

Lesson:

Overflow and Z-Index



Topics Covered

- Overflow and its properties
- usage of z index with positions

CSS overflow:

Many times when creating web sites we come across a situation where the content is overflowing and we have a horizontal scrollbar in the browser window which is not ideal. Either we have an element with fixed width or we want to show a scrollable view if there are multiple elements Ex: list of products. CSS overflow property enables us to control what happens when content overflows.

In short, the overflow property in CSS determines what happens to content that is too large to fit in an element's box.

We can apply different values to overflow property in either x direction or y direction or to both the directions at the same time.

Ex:

- overflow-x: {overflow value} // horizontal direction
- overflow-y: {overflow value} // vertical direction
- overflow: {overflow value} // both the directions

Css overflow property has the following values:

- visible
- hidden
- scroll
- auto

Let us now look at how these values affect the output

1. overflow: visible

By default, the overflow is visible, meaning that it is not clipped and it renders outside the element's box.

```
Unset
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width,
initial-scale=1.0" />
    <title>Overflow and z index</title>

    <style>
      .overflow {
        border: 2px dotted red;
        width: 300px;
        height: 200px;
      }
    </style>
  </head>
  <body>
    <div class="overflow">
      Lorem ipsum dolor sit amet consectetur adipisicing
      elit. Quidem eveniet
      nulla voluptate, dolores qui rerum voluptatibus eius
      aliquid dolorem
      expedita molestiae non libero laudantium ut nesciunt,
      sed fugit placeat
    </div>
  </body>
</html>
```

```

accusantium porro preferendis atque, in dolore.
Necessitatibus labore odio
    veniam voluptas, querat corporis et debitibus eaque
ducimus voluptate illo
    sint nisi eligendi, animi minus vero culpa,
aspernatur vel quae aliquam?
    Dolor fugit beatae mollitia sunt possimus dignissimos
pariatur porro unde
    quasi ratione? Possimus exercitationem sequi error
ipsa nostrum,
    reprehenderit placeat necessitatibus dolore suscipit
libero eveniet
    tempora officia a dolorum voluptate mollitia ratione?
Voluptatem suscipit
    repellat eum animi aperiam exercitationem impedit
accusamus?
</div>
</body>
</html>

```

The output of the above code will look like this

Lorem ipsum dolor sit amet consectetur
 adipisicing elit. Quidem eveniet nulla
 voluptate, dolores qui rerum voluptatibus eius
 aliquid dolorem expedita molestiae non libero
 laudantium ut nesciunt, sed fugit placeat
 accusantium porro preferendis atque, in
 dolore. Necessitatibus labore odio veniam
 voluptas, querat corporis et debitibus eaque
 ducimus voluptate illo sint nisi eligendi, animi
 minus vero culpa, aspernatur vel quae
 aliquam? Dolor fugit beatae mollitia sunt
 possimus dignissimos pariatur porro unde
 quasi ratione? Possimus exercitationem sequi
 error ipsa nostrum, reprehenderit placeat
 necessitatibus dolore suscipit libero eveniet
 tempora officia a dolorum voluptate mollitia
 ratione? Voluptatem suscipit repellat eum
 animi aperiam exercitationem impedit
 accusamus?

container because the text cannot fit inside it. The default value for overflow is visible, which means we can see the overflowed content.

2. overflow: hidden:

The content that exceeds an element's padding box is cut off and hidden, without any scroll bars to navigate it.

Note: The trimmed content still exists but is just not displayed on the page.

```

Unset
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width,
initial-scale=1.0" />

    <title>Overflow and z index</title>

    <style>
      .overflow {
        border: 2px dotted red;
        width: 300px;
        height: 210px;

        overflow: hidden;
      }
    </style>
  </head>
  <body>
    <div class="overflow">
      Lorem ipsum dolor sit amet consectetur adipisicing
      elit. Quidem eveniet
      nulla voluptate, dolores qui rerum voluptatibus eius
      aliquid dolorem
      expedita molestiae non libero laudantium ut nesciunt,
      sed fugit placeat
      accusantium porro perferendis atque, in dolore.
      Necessitatibus labore odio
      veniam voluptas, quaerat corporis et debitis eaque
      ducimus voluptate illo
      sint nisi eligendi, animi minus vero culpa,
      aspernatur vel quae aliquam?
      Dolor fugit beatae mollitia sunt possimus dignissimos
      pariatur porro unde
      quasi ratione? Possimus exercitationem sequi error
      ipsa nostrum,
      reprehenderit placeat necessitatibus dolore suscipit
      libero eveniet

      tempora officia a dolorum voluptate mollitia ratione?
      Voluptatem suscipit
      repellat eum animi aperiam exercitationem impedit
      accusamus?
    </div>
  </body>
</html>

