

Front End Technologies CSS

- Day 15

Agenda

- Image Border
- Margin in css box model

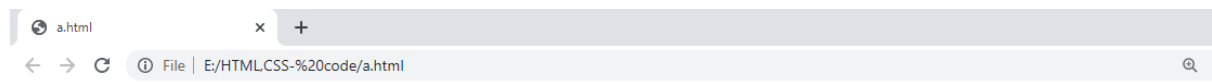


Image Border: The CSS border-image property allows you to specify an image to be used instead of the normal border around an element. Let us understand image border with an example.

Index.html

```
<!DOCTYPE html>
<html>
<head>
<style>
  p{
    border: 2px solid;
    border-image-source: url(circle.jpg);
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim
  ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in
  reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in
  culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:



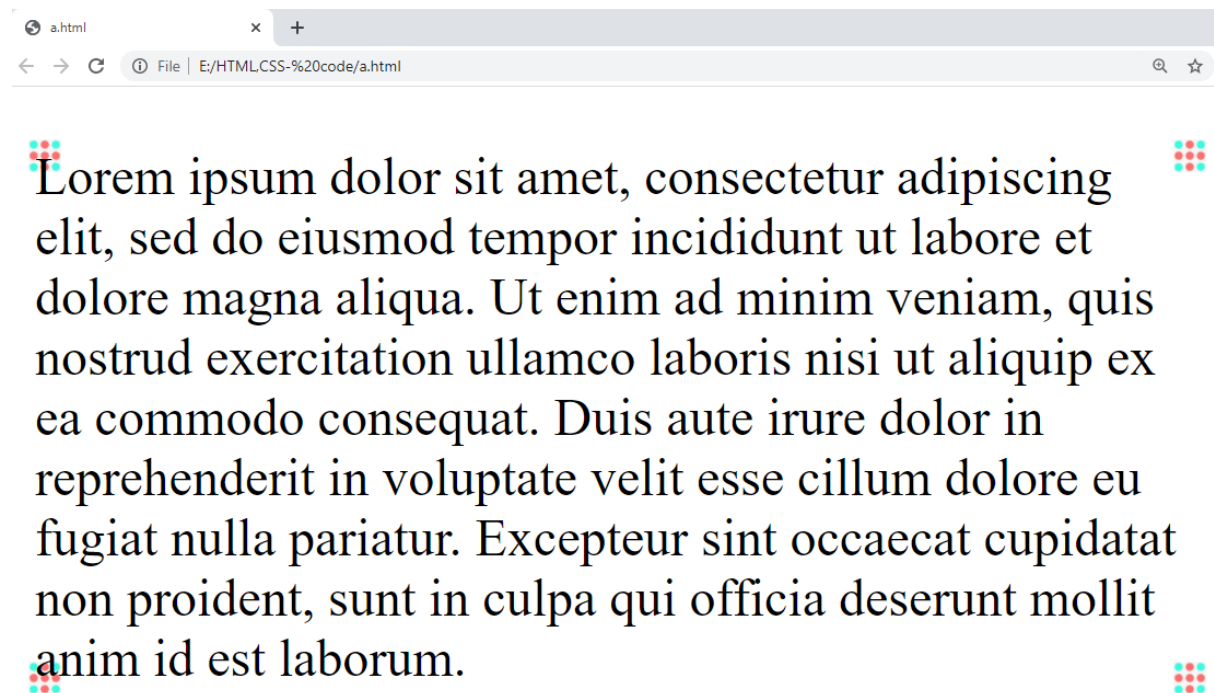
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

If we observe the output there is an image at the corner of the content. The border-image-source property specifies the path to the image to be used as a border. Let us now increase the size of image width.

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style>
  p{
    border: 2px solid;
    border-image-source: url(circle.jpg);
    border-image-width: 10px;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:

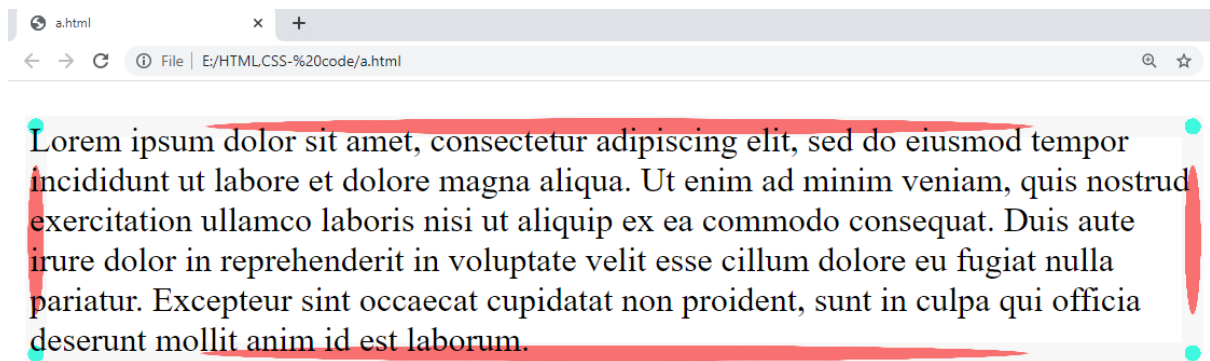


