

Complete CSS and HTML for Border Properties

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>CSS Border Properties Examples</title>
  <style>
    /* CSS Border Properties */

    /*
      1. border-width
      - Sets the width of the border.
      - Values:
        - Lengths: e.g., 1px, 2em, 0.5rem.
        - Keywords: thin, medium (default), thick.
        - Individual sides: e.g., `1px 2px 3px 4px` (top, right, bottom,
left).
    */
    .box {
      border-width: 2px; /* Uniform width for all sides */
      border-style: solid; /* Required for border-width to work */
      margin: 10px;
      padding: 10px;
    }

    .box2 {
      border-width: 1px 3px 5px 10px; /* Top, Right, Bottom, Left */
      border-style: solid;
      margin: 10px;
      padding: 10px;
    }

    /*
      2. border-style
      - Defines the style of the border.
      - Values:
        - none (default): No border.
        - solid: A solid line.
        - dashed: A dashed line.
        - dotted: A dotted line.
        - double: Two parallel lines.
        - groove: A 3D grooved effect.
        - ridge: A 3D ridged effect.
        - inset: A 3D inset effect.
    */
```

```

    - outset: A 3D outset effect.
    - Individual sides: e.g., `solid dashed dotted double` (top, right,
bottom, left).
*/
.border-solid {
    border-style: solid;
    margin: 10px;
    padding: 10px;
}

.border-mixed {
    border-style: dashed dotted double groove; /* Different styles for
each side */
    margin: 10px;
    padding: 10px;
}

/*
3. border-color
- Sets the color of the border.
- Values:
    - Any valid color value (color name, hex, RGB, RGBA, HSL, HSLA).
    - Individual sides: e.g., `red green blue yellow` (top, right,
bottom, left).
*/
.border-color {
    border-width: 2px;
    border-style: solid;
    border-color: red; /* Uniform color for all sides */
    margin: 10px;
    padding: 10px;
}

.border-color-mixed {
    border-width: 2px;
    border-style: solid;
    border-color: #0000ff green rgba(255, 0, 0, 0.5) hsl(60, 100%, 50%);
/* Top, Right, Bottom, Left */
    margin: 10px;
    padding: 10px;
}

/*
4. Shorthand: border
- Combines border-width, border-style, and border-color into a single
declaration.
- Syntax: border: [width] [style] [color];
*/
.border-shorthand {
    border: 2px solid #000; /* 2px wide, solid, black border */
}

```

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    margin: 10px;
    padding: 10px;
}

/*
5. border-radius
- Rounds the corners of an element's border.
- Values:
  - Lengths: e.g., 5px, 10%, 1em.
  - Individual corners: e.g., `10px 20px 30px 40px` (top-left, top-right, bottom-right, bottom-left).
  - Elliptical corners: e.g., `10px / 20px` (horizontal radius / vertical radius).
*/
.border-radius {
    border: 2px solid #000;
    border-radius: 10px; /* Uniform radius for all corners */
    margin: 10px;
    padding: 10px;
}

.border-radius-mixed {
    border: 2px solid #000;
    border-radius: 10px 20px 30px 40px; /* Top-left, Top-right, Bottom-right, Bottom-left */
    margin: 10px;
    padding: 10px;
}

.border-radius-elliptical {
    border: 2px solid #000;
    border-radius: 10px / 20px; /* Elliptical corners */
    margin: 10px;
    padding: 10px;
}

/*
6. border-top, border-right, border-bottom, border-left
- Shorthand properties for individual sides.
- Syntax: border-[side]: [width] [style] [color];
*/
.border-sides {
    border-top: 3px dashed blue; /* Top border only */
    border-bottom: 2px solid green; /* Bottom border only */
    margin: 10px;
    padding: 10px;
}

/*
7. border-image

```

- Allows you to use an image as a border.
- Requires `border-image-source`, `border-image-slice`, `border-image-width`, `border-image-outset`, and `border-image-repeat`.

```

*/
.border-image-example {
  border: 20px solid transparent;
  border-image: url('https://via.placeholder.com/100') 30 round; /*
Placeholder image */
  margin: 10px;
  padding: 10px;
}

/*
8. border-collapse
- Used for table elements to control whether borders are collapsed
into a single border or separated.
*/
table {
  width: 100%;
  border-collapse: collapse; /* Borders are merged into a single border
*/
  margin: 10px;
}

table, th, td {
  border: 1px solid black;
  padding: 10px;
}

/*
9. outline vs. border
- Outline is similar to border but does not take up space (does not
affect layout).
*/
.outline-example {
  border: 2px solid black;
  outline: 3px solid orange; /* Outline outside the border */
  margin: 10px;
  padding: 10px;
}
</style>
</head>
<body>

<!-- Example 1: Border Width -->
<h2>1. Border Width</h2>
<div class="box">Uniform Border Width (2px)</div>
<div class="box2">Mixed Border Width (Top: 1px, Right: 3px, Bottom: 5px,
Left: 10px)</div>

```

<!-- Example 2: Border Style -->

<h2>2. Border Style</h2>

<div class="border-solid">Solid Border</div>

<div class="border-mixed">Mixed Border Styles (Top: dashed, Right: dotted, Bottom: double, Left: groove)</div>

<!-- Example 3: Border Color -->

<h2>3. Border Color</h2>

<div class="border-color">Uniform Border Color (Red)</div>

<div class="border-color-mixed">Mixed Border Colors (Top: Blue, Right: Green, Bottom: Red, Left: Yellow)</div>

<!-- Example 4: Shorthand Border -->

<h2>4. Shorthand Border</h2>

<div class="border-shorthand">Shorthand Border (2px solid black)</div>

<!-- Example 5: Border Radius -->

<h2>5. Border Radius</h2>

<div class="border-radius">Uniform Border Radius (10px)</div>

<div class="border-radius-mixed">Mixed Border Radius (Top-left: 10px, Top-right: 20px, Bottom-right: 30px, Bottom-left: 40px)</div>

<div class="border-radius-elliptical">Elliptical Border Radius (10px / 20px)</div>

<!-- Example 6: Border Sides -->

<h2>6. Border Sides</h2>

<div class="border-sides">Top: Dashed Blue, Bottom: Solid Green</div>

<!-- Example 7: Border Image -->

<h2>7. Border Image</h2>

<div class="border-image-example">Border with Image</div>

<!-- Example 8: Border Collapse -->

<h2>8. Border Collapse</h2>

<table>

<tr>

```
<th>Header 1</th>
<th>Header 2</th>
</tr>
<tr>
  <td>Row 1, Cell 1</td>
  <td>Row 1, Cell 2</td>
</tr>
<tr>
  <td>Row 2, Cell 1</td>
  <td>Row 2, Cell 2</td>
</tr>
</table>
```

```
<hr>
```

```
<!-- Example 9: Outline vs. Border -->
```

```
<h2>9. Outline vs. Border</h2>
```

```
<div class="outline-example">Outline Outside Border</div>
```

```
</body>
```

```
</html>
```