



# Z-Index

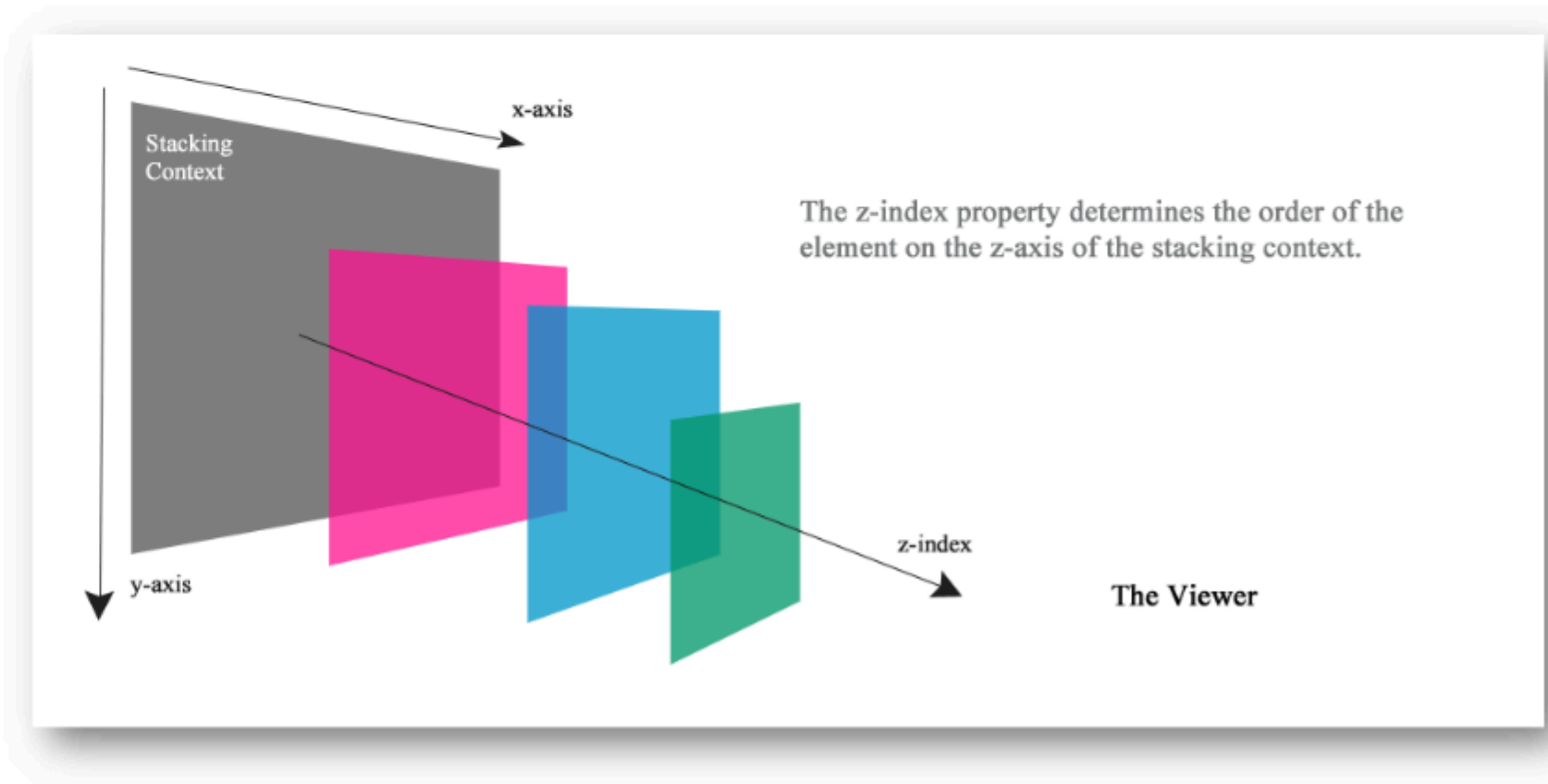
## Creating Depth and Hierarchy in Web Design

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# Z-Index in CSS

Z-index is a property that determines the stacking order of elements in a layout, particularly when elements overlap, used it to control the visibility and layering of elements.