If you observe the output, the width of the image is changed. Border-image-width property helps to increase the width of the image. But we don't want this output, rather we want image as the border for the content for that first let us split the image as shown below.

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style>
  p{
    border: 2px solid;
    border-image-source: url(circle.jpg);
    border-image-width: 10px;
    border-image-slice: 33%;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:

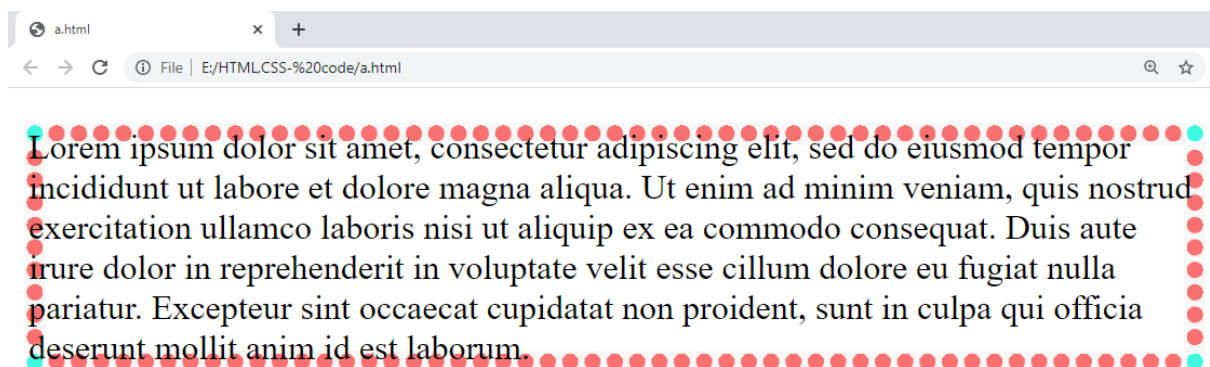


If you observe the output, the image has been splitted but that is not coming as the proper border for the content it is just stretched. To make it as a proper border we have to duplicate the image as shown below.

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style>
  p{
    border: 2px solid;
    border-image-source: url(circle.jpg);
    border-image-width: 10px;
    border-image-slice: 33%;
    border-image-repeat: repeat;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:

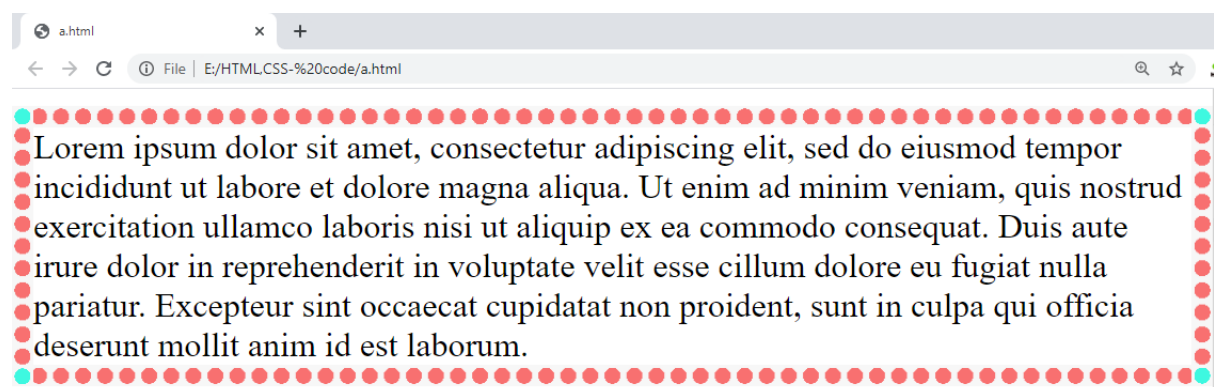


Now if you see the output, we have achieved in adding image has the border for the content, but the border is overlapped on the content. To remove that overlapping we have to make use of border-image-outset property as shown below.

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style>
