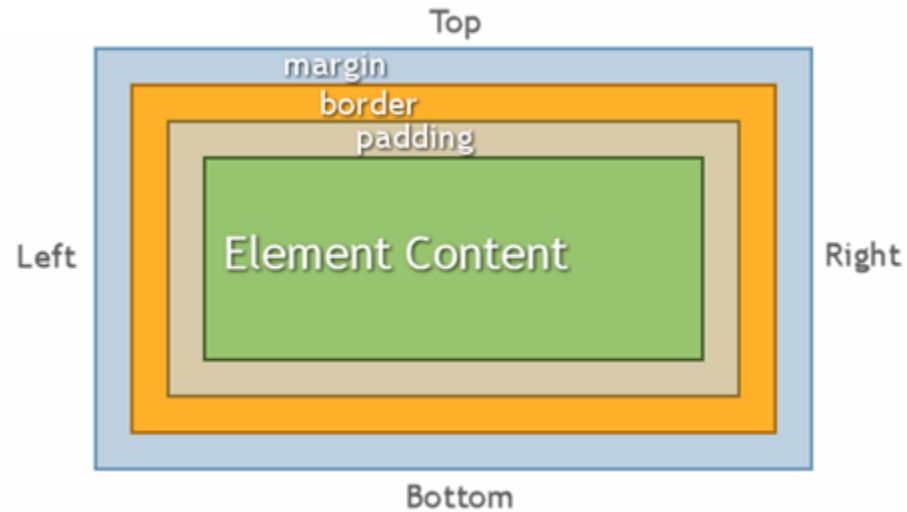


Height and width

- Set height and width of element
- Height and width do not include padding, borders, or margins
- Set height/width inside padding, border, and margin

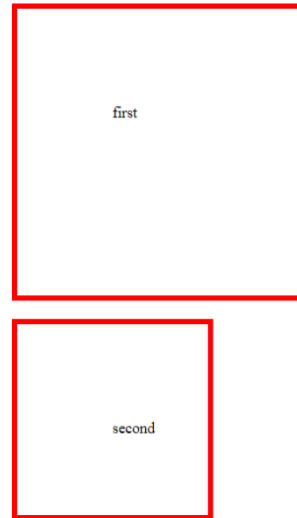
Box model

- Consists of: margins, borders, padding, and actual content



Box sizing

- Element visibility depends on width or height, padding and border
- box-sizing property alter default CSS box model
- With box-sizing padding or border drawn inside content area



SECTION-IV ENDS

SECTION-V

Layout

Position

Flexbox

Layout

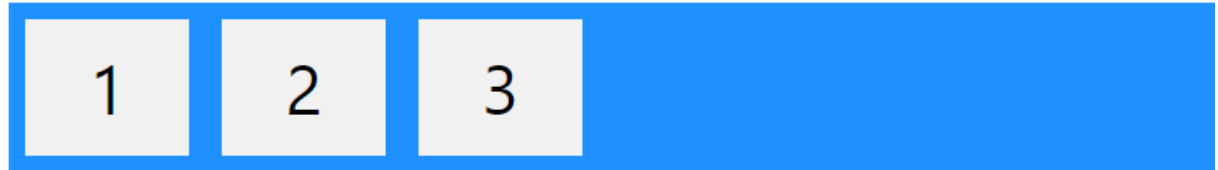
- Property for controlling layout
- Default value is either block or inline
- Block elements display on new line and take full width
- Display:none is used to show/hide element
- overflow property controls big contents
- Specifies whether to clip content or to add scrollbars
- Have properties like visible, hidden, scroll, auto

Position Property

- Specifies type of positioning
- Can be static, relative, fixed, absolute or sticky
- Elements positioned by top, bottom, left, and right properties
- These properties will not work unless the position property is set first

Flexbox

- Flexible Box Layout Module, makes easier to design flexible responsive layout
- Possible without using float or positioning
- First need to define flex container
- Flex container properties are:
 - flex-direction: direction to stack container items. Column, row, column-reverse, row-reverse
 - flex-wrap
 - flex-flow
 - justify-content
 - align-items
 - align-content



SECTION-V ENDS

SECTION-VI

Rounded corner

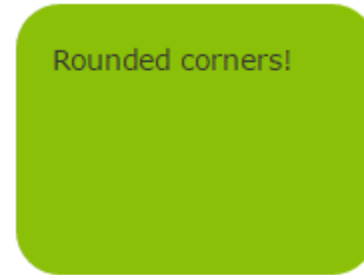
Background

Border image

Gradients

Rounded corner

- Rounded corner added using border-radius
- border-radius
- border-top-left-radius
- border-top-right-radius
- border-bottom-right-radius
- border-bottom-left-radius



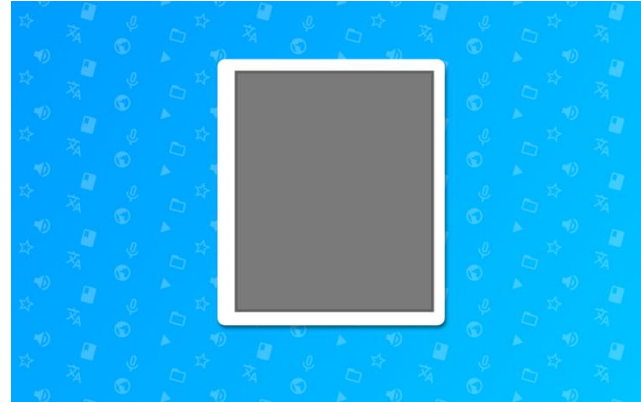
Border image

- Image on border
- Image url
- Image slice
- Middle sections should be repeated or stretched



