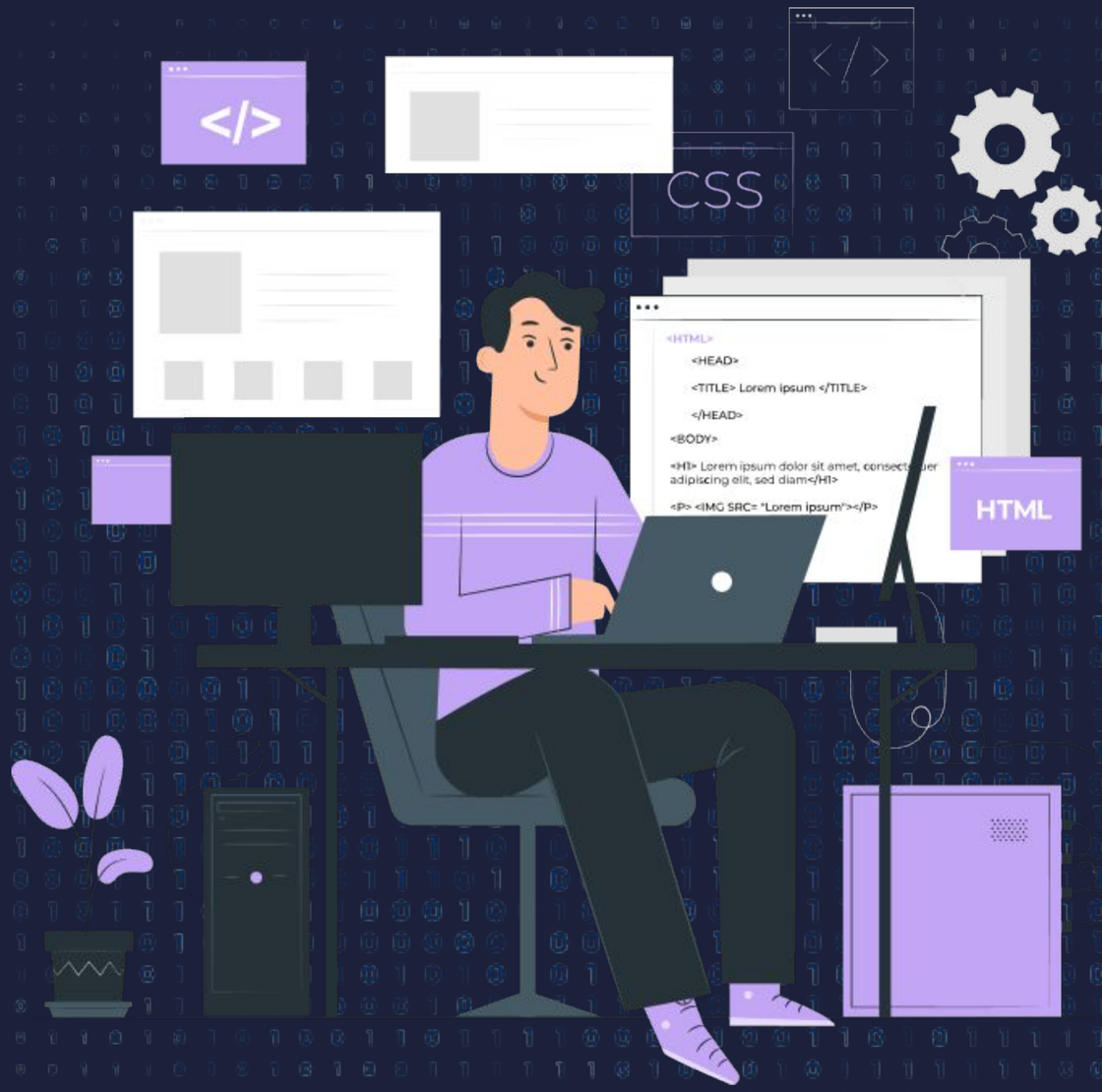
PW SKILLS

Animation



Topics Covered

- What is Animation?
- Style Declaration
- Animation Sequence - Keyframes
- Animation Examples
- Animation vs Transition

What is Animation?

Animate transitions between different CSS style configurations.

Animation Components

Animations Syntax typically comprise of two parts:

- A **style declaration** that outlines the CSS animation,
- A collection of **keyframes** that establish the initial and final states of the animation's style, along with any potential intermediary points.