  p{
    border: 2px solid;
    border-image-source: url(circle.jpg);
    border-image-width: 10px;
    border-image-slice: 33%;
    border-image-repeat: repeat;
    border-image-outset: 8px;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:

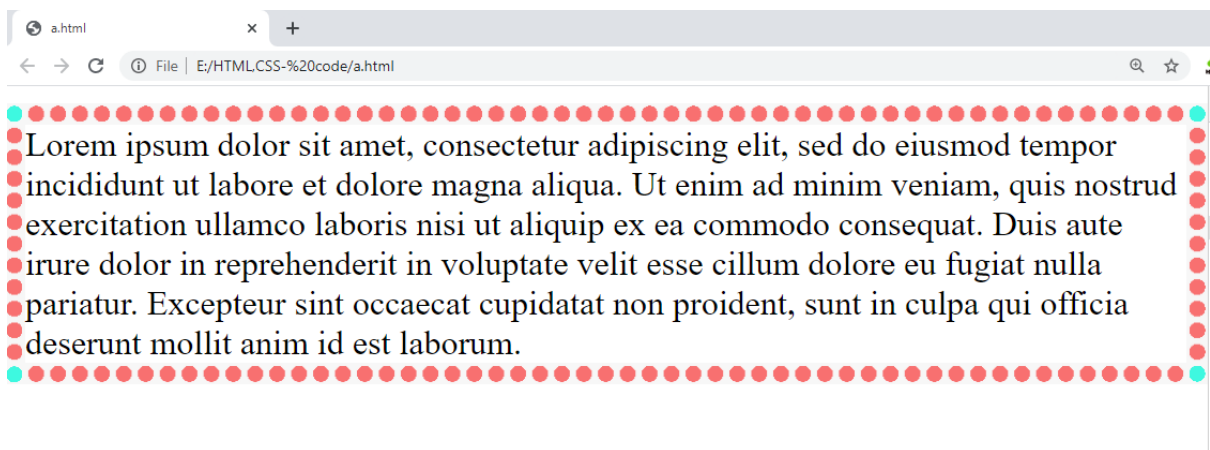


As you can clearly see from the output there is spacing between content and image border. The border-image-outset property specifies the amount by which the border image area extends beyond the border box. If you observe the output carefully at the corner there is half circle, if you don't want that means instead of mention it as repeat you have to mention it as round.

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style>
  p{
    border: 2px solid;
    border-image-source: url(circle.jpg);
    border-image-width: 10px;
    border-image-slice: 33%;
    border-image-repeat: round;
    border-image-outset: 8px;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:

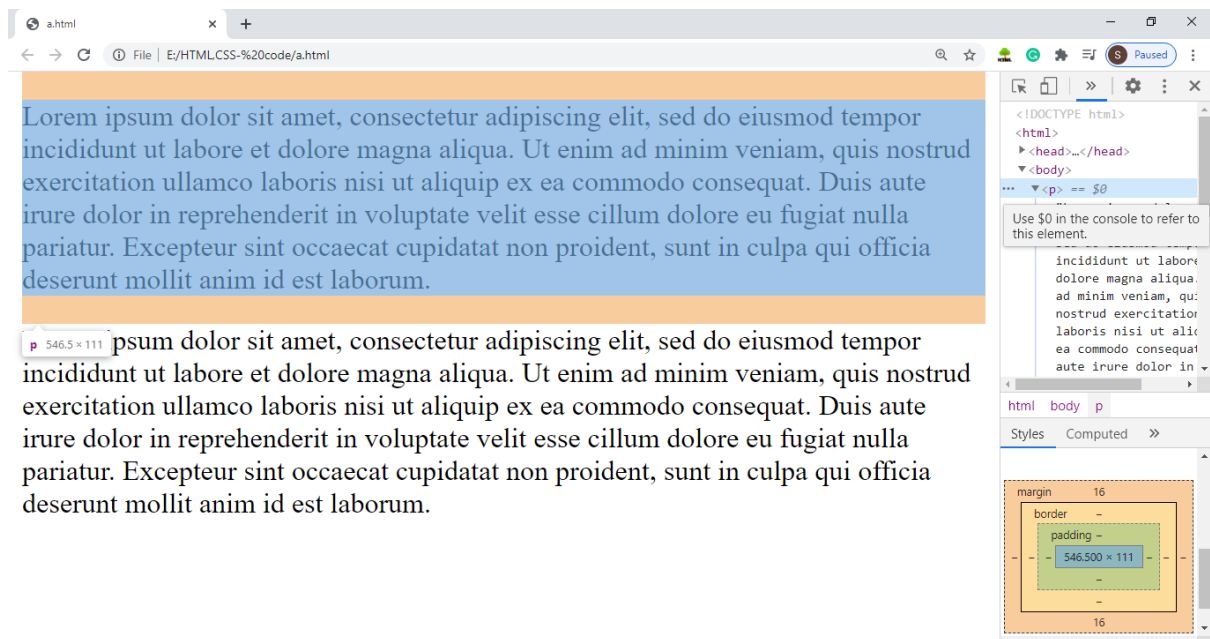


Margin in CSS Box Model: Margin is used to give space outside an element. The margin is transparent. Let us now understand this with an example.

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:



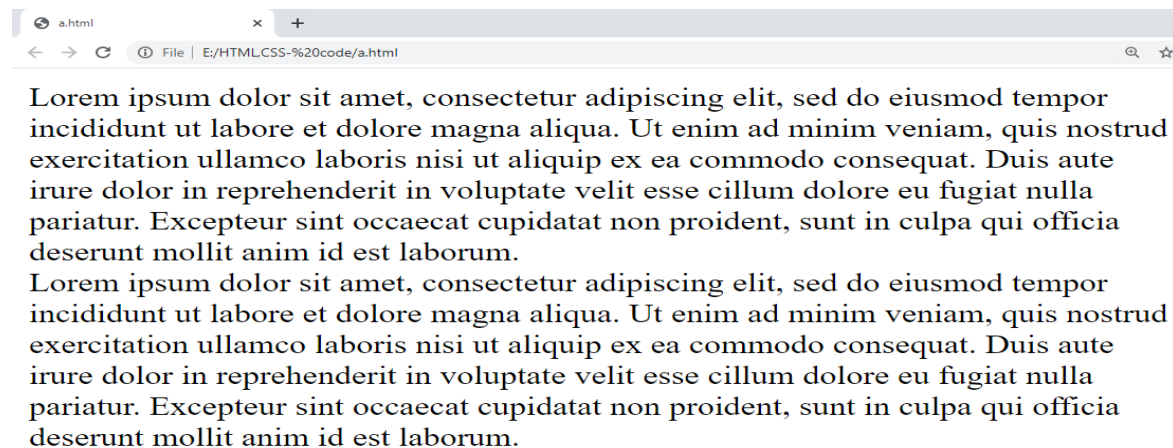