```

The output for the above code will look like this

Lore ipsum dolor sit amet consectetur adipisicing elit. Quidem eveniet nulla voluptate, dolores qui rerum voluptatibus eius aliquid dolorem expedita molestiae non libero laudantium ut nesciunt, sed fugit placeat accusantium porro perferendis atque, in dolore. Necessitatibus labore odio veniam voluptas, quaerat corporis et debitis eaque ducimus voluptate illo sint nisi eligendi, animi minus vero culpa, aspernatur vel quae aliquam? Dolor fugit beatae mollitia sunt possimus dignissimos pariatur porro unde

As we can see the text that was supposed to overflow is cut off. And to show you that the text is still present in the DOM, I am attaching another screenshot from the rowsers element tab

```
<div class="overflow"> == $0
  " Lorem ipsum dolor sit amet consectetur adipisicing elit.
  Quidem eveniet nulla voluptate, dolores qui rerum
  voluptatibus eius aliquid dolorem expedita molestiae non
  libero laudantium ut nesciunt, sed fugit placeat
  accusantium porro preferendis atque, in dolore.
  Necessitatibus labore odio veniam voluptas, quaerat
  corporis et debitis eaque ducimus voluptate illo sint nisi
  eligendi, animi minus vero culpa, aspernatur vel quae
  aliquam? Dolor fugit beatae mollitia sunt possimus
  dignissimos pariatur porro unde quasi ratione? Possimus
  exercitationem sequi error ipsa nostrum, reprehenderit
  placeat necessitatibus dolore suscipit libero eveniet
  tempora officia a dolorum voluptate mollitia ratione?
  Voluptatem suscipit repellat eum animi aperiam
  exercitationem impedit accusamus? "
</div>
```

3. overflow: scroll:

Setting the value to scroll, the overflow is clipped and a scrollbar is added to scroll inside the box. Note that this will add a scrollbar both horizontally and vertically (even if you do not need it).

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width,
initial-scale=1.0" />
    <title>Overflow and z index</title>

  <style>
    .overflow {
      border: 2px dotted red;
      width: 300px;
      height: 210px;
      overflow: scroll;
    }
  </style>

```

```

        }
    </style>
</head>
<body>
<div class="overflow">
    Lorem ipsum dolor sit amet consectetur adipisicing
    elit. Quidem eveniet
    nulla voluptate, dolores qui rerum voluptatibus eius
    aliquid dolorem
    expedita molestiae non libero laudantium ut nesciunt,
    sed fugit placeat
    accusantium porro preferendis atque, in dolore.
    Necessitatibus labore odio
    veniam voluptas, quaerat corporis et debitis eaque
    ducimus voluptate illo
    sint nisi eligendi, animi minus vero culpa,
    aspernatur vel quae aliquam?
    Dolor fugit beatae mollitia sunt possimus dignissimos
    pariatur porro unde
    quasi ratione? Possimus exercitationem sequi error
    ipsa nostrum,
    reprehenderit placeat necessitatibus dolore suscipit
    libero eveniet
    tempora officia a dolorum voluptate mollitia ratione?
    Voluptatem suscipit
    repellat eum animi aperiam exercitationem impedit
    accusamus?
</div>
</body>
</html>

```

The output of the above code will be

Lorem ipsum dolor sit amet consectetur
 adipisicing elit. Quidem eveniet nulla
 voluptate, dolores qui rerum voluptatibus
 eius aliquid dolorem expedita molestiae non
 libero laudantium ut nesciunt, sed fugit
 placeat accusantium porro preferendis
 atque, in dolore. Necessitatibus labore odio
 veniam voluptas, quaerat corporis et debitis
 eaque ducimus voluptate illo sint nisi
 eligendi, animi minus vero culpa, aspernatur
 vel quae aliquam? Dolor fugit beatae

The box above is now scrollable

As we can see we have the scrollbar in both the directions but we have read we can apply the property to only one by specifying the direction, let us apply the scrollbar only to the direction is it required

In the previous example replace overflow: scroll with the following property to get a scrollbar in the y direction

Unset

