179 ❀ Animations :-

→ Allow animation of html elements without using Javascript / Flash.

❀ Properties — @keyframes ✓
  animation-name ✓
  animation-duration ✓
  animation-delay ✓
  animation-iteration-count ✓
  animation-direction ✓
  animation — Shorthand property
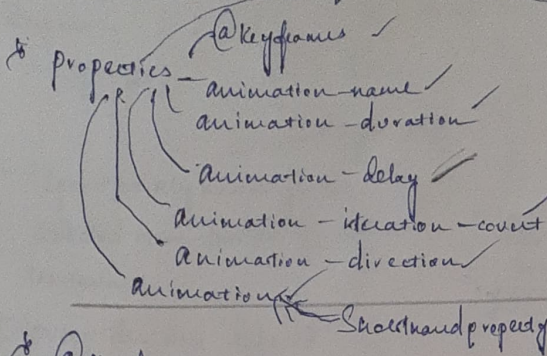
  animation-fill-mode ✓
  animation-timing-function ✓

❀ @keyframes

❀ To use css animation you must first specify some keyframes for the animation.

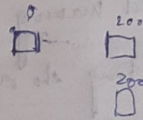❀ animation-name
  Specify the name of the @keyframes animation.

❀ animation-duration

* defines how long an animation should take to complete.
* Not specified, no animation will occur.
* default value → 0s (0 seconds)
* keywords (from, to)
      ¹(0% start) ²(100% complete)

❀ animation-delay :- ⌐) Specifies delay for start of animation.
                      ⌐) Negative not allowed.
                      ⌐) If using negative values the animation will start as
                         if has already been playing for N seconds.
                      ⌐) defined in (s (second)
                                     (ms (milliseconds)

❀ animation-iteration-count :- Specifies the no of times the animation should run.
                               ⌐) you use keyword ⌐) infinite
                                                  Value for the property

❀ animation-direction ⌐) Specifies whether animation played — forward
                                                                backward
                      ⌐) Values (normal (default) (forward)   alternate
                                = reverse (backward) (played)   cycle
                                  alternate
                                  alternate-reverse

* Alternate ~) It is played forward first then backward
* alternate-reverse ~) It is played backward first then forward.

* animation-fill-mode

don't * Specifies style for target element when the animation is not playing
(before it starts, after it ends or both)

* values none   — forward   — backwards — both.
         ↑
      default value

* animation-timing-function

* Specifies the curve of the animation.

* values ease ⟶ Slow start then fast then end slowly (default)
         linear ⟶ Same speed from start to end.
         ease-in ~) Slow start.
         ease-out ~) Slow end
         ease-in-out ~) Slow start & end
         - Cubic-bezier(n,n,n,n) ~) define your own values in cubic bezier function.

* animation

```
Animation: name duration timing- delay iteration direction delay-
                       function           count    fill-  state;
                                                   mode
```

* animation-play-state ⟨ paused — animation is paused.
                         ⟨ running — default value
* Specifies whether animation is running or paused.

Eg 1) animation-delay .html

```
<!DOCTYPE html>
<html>
<head>
<style>
/* The Animation code */
@keyframes example2 {
0% {
background-color: ▢red;
left: 0px;
top: 0px;
}
25% {
background-color: ▢yellow
```

/* This is where the started
animation */

```
        left: 200px;           /* This is moving to the right */

        /* left: 0200 px */
        top: 0px;
      }

  50% {
        background - color: [] black;
        left: 200px;
        top: 200px;
      }

  75% {
        background - color: [] purple;
        left: 0px;
        top: 200px;
      }

  100% {
        background - color: [] green;
        left: 0px;
        top: 0px;
      }
    }

  /* The element to apply the animation to */
  div {
        width: 100px;
        height: 100px;
        background - color: [] red;
        animation - name : examples;
        animation - duration: 5s;
        animation - delay: - 1s
        posistion : relative;
      }
</style>
</head>
    <body>
        <div> R </div>
    </body>
</html>
```

```
<!Doctype html>
<html>
    <head>
        <style>
            /* The Animation code */
            @keyframes example2 {
                0% {
                    background-color: red;
                    left: 0px;
                    top: 0px;
                }
                25% {
                    background-color: yellow
                    left: 200px;
                    /* left: 200px; */
                    top: 0px;
                }
                50% {
                    background-color: black;
                    left: 200px;
                    top: 200px;
                }
                100% {
                    background-color: green;
                    left: 0px;
                    top: 0px;
                }
            }
            div {
                width: 100px;
                height: 100px;
                background-color: red;
                animation-name: example2;
                animation-duration: 8s;
                animation-iteration-count: infinite;
                animation-direction: alternate-reverse;
                position: relative;
            }
        </style>
    <head>
        <body>
            <div> R </div>
        </body>
</html>
```

```html
<!Doctype html>
<html>
  <head>
    <style>
      @keyframes example2 {
        0%
        {
          background-color: Bred;
          left: 0px;
          top: 0px;
        }
        25%
        {
          background-color: Byellow;
          left: 200px;
          top: 0px;
        }
        50%
        {
          background-color: Bblack;
          left: 200px;
          top: 200px;
        }
        100%
        {
          background-color: Bgreen;
          left: 0px;
          top: 0px;
        }
      }
      div {
        width: 100px;
        height: 100px;
        background-color: Bred;
        animation-name: example2;
        animation-duration: 8s;
        animation-iteration-count: infinite;
        animation-direction: alternate;
        position: relative;
      }
    </style>
  </head>
  <body>
    <div> R </div>
  </body>
</html>
```