If you observe the output, we have not given the margin then also by default browser has added the margin. For few html elements browser will add the css to the elements, in this case browser has added margin to the elements. Now let's see how to add the margin with an example:

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
  p{
    margin: 0px;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```


Output:



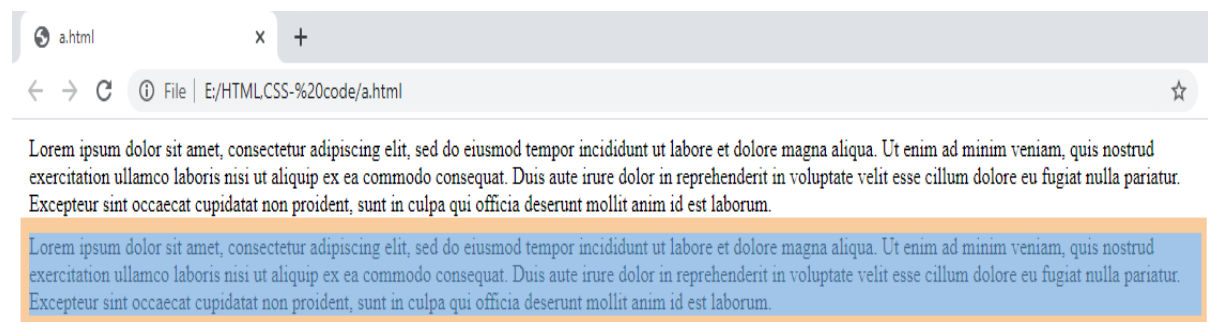
As you can see from the output, there is no space between first paragraph and second paragraph because you have made margin as 0px. You can give separate margins to all different sides but always follow the convention of top-right-bottom-left.

Example:

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
  p{
    margin-top: 10px;
    margin-right: 5px;
    margin-bottom: 10px;
    margin-left: 8px;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:



As you can see from the output, separate margin is added to all the sides.

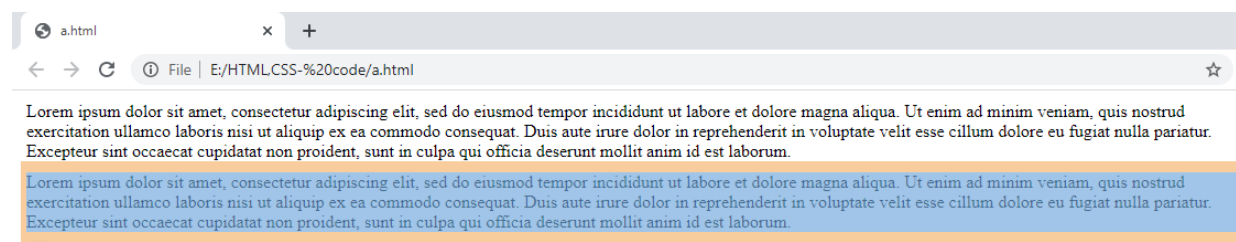
The CSS margin shorthand property is used to define the margin area for an element. It sets values in clock-wise direction, i.e. margin-top, margin-right, margin-bottom and then margin-left. Now we will see with an example of using margin shorthand property.