- It is an imaginary line that runs perpendicular to the screen and determines the depth of an element.
- Elements with a higher z-index value will appear in front of elements with a lower z-index value.
- It only works on elements whose position property is set to relative, fixed, or absolute.



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# Z-Index in CSS (contd.)

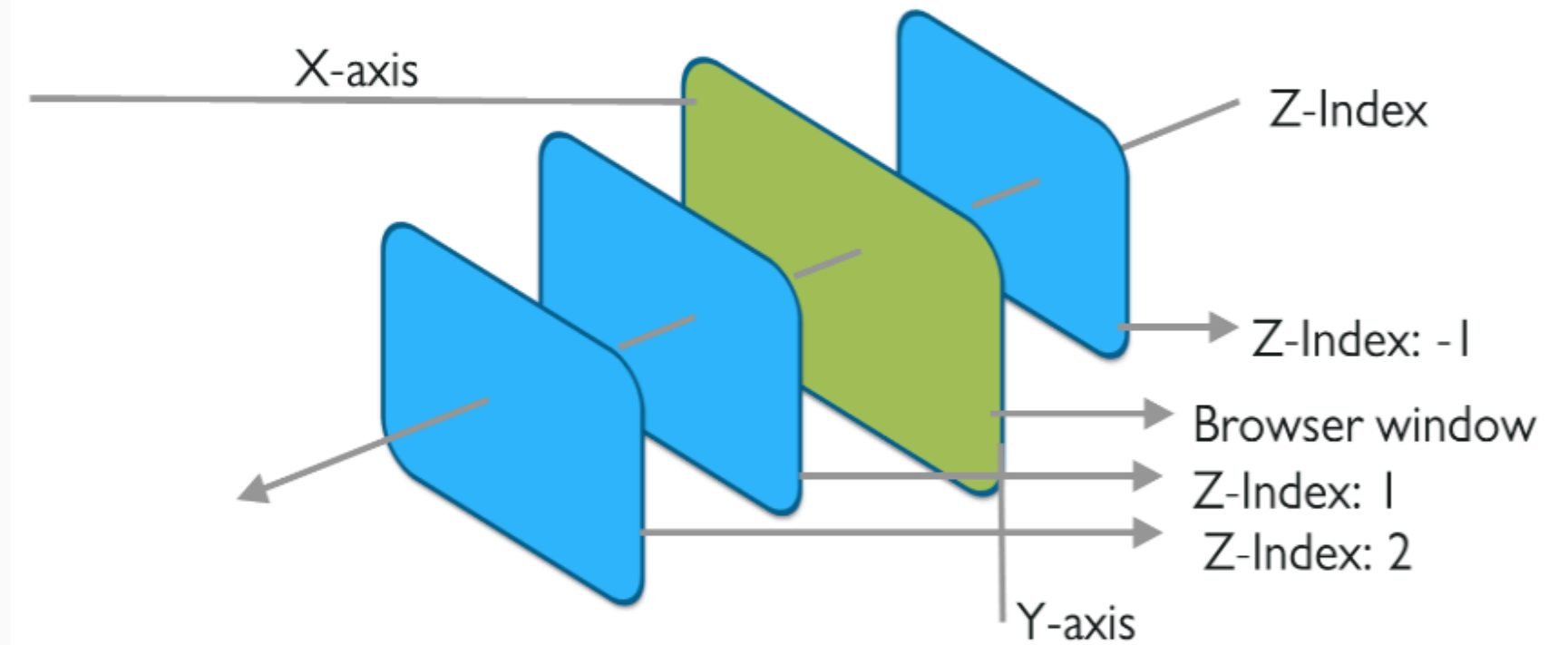
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Value	Description
<b>number</b>	An integer value is used to specify the stack order.
<b>initial</b>	It stacks the element with reference to its default value.
<b>inherit</b>	It inherits the property value from its parent element.
<b>auto</b>	It sets the stack order according to its parent element.

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# Working of Z-Index

- Elements with higher "z-index" values are positioned closer to the viewer or the front of the stacking order, while elements with lower values are positioned farther away or behind other elements.
- It controls the vertical stacking order of elements in web page layouts, allowing developers to manage the visibility and layering of elements as needed for design and functionality.