CSS3 - Background

- Used to define background effect
- background
- background-clip
- background-image
- background-origin
- background-size



Gradients

- Display smooth transitions between colors
- Linear Gradients (goes down/up/left/right/diagonally)
- Radial Gradients (defined by their center)



SECTION-VI ENDS

SECTION-VII

Shadow effects

Web fonts

navbar

Shadow effect

- Add shadow to text and elements
- text-shadow, box-shadow
- text-shadow applies shadow to text

Text shadow effect!



Web fonts

- External fonts can be added
- TrueType Fonts
- OpenType Fonts
- The Web Open Font Format
- Embedded OpenType Fonts

The @font-face Rule

Added font which is not available on computer

Navigation bar

- Created using ul with css style
- Vertical bar, use li a{ display: block; width: 60px;}
- Active link: .active { background-color: #f1f1f1; color: white}
- Horizontal bar: li{ display: inline;}
- Active link: .active { background-color: green; }
- Sticky Navbar: Add position: sticky; to to create a sticky navbar
- ul { position: -webkit-sticky; position: sticky; top: 0; }



SECTION-VII ENDS

SECTION-VIII

2D, 3D transform
Transition
Animation

2D transform

- Can move, rotate, scale, and skew elements
- `translate()`, `rotate()`, `scaleX()`, `scaleY()`, `scale()`, `skewX()`, `skewY()`, `skew()`
- `div { transform: translate(50px, 100px); }`
- `transform: rotate(20deg)`
- `transform: scale(2, 3)`



Transitions

- It allows to change property values smoothly
- transition
- transition-delay
- transition-duration
- transition-property
- transition-timing-function

Animations

- Animation without JavaScript
- Slowly change
- Uses @keyframes rules
- Bind using animation-name
- @keyframes
- animation-name
- animation-duration
- animation-delay
- animation-iteration-count
- animation



SECTION-VIII ENDS

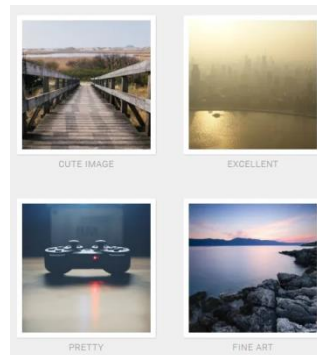
SECTION-IX

Style images

Multiple columns

Style images

- Rounded : `img { border-radius: 8px; }`
- Circled : `img { border-radius: 50%; }`
- Thumbnail: `img { border: 1px solid #ddd; border-radius:4px; width:150px}`
- Responsive: `img { max-width: 100%; height: auto; }`
- Center: `img {display: block; margin-left: auto; margin-right: auto; width: 50%;}`



Multiple Columns

- Creating multiple columns: `div { column-count: 3; }`
- `column-gap: 40px`
- `column-rule-style: solid`
- `column-rule-width`
- `column-rule-color`

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut eu augue orci. Morbi tristique a felis et varius. Sed augue nunc, cursus sed congue sit amet, mollis sed risus. Aliquam sit amet fringilla nisl. Vivamus ullamcorper odio magna, ut sagittis justo accumsan at. Donec turpis turpis, sagittis

vel nisl eget, sodales ullamcorper eros. Etiam ut velit non sapien tincidunt ultrices in et nisi. Phasellus fringilla quam rutrum, semper neque pretium, fermentum justo. Suspendisse convallis, purus vitae mollis semper, est justo pretium neque, sit amet convallis nisi justo vel justo.

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SECTION-IX ENDS

SECTION-X

Media queries

Media queries

- Media queries can be used to check
 - Width, height of viewport
 - Width, height of device
 - Orientation
 - Resolution
- ```
@media not|only mediatype and (expressions)
{
 CSS-Code;
}
```

- Different stylesheet for different media

```
<link rel="stylesheet" media="mediatype and|not|only (expressions)" href="print.css">
```

**SECTION-X ENDS**



## Code checking

- Use proper indentation
- Beautify option can be used from editor
- Use linter for code checking

## Best practices

- Create Readable css
- Keep Consistent
- Create Your HTML First
- Comment your CSS
- Alphabetize your Properties
- Make Use of Generic Classes
- Use "Margin: 0 auto" to Center Layouts
- Use Reset and Normalize CSS
- Organize the Stylesheet
- Use Absolute Positioning Sparingly
- Use Text-transform

## Cont...

- Don't use Negative Margins to Hide Your h1
- Validate Your CSS and HTML
- Avoid Extra Selectors
- Combine CSS Elements
- Use Appropriate Naming Convention
- Always avoid inline styling
- Always use External CSS
- Shorthand CSS
- Minify CSS file size with CSS Compressors
- Cross-browser compatibility



CYBAGE

Thank You!