Example:

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
  p{
    margin: 10px 5px;
  }
</style>
</head>
<body>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

Output:



As you can see from the code and the output that first value is margin-top and second value is margin-right, whatever we have given for margin-top will be reflected to margin-bottom and whatever we have given for margin-right will be reflected to margin-left if you have given with only two values.

Margin collapse: The CSS margin property is used to set a margin on all four sides of an element. When two elements are next to each other on a page vertically, one of the elements might lose its vertical margin. This means top and bottom margins of elements are sometimes collapsed into a single margin that is equal to the largest of the two margins. Now let us understand margin collapse with an example:

Example:

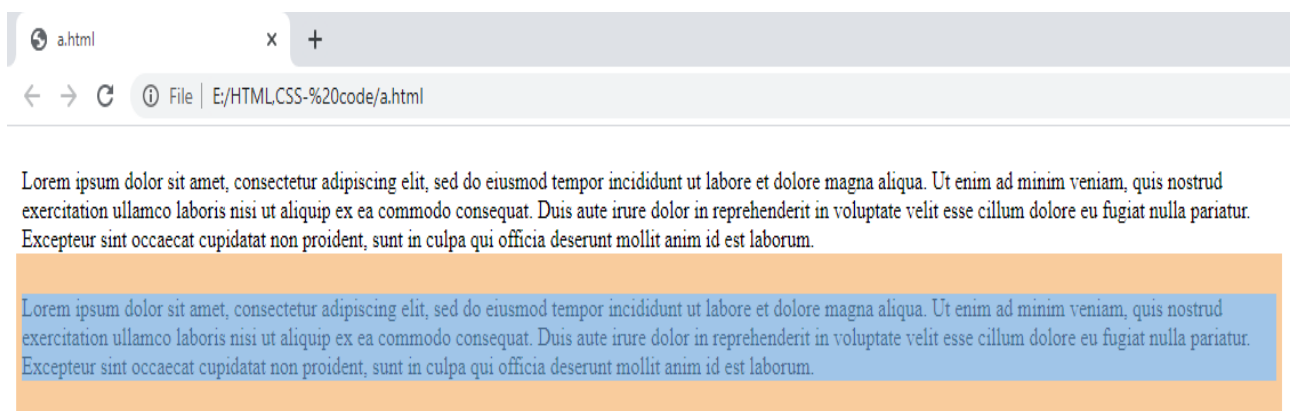
Index.html

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .firstp{
        margin: 25px 5px;
    }
    .secondp{
        margin: 25px 5px;
    }
</style>
</head>
<body>
    <p class="firstp">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>

    <p class="secondp">Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</p>
</body>
</html>
```