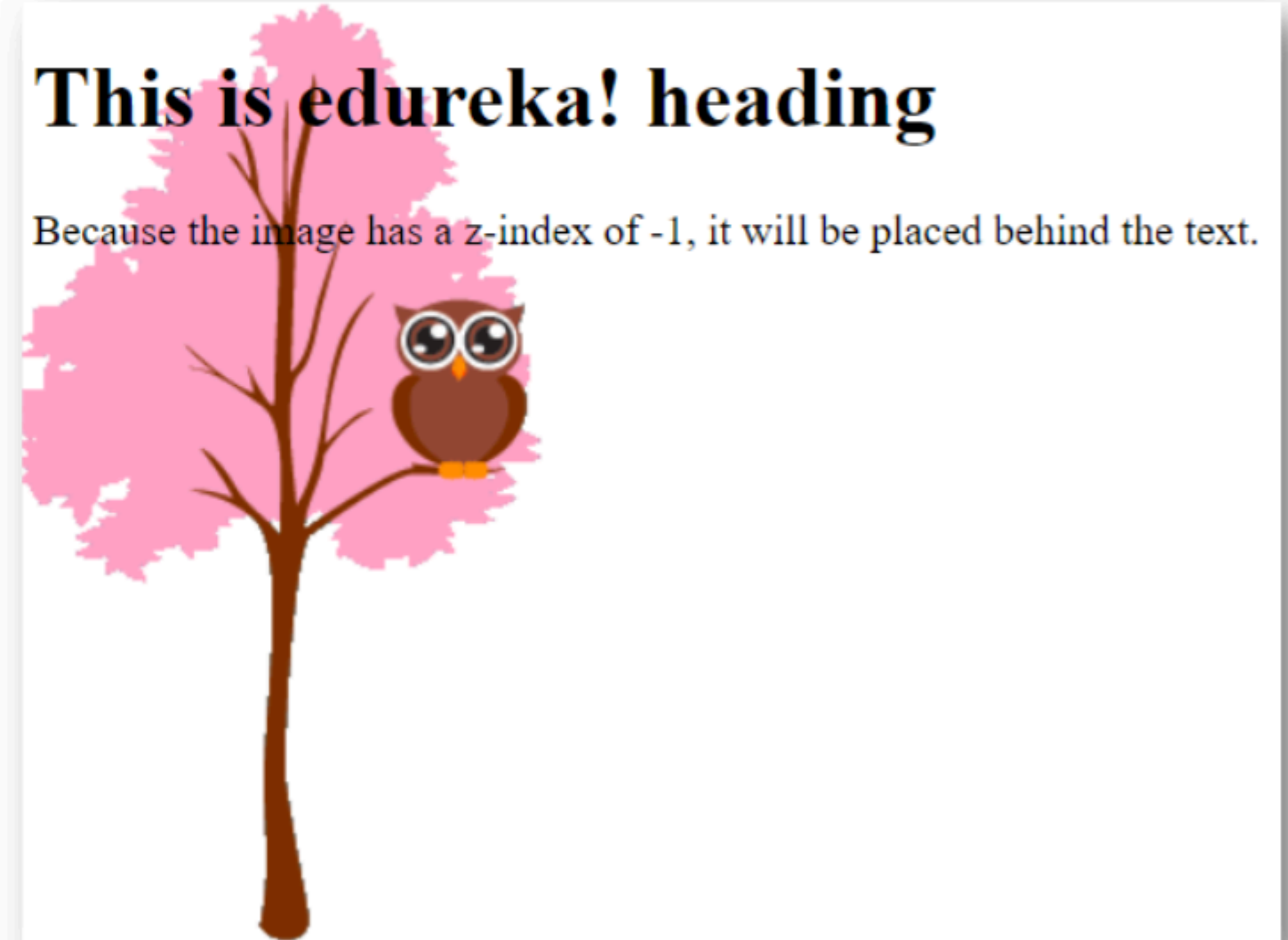
# Example – Z-Index

## Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
img {
  position: absolute;
  left: 0px;
  top: 0px;
  z-index: -1;
}
</style>
</head>
<body>
<h1> This is edureka! heading</h1>