```
overflow-y: scroll;
```

The output now would look as shown below

```
Lorem ipsum dolor sit amet consectetur  
adipisicing elit. Quidem eveniet nulla  
voluptate, dolores qui rerum voluptatibus  
eius aliquid dolorem expedita molestiae non  
libero laudantium ut nesciunt, sed fugit  
placeat accusantium porro preferendis  
atque, in dolore. Necessitatibus labore odio  
veniam voluptas, quaerat corporis et debitis  
eaque ducimus voluptate illo sint nisi  
eligendi, animi minus vero culpa, aspernatur  
vel quae aliquam? Dolor fugit beatae  
mollitia sunt noissimus dignissimos narratur.
```

4. overflow: auto:

The auto value is similar to scroll, but it adds scrollbars only when it is necessary.

Let us replace overflow property from our previous example with the following

```
Unset  
overflow: auto;
```

The output would look like the following

```
Lorem ipsum dolor sit amet consectetur  
adipisicing elit. Quidem eveniet nulla  
voluptate, dolores qui rerum voluptatibus  
eius aliquid dolorem expedita molestiae non  
libero laudantium ut nesciunt, sed fugit  
placeat accusantium porro preferendis  
atque, in dolore. Necessitatibus labore odio  
veniam voluptas, quaerat corporis et debitis  
eaque ducimus voluptate illo sint nisi  
eligendi, animi minus vero culpa, aspernatur  
vel quae aliquam? Dolor fugit beatae  
mollitia sunt noissimus dignissimos narratur.
```

CSS z-index

The z-index CSS property arranges the z-position of a positioned element, as well as its descendants.

The z-index property takes an integer value, which represents the element's position on the z-axis. Elements with higher z-index values are placed on top of elements with lower z-index values.

By default, elements have a z-index value of 0, which means their stacking order is determined by their position in the HTML document and their parent's stacking order.

Ex:

```
Unset
<!DOCTYPE html>
<html lang="en-US">
  <head>
    <title>About Us</title>
  </head>
  <style>
    .container {
      position: relative;
    }

    .box {
      position: absolute;
      width: 100px;
      height: 100px;
      font-size: 20px;
      color: white;
      padding: 5px;
    }

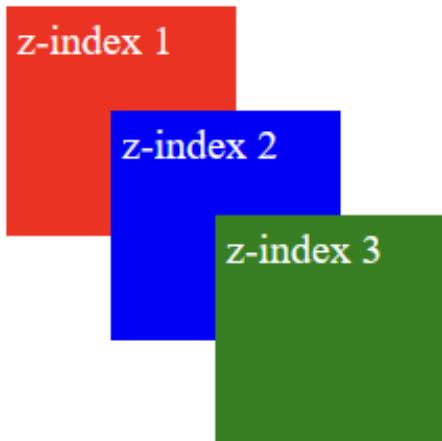
    .box__1 {
      background-color: red;
    }

    .box__2 {
      left: 50px;
      top: 50px;
      background-color: blue;
      /* z-index: 1; */
    }

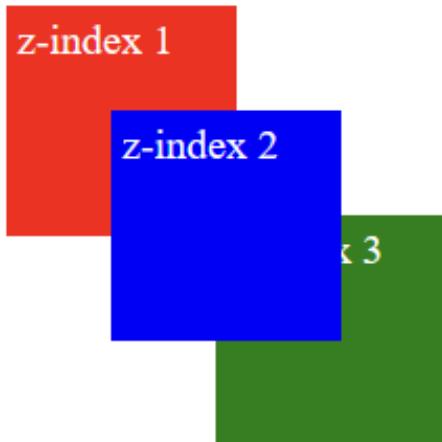
    .box__3 {
      left: 100px;
      top: 100px;
      background-color: green;
    }
  </style>

  <body>
    <div class="container">
      <div class="box box__1">z-index 1</div>
      <div class="box box__2">z-index 2</div>
      <div class="box box__3">z-index 3</div>
    </div>
  </body>
</html>
```

The output of the above code would look as shown below



Let us now see how z-index can change the behavior of box 2, in the previous code under style tag in .box__2 class, if we uncomment z-index: 1; save the file and check the browser for the output we will see the difference. Below is what the output will look like



As we can see the element with box__2 class is sitting on top of every other element, since the other elements have default z-index but box__2 has z-index value set to 1 which is higher hence the element is sitting on top of other elements.