You would expect the margin between the two paragraphs to be 50px (20px bottom margin of 1st paragraph + 25px top margin of next paragraph). But in CSS the margin overrides and the actual margin is 25px.

Output:



As you can clearly see from the output, the bottom margin of the first paragraph and top margin of the second paragraph is collapsed.

Example:

Index.html

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .first{
        height: 50px;
        background-color: #121013;
    }
    .second{
        height: 50px;
        background-color: #4d375d;
    }
    .third{
        height: 50px;
        background-color: #eb566e;
    }
</style>
</head>
<body>
    <div class="outer">
        <div class="first"></div>
        <div class="second"></div>
        <div class="third"></div>
    </div>
</body>
</html>
```

Output:



In this example, we have given background color for the inner division as there is not content inside the division only background color you can see in the output.

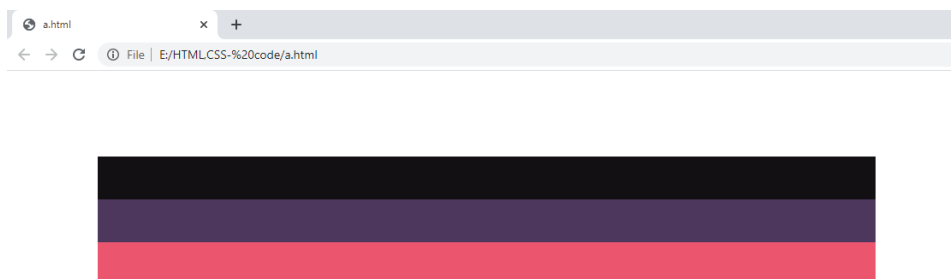
Now let's give margin for outer div and see how the output will look like.

Example:

index.html

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .first{
        height: 50px;
        background-color: #121013;
    }
    .second{
        height: 50px;
        background-color: #4d375d;
    }
    .third{
        height: 50px;
        background-color: #eb566e;
    }
    .outer{
        margin: 100px;
    }
</style>
</head>
<body>
    <div class="outer">
        <div class="first"></div>
        <div class="second"></div>
        <div class="third"></div>
    </div>
</body>
</html>
```

Output:



Now if you observe the output, the margin given for parent div as been applied as 100px on all the sides and child div have come to the center.

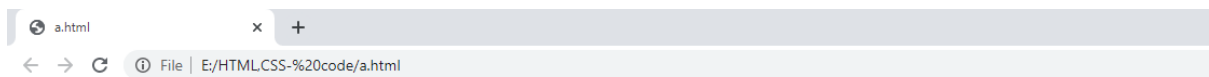
Now we will try to give bottom margin for first child and top margin for the second child

Example:

index.html

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .first{
        height: 50px;
        background-color: #121013;
        margin-bottom: 50px;
    }
    .second{
        height: 50px;
        background-color: #4d375d;
        margin-top: 50px;
    }
    .third{
        height: 50px;
        background-color: #eb566e;
    }
    .outer{
        margin:100px;
    }
</style>
</head>
<body>
    <div class="outer">
        <div class="first"></div>
        <div class="second"></div>
        <div class="third"></div>
    </div>
</body>
</html>
```

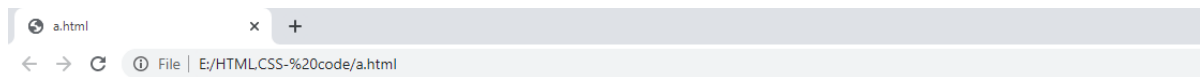
Output:



Example:

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .first{
        height: 50px;
        background-color: #121013;
        margin-bottom: 150px;
    }
    .second{
        height: 50px;
        background-color: #4d375d;
        margin-top: 50px;
    }
    .third{
        height: 50px;
        background-color: #eb566e;
    }
    .outer{
        margin:100px;
    }
</style>
</head>
<body>
    <div class="outer">
        <div class="first"></div>
        <div class="second"></div>
        <div class="third"></div>
    </div>
</body>
</html>
```

Output:



Now if you observe the output, margin collapse has been happened between first and second div child. First div child has bottom margin of 150px and second div child has top margin of 50px, now margin collapse will happen so total of 150px margin is there between first and second div child.