<p>Because the image has a z-index of -1, it will be placed behind the
text.</p>
</body>
</html>
```

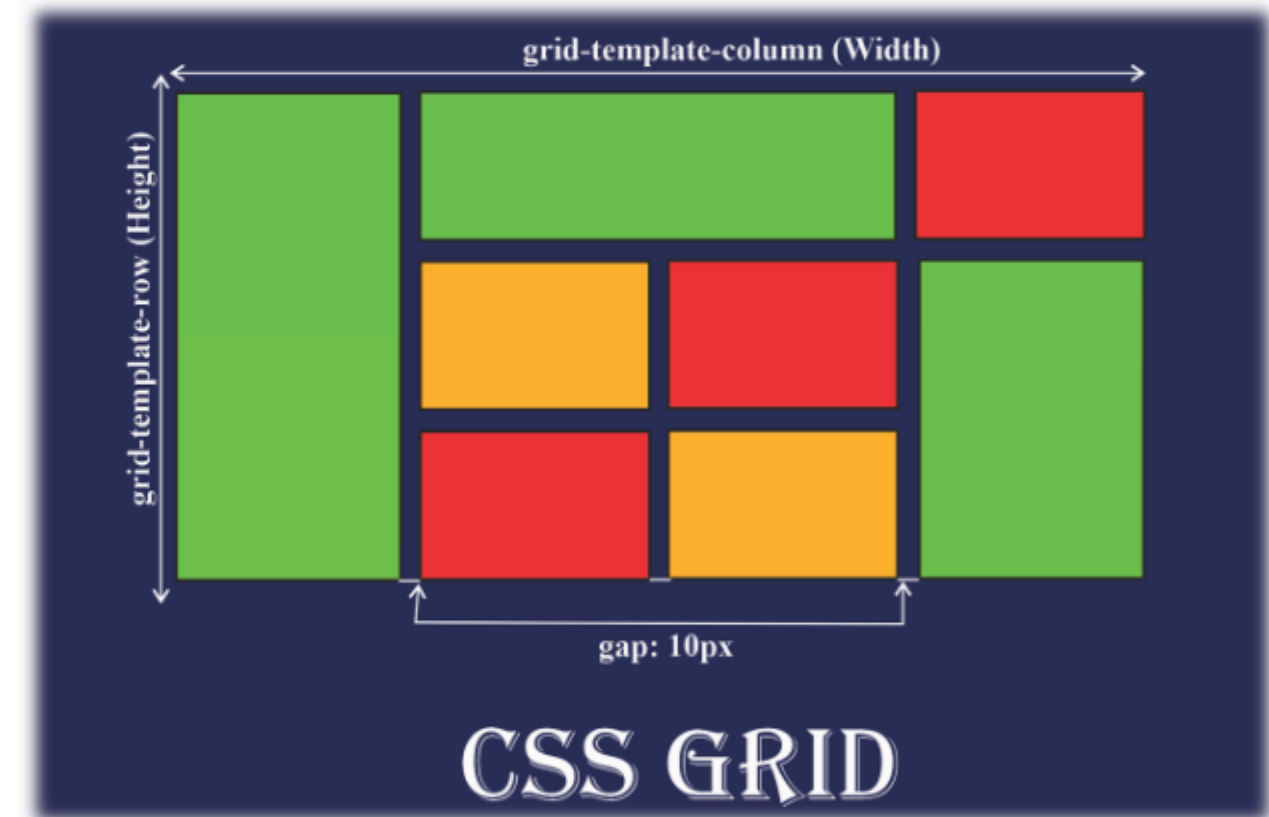
## Output:



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# Grid Model in CSS

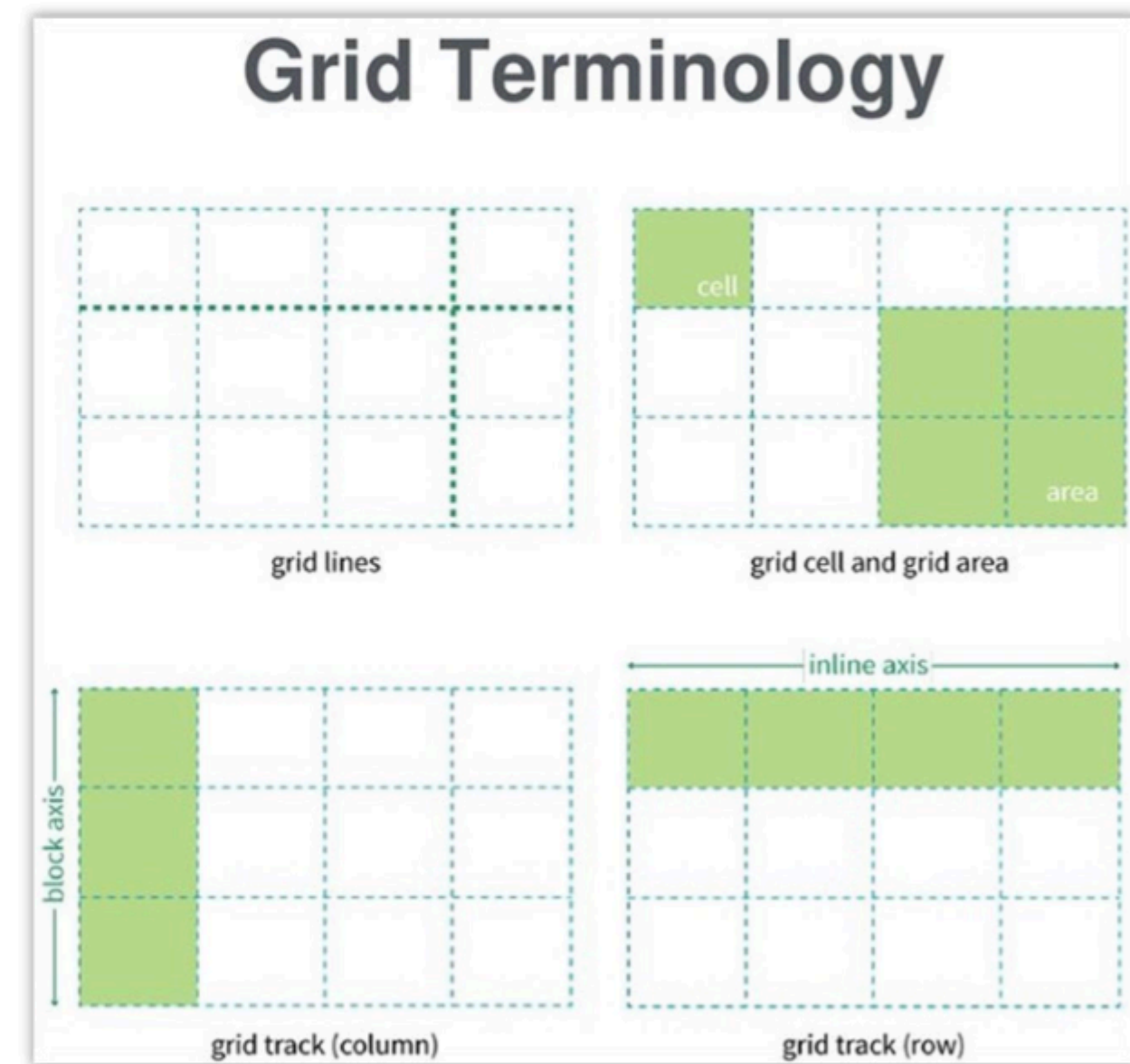
- Grid model is a two-dimensional layout model used to make our web page responsive to accommodate different screen sizes.
- The CSS Grid model is more powerful than flexbox, as the grid model is a two-dimensional layout model.
- In the grid model, we can create a Grid-container using `display: grid`.





# Grid Model in CSS (contd.)

- The fundamental terminology used in the CSS Grid Model, which is a powerful tool for creating organized and flexible web layouts are:
  - **Grid container:** the parent of all the grid items
  - **Grid line:** the dividing lines in a grid model
  - **Grid track:** the gap between two adjacent grid lines
  - **Grid area:** the gap surrounded by four grid lines
  - **Grid item:** the children of the grid container
  - **Grid cell:** the space between rows and columns



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# Properties of Grid-Container

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Property	Description
<b>grid-template-columns/rows</b>	Defines the columns and rows with a space between each column or row.
<b>grid-auto-rows/columns</b>	Defines the width or height of the grid items.
<b>grid-column/row-gap</b>	Defines the space between the rows and columns.

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# Properties of Grid-Item

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Property	Description
<b>grid-column-start/end</b>	Specifies starting column and ending column of the item in grid container.
<b>grid-row-start/end</b>	Specifies starting and ending row of the item in a grid container.
<b>align-self</b>	It helps us to align item of grid container either in beginning, center or at the end vertically.
<b>justify-self</b>	It helps us to align item of grid container either in beginning, center or at the end horizontally.

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# Flex Box vs. Grid System