Eq 4) animation -direction utml

```
<!DOCTYPE html>
<html>
    <head>
        <style>
            @keyframes examples{
                0%
                {
                    background-color: red;
                    left: 0px;
                    top: 0px;
                }
                25%
                {
                    background-color: yellow;
                    left: 200px;
                    top: 0px;
                }
                50%
                {
                    background-color: black;
                    left: 200px;
                    top: 200px;
                }
                100% {
                    background-color: green;
                    left: 0px;
                    top: 0px;
                }
            }
            div{
                width: 100px;
                height: 100px;
                background-color: red;
                animation-name: examples;
                animation-duration: 2s;
                animation-iteration-count: infinite;
                animation-direction: reverse;
                position: relative;
            }
        </style>
    </head>

    <body>
        <div> R </div>
    </body>
</html>
```

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Eg 5) animation-ituation-count
.html

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      @keyframes example2 {
        0%
        {
          background-color: □red;
        }
        25%
        {
          background Dyellow;
            -color;
          left: 200px;
          top: 0px;
        }
        50%
        { background-color: D black;
          left: 200px;
          top: 200px;
        }
        100%
        {
          background-color: □green;
          left: 0px;
          top: 0px;
        }
      }
      div
      {
        width: 100px;
        height: 100px;
        backgroud-color: □red;
        animation-name: example2;
        animation-dovation: 8S
        animation-iteration-count: 5;
          pesistion: relative;
      }
    </style>
  </head>
    <body>.
      <div> R </div>
      </body>

  </html>
```

Eg 6) animation-ituation-count
-infinite .html

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      @keyframes example2 {
        0% ₪
        {
          background-color:
          left: 0px;
          top: 0px;       □red;
        }
        25%
        {
          background
            -color: □yellow;
          left: 200px;
          top: 0px;
        }
        50%
        {
          background: □ black;
          left: 200px;
          top: 200px;
        }
        100% {
          background-color: □green;
          left: 0px;
          top: 0px;
        }
      }
      div
      {
        width: 100px;
        height: 100px;
        background-color: □red;
        animation-name: example2;
        animation-dovation: 8c;
        animation-iteration
                  -count: infinite;
        pesistion: relative;
      }
    </style>
  </head>

    <body>
      <div> R </div>
      </body>
  </html>
```

Eg 7) animation shorthand .html

```
<!DOCTYPE html>
<html>
    <head>
        <style>
            div {
                width: 100px;
                height: 50px;
                background-color: red;
                position: relative;
                animation: mymove 5s ease 2s infinite normal
                                        backwards running;
            }
            @keyframes mymove
            {
                from
                {
                    left: 0px;
                }
                to
                {
                    left: 300px;
                }
            }
        </style>
    </head>
        <body>
            <div> 1 </div>
        </body>
</html>
```

Eg 8) without -keyframe -animation .html   (Compare this program
                                                 in pg no 188 eg 11)

```
<!DOCTYPE html>
<html>
    <head>
        <style>
            div {
                width: 100px;
                height: 100px;
                background-color: red;
                animation-name: example;
                animation-duration: 4s;
            }
        </style>
    </head>
        <body>
            <div> </div>
        </body>
</html>
```

Eg 9) `<!DOCTYPE html>` animation
-timing-
function
.html

```html
<!DOCTYPE html>
<html>
<head>
<style>
div {
    width: 100px;
    height: 50px;
    background-color: Dred;
    position: relative;
    animation: mymove 5s infinite;
}
#div1
{
    animation-timing-function: linear;
}
#div2{
    animation-timing-function: ease;
}
#div3
{
    animation-timing-function: ease-in;
}
#div4 {
    animation-timing-function: ease-out;
}
#div5{
    animation-timing-function: ease-in-out;
}
@keyframes mymove
{
    from
    {
        left: 0px;
    }
    to
    {
        left: 300px;
    }
}
</style>
</head>
<body>
    <div id="div1"> linear </div>
    <div id="div2"> ease </div>
    <div id="div3"> ease-in </div>
    <div id="div4"> ease-out </div>
    <div id="div5"> ease-in-out </div>
</body>
</html>
```

Eg 10) with-keyframe
-interval.html

```html
<!DOCTYPE html>
<html>
<head>
<style>
@keyframes example{
    0% {
        background
        -color: Dred;
    }
    20% {
        background
        -color: Dyellow;
    }
    50% {
        background
        -color: Dblue;
    }
    100% {
        background
        -color: Dgreen;
    }
}
div {
    width: 100px;
    height: 100px;
    background-color: Dred;
    animation-name: example;
    animation-duration: 5s;
}
</style>
</head>
<body>
    <div> </div>
</body>
</html>
```

Eg 11) with_keyframe.html

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      div {
        width: 100px;
        height: 100px;
        background-color: red;
        animation-duration: 8s;
        animation-name: example;
        /* Must mention the animation name in the selector */
        /* This may or may not be in order */
      }
      @keyframes example {
        from
        {
          background-color: red;
        }
        to
        {
          background-color: yellow;
        }
      }
    </style>
  </head>
  <body>
    <div></div>
  </body>
</html>
```

Eg 12) with-keyframe-movingdiv.html

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      /* The animation code */
      @keyframes example {
        0% {
          background-color: red;
          left: 0px;
          top: 0px;
        }
```

```
25%
  {
    background-color: yellow;      /* This is when the ani started */
    left: 200px;
    top: 0px;
  }

50%
  {
    background-color: black;
    left: 200px;
    top: 200px;
  }

75%
  {
    background-color: purple;
    left: 0px;
    top: 200px;
  }

100%
  {
    background-color: green;
    left: 0px;
    top: 0px;
  }
}

div {
    width: 100px;
    height: 100px;
    background-color: red;
    animation-name: example2;
    animation-duration: 8s;
    animation-delay: -0s;
    position: relative;
}
</style>

</head>

<body>

    <div> R </div>

  </body>

</html>
```