

BASIC & ADVANCE CSS SYLLABUS

MODULE 1: Introduction to CSS

1.1 What is CSS?

- Definition of CSS (Cascading Style Sheets)
- Role of CSS in Web Development
- Separation of Structure (HTML) and Presentation (CSS)
- Evolution of CSS (CSS1, CSS2, CSS3)

1.2 Advantages of CSS

- Code Reusability
- Maintainability
- Performance Optimization
- Consistency Across Pages

1.3 Ways to Apply CSS

- Inline CSS
- Internal CSS
- External CSS
- @import rule

1.4 CSS Syntax

- Selector
- Property
- Value
- Declaration Block
- Comments in CSS

Practical Tasks:

- Apply inline, internal, and external CSS
- Create a styled HTML page

MODULE 2: CSS Selectors

2.1 Basic Selectors

- Universal Selector (*)
- Type Selector
- Class Selector
- ID Selector
- Group Selector

2.2 Combinator Selectors

- Descendant
- Child (>)
- Adjacent Sibling (+)
- General Sibling (~)

2.3 Attribute Selectors

- [attr]
- [attr=value]
- ^=, \$=, *=

2.4 Pseudo Classes

- :hover
- :focus
- :active
- :visited
- :nth-child()

- :first-child
- :last-child

2.5 Pseudo Elements

- ::before
- ::after
- ::first-letter
- ::first-line
- ::selection
- ::marker

MODULE 3: CSS Colors & Units

3.1 Color Systems

- Named Colors
- RGB / RGBA
- HEX
- HSL / HSLA

3.2 CSS Units

- Absolute Units (px, cm, mm)
- Relative Units (em, rem, %, vh, vw)
- Viewport Units
- fr unit (Grid)

MODULE 4: CSS Box Model

4.1 Box Model Concept

- Content
- Padding
- Border

- Margin

4.2 box-sizing Property

- content-box
- border-box

4.3 Margin Collapsing

4.4 Outline vs Border

MODULE 5: CSS Typography

5.1 Font Properties

- font-family
- font-style
- font-weight
- font-variant

5.2 Text Properties

- text-align
- text-decoration
- text-transform
- letter-spacing
- word-spacing
- line-height

5.3 Web Fonts

- Google Fonts
- @font-face

Practical Tasks:

- Create blog layout with typography styling
- Integrate custom font

MODULE 6: Backgrounds & Borders

6.1 Background Properties

- background-color
- background-image
- background-size
- background-position
- background-repeat
- background-attachment

6.2 Gradients

- Linear Gradient
- Radial Gradient

6.3 Border Styling

- border-radius
- border-image

Practical Tasks:

- Create gradient button
- Design profile card with rounded borders

MODULE 7: CSS Layout Fundamentals

7.1 Display Property

- block
- inline
- inline-block
- none

7.2 Positioning

- static
- relative
- absolute
- fixed
- sticky

7.3 Float & Clear

- Float behavior
- Clear property
- clearfix hack

MODULE 8: Flexbox (Modern Layout)

8.1 Introduction to Flexbox

- Flex Container
- Flex Items
- Main Axis & Cross Axis

8.2 Flex Container Properties

- display: flex
- flex-direction

- flex-wrap
- justify-content
- align-items
- align-content

8.3 Flex Item Properties

- flex-grow
- flex-shrink
- flex-basis
- order
- align-self

Practical Tasks:

- Build responsive navbar
- Create pricing cards layout

MODULE 9: CSS Grid (Advanced Layout)

9.1 Grid Basics

- display: grid
- Grid Container & Items
- Grid Lines

9.2 Grid Properties

- grid-template-columns
- grid-template-rows
- grid-gap
- grid-area
- grid-template-areas

9.3 Advanced Grid Concepts

- Implicit vs Explicit Grid
- auto-fit vs auto-fill
- minmax()

Practical Tasks:

- Design homepage layout using grid
- Build photo gallery

MODULE 10: Responsive Web Design

10.1 Media Queries

- Breakpoints
- Orientation
- min-width vs max-width

10.2 Mobile First Design

10.3 Responsive Images

- max-width: 100%
- object-fit

Practical Tasks:

- Make website responsive
- Create mobile-first layout

MODULE 11: CSS Transforms, Transitions & Animations

11.1 CSS Transforms

- translate()
- rotate()
- scale()
- skew()

11.2 Transitions

- transition-property
- transition-duration
- transition-timing-function

11.3 CSS Animations

- @keyframes
- animation-name
- animation-duration
- animation-delay
- animation-iteration-count

Practical Tasks:

- Create hover animation button
- Create loading spinner

MODULE 12: Advanced CSS Topics

12.1 CSS Variables (Custom Properties)

- :root
- var()

12.2 CSS Functions

- calc()
- clamp()
- min()
- max()

12.3 CSS Filters

- blur()
- brightness()
- contrast()

12.4 CSS Clip-path

12.5 CSS Masking

12.6 CSS Blend Modes

MODULE 13: Projects

1. Personal Portfolio Website
2. E-commerce Product Page
3. Landing Page with Animation