Parameters	Flexbox	Grid System
Layout Model	It is a one-dimensional layout model focuses on arranging items along either a row or a column.	It is a two-dimensional model focuses on arranging items along either a row or a column.
Content-Centric vs. Structure-Centric	Primarily content-centric, adjusting the layout based on the size of the content. It's great for centering content.	Structure-centric, where you define rows and columns explicitly, offering more control over layout structure and alignment.
Item Ordering	Supports reordering of items using the order property.	Offers better control over the placement and overlapping of items.
Alignment	Provides easy alignment options along the main axis (row or column) for items.	Allows for precise alignment of items within specific grid cells, giving full control over placement.

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# Font Styling in CSS

Styling font refers to how you can customize the appearance of text on a web page. CSS provides various properties and values that allow you to control the font size, typeface, color, weight, style, and more.

Properties	Description
<b>font-size</b>	Specifies the size of the text.
<b>font-family</b>	Specifies the font-family of the text such as Tahoma, Arial, Serif, etc.
<b>font-style</b>	Specifies the text style, and can have the value of italic, normal, or oblique.
<b>font-weight</b>	Specifies how thick the text should be, and can have the value of bold or bolder.
<b>text-align</b>	Specifies the alignment of the text, and can have the value of left, right, center, or justify.
<b>color</b>	Specifies the color of a text. It accepts hexadecimal, RGB (red, green, blue), or names of the colors.

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# Example of Font Styling – font-size

## Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
  font-size: 40px;
}
h2 {
  font-size: 30px;
}
p {
  font-size: 14px;
}
</style>
</head>
<body>
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<p>This is a paragraph.</p>
<p>This is another paragraph.</p>
</body>
</html>
```

