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INTERNET & WEB DESIGNING USING IHTML5

UNIT-5
TRANSITION & ANIMATION

INTRODUCTION TO TRANSITION

- Delay
- Duration
- Property
- Timing- Function

INTRODUCTION TO ANIMATION

- Name
- Duration
- Delay
- Iteration Count
- Direction
- Timing-Function
- Fill-Mode

INTRODUCTION TO TRANSITION

- A “transition” is **a Movement, Passage, or Change from One Position to Another**. The word “transition” is often used in human services to refer to the general process of someone moving, or being moved, from one set of services to another.
- The transition property in CSS is used to make some transition effect, specified as one or more single-property transitions, separated by commas.
- The transition is the combination of four properties which are listed below:

transition-property

transition-duration

transition-timing-function

transition-delay

Transition-Property:-

- It specifies the CSS properties to which a transition effect should be applied.
- A transition effect could typically occur when a user hover over an element.
- Always specify the transition-duration property, otherwise the duration is 0, and the transition will have no effect.

- **Transition-Property:-**

Syntax:-

div { transition-property: none/all/property/initial/inherit; }

Value	Description
none	No property will get a transition effect
all	Default value. All properties will get a transition effect
property	Defines a comma separated list of CSS property names the transition effect is for
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

- **Transition-Timing-Function :-**
  - The transition-timing-function property specifies the speed curve of the transition effect.
  - This property allows a transition effect to change speed over its duration.

Syntax:-

```
div {
  transition-timing-function: linear/ease/ease-in/ease-out/ease-in-out/step-start/step-end/steps(int,start|end)/cubic-bezier(n,n,n,n)/initial/inherit;
}
```

Transition-Timing-Function :-

Value	Description
ease	Default value. Specifies a transition effect with a slow start, then fast, then end slowly (equivalent to cubic-bezier(0.25,0.1,0.25,1))
linear	Specifies a transition effect with the same speed from start to end (equivalent to cubic-bezier(0,0,1,1))
ease-in	Specifies a transition effect with a slow start (equivalent to cubic-bezier(0.42,0,1,1))
ease-out	Specifies a transition effect with a slow end (equivalent to cubic-bezier(0,0,0.58,1))
ease-in-out	Specifies a transition effect with a slow start and end (equivalent to cubic-bezier(0.42,0,0.58,1))
step-start	Equivalent to steps(1, start)
step-end	Equivalent to steps(1, end)
steps(int,start|end)	Specifies a stepping function, with two parameters. The first parameter specifies the number of intervals in the function. It must be a positive integer (greater than 0). The second parameter, which is optional, is either the value "start" or "end", and specifies the point at which the change of values occur within the interval. If the second parameter is omitted, it is given the value "end"
cubic-bezier(*n*,*n*,*n*,*n*)	Define your own values in the cubic-bezier function. Possible values are numeric values from 0 to 1
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

- **Transition-Duration :-**
- The transition-duration property specifies how many seconds (s) or milliseconds (ms) a transition effect takes to complete.

Transition-Timing-Function :-

- Syntax:-

```
div {
  transition-duration: time/initial/inherit;
}
```

Value	Description
time	Specifies how many seconds or milliseconds a transition effect takes to complete. Default value is 0s, meaning there will be no effect
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

INTRODUCTION TO TRANSITION

- **Transition-Delay :-**
  - The transition-delay property specifies when the transition effect will start.
  - The transition-delay value is defined in seconds (s) or milliseconds (ms).
- Syntax:-

```
div {
  transition-delay: 2s;
}
```

Value	Description
time	Specifies the number of seconds or milliseconds to wait before the transition effect will start
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

INTRODUCTION TO ANIMATION

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INTRODUCTION TO ANIMATION

- **CSS animations make it possible to animate transitions from one CSS style configuration to another**. Animations consist of two components, a style describing the CSS animation and a set of keyframes that indicate the start and end states of the animation's style, as well as possible intermediate waypoints.
- **Syntax**
  - @keyframes mymove {
    from {top: 0px;}
    to {top: 200px;}
    }
- The @keyframes rule specifies the animation code.
- The animation is created by gradually changing from one set of CSS styles to another.