Example:

index.html

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .first{
        height: 50px;
        background-color: #121013;
        margin-top: 200px;
    }
    .second{
        height: 50px;
        background-color: #4d375d;
    }
    .third{
        height: 50px;
        background-color: #eb566e;
    }
    .outer{
        margin:100px;
    }
</style>
</head>
<body>
    <div class="outer">
        <div class="first"></div>
        <div class="second"></div>
        <div class="third"></div>
    </div>
</body>
</html>
```

Output:



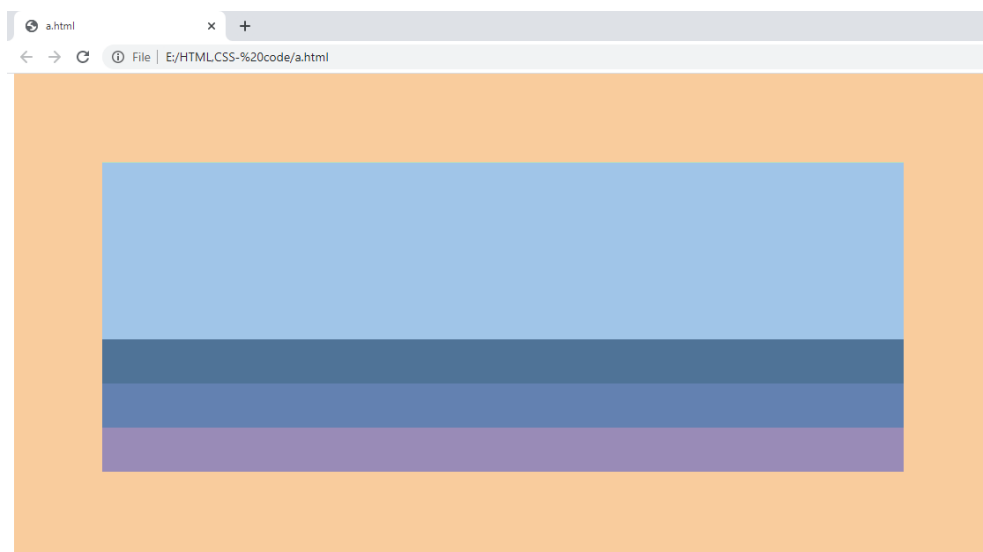
Now if you observe the output, the inner div margin is collapsing the outer div margin. If you don't want child div collapsing with parent div then you have add padding.

Example:

Index.html:

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .first{
        height: 50px;
        background-color: #121013;
        margin-top: 200px;
    }
    .second{
        height: 50px;
        background-color: #4d375d;
    }
    .third{
        height: 50px;
        background-color: #eb566e;
    }
    .outer{
        margin:100px;
        padding-top: 1px;
    }
</style>
</head>
<body>
    <div class="outer">
        <div class="first"></div>
        <div class="second"></div>
        <div class="third"></div>
    </div>
</body>
</html>
```

Output:



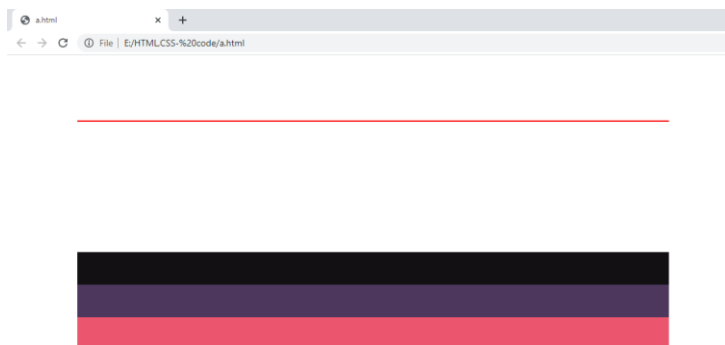
As you can see in the output, padding is acting like a barrier which is preventing the collapsing of child div with parent div. Not only padding any layer inbetween the margin of the child and the margin of parent can help you to achieve this. Now we will understand by adding border instead of padding.

Example:

index.html:

```
<!DOCTYPE html>
<html>
<head>
<style type="text/css">
    .first{
        height: 50px;
        background-color: #121013;
        margin-top: 200px;
    }
    .second{
        height: 50px;
        background-color: #4d375d;
    }
    .third{
        height: 50px;
        background-color: #eb566e;
    }
    .outer{
        margin:100px;
        border-top:2px solid red;
    }
</style>
</head>
<body>
    <div class="outer">
        <div class="first"></div>
        <div class="second"></div>
        <div class="third"></div>
    </div>
</body>
</html>
```

Output:



As you can see from the output, margin collapsing doesn't happen because it is not penetrating through the border.