Style Declaration

Style declaration sets animation properties,

1. animation-name: specifies the name of the animation.

```
animation-name: animation1
animation-name: animation2
animation-name: animation3
```

2. animation-duration: determines how long the animation will run.

```
animation-duration: 1s
animation-duration: 1000ms
```

Style Declaration

Style declaration sets animation properties,

3. animation-timing-function: controls the speed of the animation

```
animation-timing-function: ease-in
animation-timing-function: ease-out
animation-timing-function: easy-in-out
```

4. animation-iteration-count: number of times the animation should repeat

```
animation-iteration-count: 2
animation-iteration-count: 5
```

Style Declaration

Few other properties,

5. animation-delay: Delay before the animation starts.

```
animation-delay: 1s
animation-delay: 1000ms
```

6. animation-direction: Direction of the animation.

```
animation-direction: normal
animation-direction: reverse
animation-direction: alternate
```

Style Declaration

Few other properties,

7. animation-fill-mode: controls how the animation behaves before and after it runs.

```
animation-fill-mode: forwards;
animation-fill-mode: backwards;
animation-fill-mode: both;
```

8. animation-play-state: determines whether the animation is running or paused.

```
animation-play-state: paused
animation-play-state: running
```

Animation Sequence - Keyframes

Defines animation states using using the **@keyframes rules**

Syntax

```
@keyframes animation_name {
  from {
   /* initial styles written here */
  }

  75% {
  /* intermediate styles written here */
  }

  to {
    /* final styles written here */
  }
}
```

Example 1

HTML

```
<!DOCTYPE html>
<html lang="en-US">
  <head>
    <title>Animation</title>
  </head>
  <body>
    <div class="box"></div>
  </body>
</html>
```

CSS

```
.box {
   position: relative;
   background-color: blueviolet;
   border-radius: 50px;
   animation: move 1s ease-in-out 0s 100
alternate;
}

@keyframes move {
   from {
   width: 100px;
   height: 100px;
}

to {
   width: 50px;
   height: 50px;
   }
}
```

Example 1 output

Output

Example 2

HTML

```
<!DOCTYPE html>
<html lang="en-US">
  <head>
    <title>Animation</title>
  </head>
  <body>
    <div class="box"></div>
  </body>
</html>
```

CSS

```
.box {
    position: absolute;
    width: 100px;
    height: 100px;
    background-color: blueviolet;
    border-radius: 50px;
    animation: move 1s ease-in-out 0s 1
alternate;
}

@keyframes move {
    from {
      left: 0px;
    }

    to {
      left: 100px;
    }
}
```

Example 2 output

Output

Example 3

HTML

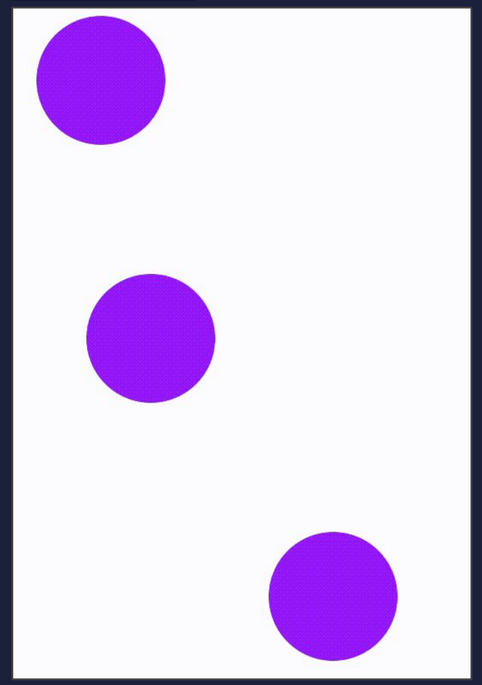
```
<!DOCTYPE html>
<html lang="en-US">
  <head>
    <title>Animation</title>
  </head>
  <body>
    <div class="box box1"></div>
    <div class="box box2"></div>
    <div class="box box3"></div>
  </body>
</html>
```

CSS

```
.box1 {
  animation: move 1s ease-in-out 0s 100 alternate;
}

.box2 {
  animation: move 1s ease-in-out 500ms 100 alternate;
  top: 100px;
}

.box3 {
  animation: move 1s ease-in-out 1000ms 100 alternate;
  top: 200px;
}

@keyframes move {
  from {
     left: 0px;
  }
  to {
     left: 200px;
  }
}
```

Example 3 output

Output



Animation vs Transition

Animation	Transition
It moves from initial to final state, along with intermediate steps.	Can only move from initial to final state.
We can set loop count using animation-iteration-count property	Run only once
We can run automatically or with a trigger	Runs on trigger (like hover)
Runs forward, in reverse, or alternate directions	On trigger, run forwards, and on leaving the trigger run reverse
Easy for creating a complex series of movements.	Helpful in creating simple movements.


SKILLS
THANK YOU