Property	Description
@keyframes	Specifies the animation code
animation	A shorthand property for setting all the animation properties
animation-delay	Specifies a delay for the start of an animation
animation-direction	Specifies whether an animation should be played forwards, backwards or in alternate cycles
animation-duration	Specifies how long time an animation should take to complete one cycle
animation-fill-mode	Specifies a style for the element when the animation is not playing (before it starts, after it ends, or both)
animation-iteration-count	Specifies the number of times an animation should be played
animation-name	Specifies the name of the @keyframes animation
animation-play-state	Specifies whether the animation is running or paused
animation-timing-function	Specifies the speed curve of the animation

INTRODUCTION TO ANIMATION

- **Animation-Name :-**

➢ The animation-name property specifies a name for the @keyframes animation.

➢ The **animation-name** CSS *property* specifies the names of one or more @keyframes at-rules that describe the animation to apply to an element. Multiple @keyframe at-rules are specified as a comma-separated list of names. If the specified name does not match any @keyframe at-rule, no properties are animated.

➢ **Syntax**

- animation-name: keyframename|none|initial|inherit;

ANIMATION-NAME :-

Value	Description
keyframename	Specifies the name of the keyframe you want to bind to the selector
none	Default value. Specifies that there will be no animation (can be used to override animations coming from the cascade)
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

```
div {
    background: red;
    animation-name: mymove;
}
```

- **Animation-Duration: -**
  - The animation-duration CSS property sets the length of time that an animation takes to complete one cycle.

➢ **Syntax**

- animation-duration: time|initial|inherit;

```
div {
  animation-duration: 3s;
}
```

Value	Description
time	Specifies the length of time an animation should take to complete one cycle. This can be specified in seconds or milliseconds. Default value is 0, which means that no animation will occur
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

- **Animation-Direction: -**
- The **animation-direction** CSS property sets whether an animation should play forward, backward, or alternate back and forth between playing the sequence forward and backward.

➢ **Syntax**

```
div {
  animation-direction: alternate;
}
```

ANIMATION-DIRECTION

- **Syntax:-**
- animation-direction: normal|reverse|alternate|alternate-reverse|initial| inherit ;

Value	Description
normal	Default value. The animation is played as normal (forwards)
reverse	The animation is played in reverse direction (backwards)
alternate	The animation is played forwards first, then backwards
alternate-reverse	The animation is played backwards first, then forwards
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

- **Animation-Interation-Count: -**

  - The **animation-iteration-count** CSS property sets the number of times an animation sequence should be played before stopping.

  - **Syntax**

    - div {
      animation-iteration-count: 2;
      }

ANIMATION-INTERATION-COUNT

- **Syntax:-**

animation-iteration-count: number|infinite|initial|inherit;

Value	Description
number	A number that defines how many times an animation should be played. Default value is 1
infinite	Specifies that the animation should be played infinite times (for ever)
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element

- **Animation-Delay :-**

  The **animation-delay** CSS property specifies the amount of time to wait from applying the animation to an element before beginning to perform the animation. The animation can start later, immediately from its beginning, or immediately and partway through the animation.

  - **Syntax**

```
div {
  animation-delay: 2s;
}
```

ANIMATION-DELAY

- **Syntax:-**

animation-delay: *time*|initial|inherit;

Value	Description
time	Optional. Defines the number of seconds (s) or milliseconds (ms) to wait before the animation will start. Default value is 0. Negative values are allowed. If you use negative values, the animation will start as if it had already been playing for *N* seconds/milliseconds.
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

- **Animation-Timing-Function :-**
  - The **animation-timing-function** CSS property sets how an animation progresses through the duration of each cycle.
  - The speed curve defines the TIME an animation uses to change from one set of CSS styles to another.
  - The speed curve is used to make the changes

➢ **Syntax**

```
div {
  animation-timing-function: linear;
}
```

- **Animation-Fill-Mode :-**
  - The **animation-fill-mode** CSS property sets how a CSS animation applies styles to its target before and after its execution.

➢ **Syntax**

```
div {
  animation-fill-mode: forwards;
}
```

ANIMATION-FILL-MODE :-

- **Syntax:-**

animation-fill-mode: none|forwards|backwards|both|initial| inherit;

Value	Description
none	Default value. Animation will not apply any styles to the element before or after it is executing
forwards	The element will retain the style values that is set by the last keyframe (depends on animation-direction and animation-iteration-count)
backwards	The element will get the style values that is set by the first keyframe (depends on animation-direction), and retain this during the animation-delay period
both	The animation will follow the rules for both forwards and backwards, extending the animation properties in both directions
initial	Sets this property to its default value.
inherit	Inherits this property from its parent element.

Unit-5 Completed