Agenda

- CSS
  - Inline
  - Internal
  - External
- Selector
- CSS Box Model
- CSS Properties
- BootStrap
- Breakpoints

CSS

- CSS stands for Cascading Style Sheets.
- It makes an HTML website presentable.
- It adds style to various HTML elements.
- It helps you to define how the elements should look, where they should be placed and whether they should be displayed or not.
- Types of CSS

1. Inline
2. Internal
3. External

Inline CSS

- Use style attribute of an element to decorate it
- Simplest way to add decoration
- It is very difficult to manage because it can target only one element at a time
- It is discouraged to use inline CSS
- E.g. `<p style=”color:red;”>test</p>`

Internal CSS

- Use style tag in header section
- It can target multiple elements at a time in the given page
- It can target only one page at a time
- E.g.

```
p {
color: red;
}
```

External CSS

- Use external CSS file to hold all the rules
- Link the external CSS with link tag in header section
- E.g.

```
<link rel=”stylesheet” href=”mystyles.css”>
```

Terminology

- Rule or Ruleset:
  - Pair of CSS selector and declaration block
- Declaration block:
  - Collection of declarations
- Declaration:
  - Pair of CSS property and its value separated by colon(😃 and terminated by semi-colon(😉
- Selector:
  - Used to select one or more elements from the page

Units

- px: pixel (Picture Element)
- deg: degree
- s: Seconds
- %: with respect to its parent

CSS Selector

- used to select one or more elements from given page
- Types of selector

1. Element selector
   - Also called as type selector
   - Targets only similar type of element
   - E.g. : only paragraph will have red color

```
p { color: red; }
```

2. Multiple element selector (,)
   - Multiple type selector
   - Select multiple type of elements
   - E.g. : paragraph, h2 and h3 will have color green

```
p, h2, h3 { color: green; }
```

3. ID selector (#)
    - Select only element matching the given Id
    - Id can appear in a page only once
    - E.g. :

```
/* select only paragraph having id para1  */
p#para1 { color:red; }

/* select any element having id para1 */
#para1 { color: green; }
```

4. Class selector (.)
    - Select only element matching the given class
    - E.g.

```
/* select only paragraph having class para1 */
p.para1 { color:red; }

/* select any element having class para1 */
.para1 { color: green; }
```

5. Descendant selector (white-space)
    - Used to select child elements at any level
    - E.g.

```
/* paragraph at any level inside div will have color red */
div p { color: red; }
```

6. Child selector (>)
    - Used to select child elements which are at first level
    - Used to select only direct child elements
    - E.g.

```
/* paragraph at first level (direct) inside div will have color red */
div > p { color: red; }
```

7. Attribute selector ([])
    - Used to select an element based on the given attribute value
    - E.g.

```
/* input of type submit will have color red */
input[type=”submit”] { color: red; }
```

8. Universal selector (*)
    - Used to select all elements
    - E.g.

```
/* all elements will have font family as arial */
* { font-family: arial; }
```

9. Pseudo selector (😃)
    - Used to apply CSS rules in specific condition
    - The conditions are also known as pseudo classes
    - E.g. hover, nth-child, active, focus, visited
    - E.g.

```
/* when mouse gets over on div, the color will change to red */
div:hover { color: red; }
```

CSS Box Model

- Every element in html is rendered as a box (rectangle)
- Their are 3 Properties
    1. Border
    2. Padding
    3. Margin

CSS Display

- Used to control the display behavior of an element
- Values are

1. block:
    - considers width and height and displays elements on new line
2. inline:
    - ignores the width and height and displays in same line
3. none:
    - hides the element
4. inline-block:
    - considers width and height and displays elements on same line

CSS Float

- The float property in CSS is used to position elements to the left or right of a container, allowing text or other elements to wrap around them.
- values
    1. right:

2. left:

CSS Flex

- Flexbox (Flexible Box Layout) is a powerful, one-dimensional layout system in CSS designed for organizing elements in rows or columns.
- It simplifies alignment, spacing, and distribution of elements, making it ideal for responsive design.
- To use Flexbox, apply display: flex; to a container.
- This makes all child elements (flex items) automatically adjust according to the rules of Flexbox.
- Flex Container and Flex Items

1. Flex Container: The parent element that holds flex items.
2. Flex Items: The child elements inside the container.

- Below properties apply to the container (display: flex;).

1. flex-direction

1. row: Default. Items are placed left to right.
2. row-reverse: Items are placed right to left.
3. column: Items are placed top to bottom.
4. column-reverse: Items are placed bottom to top.

2. justify-content

1. flex-start: Default. Items align to the start (left).
2. flex-end: Items align to the end (right).
3. center: Items are centered.
4. space-between: First item at start, last item at end, space between them.

CSS Position

- Used to control the position
- Values are

1. static:
    - by default static is used
    - ignores top, bottom, left and right
2. relative:
    - element is aligned with respective with top,bottom,left and right
3. absolute:
    - It is absolute with the current displayed window and moves up as window scrolls
4. fixed:
    - It is fixed at the position. Even if window scrolls the element will not move from the position

CSS3 Advanced Properties

- border-radius
    - Used to add rounded corner
- Shadow

    - Text shadow
    - Box shadow
- Gradients
    - Linear
    - Radial
- column-counts
    - Used to divide an element in number of columns
- CSS Animations
    - Transition
    - Transform
        - scale
        - rotate
        - translate
- CSS Media Queries