## Output:

**This is heading 1**

**This is heading 2**

This is a paragraph.

This is another paragraph.

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# Example of Font Styling – font-family

## Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
.p1 {
  font-family: "Times New Roman", Times, serif;
}
.p2 {
  font-family: Arial, Helvetica, sans-serif;
}
.p3 {
  font-family: "Lucida Console", "Courier New", monospace;
}
</style>
</head>
<body>
<h1>CSS font-family</h1>
<p class="p1">This is a paragraph, shown in the Times New Roman font.
</p>
<p class="p2">This is a paragraph, shown in the Arial font.</p>
<p class="p3">This is a paragraph, shown in the Lucida Console font.</p>
</body>
</html>
```

## Output:

### CSS font-family

This is a paragraph, shown in the Times New Roman font.

This is a paragraph, shown in the Arial font.

This is a paragraph, shown in the Lucida Console font.

# Example of Font Styling – font-style

## Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
p.normal {
  font-style: normal;
}
p.italic {
  font-style: italic;
}
p.oblique {
  font-style: oblique;
}
</style>
</head>
<body>
<h1>The font-style property</h1>
<p class="normal">This is a paragraph in normal style.</p>
<p class="italic">This is a paragraph in italic style.</p>
<p class="oblique">This is a paragraph in oblique style.</p>
</body>
</html>
```

## Output:

### The font-style property

This is a paragraph in normal style.

*This is a paragraph in italic style.*

*This is a paragraph in oblique style.*



# Example of Font Styling – font-weight

## Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
p.normal {
  font-weight: normal;
}
p.light {
  font-weight: lighter;
}
p.thick {
  font-weight: bold;
}
p.thicker {
  font-weight: 900;
}
</style>
</head>
<body>
<h1>The font-weight Property</h1>
<p class="normal">This is a paragraph.</p>
<p class="light">This is a paragraph.</p>
<p class="thick">This is a paragraph.</p>
<p class="thicker">This is a paragraph.</p>
</body>
</html>
```

## Output:

### The font-weight Property

This is a paragraph.

This is a paragraph.

**This is a paragraph.**

**This is a paragraph.**

# Example of Font Styling – text-align

## Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
div a {
  text-align: center;
}
div b {
  text-align: left;
}
div c {
  text-align: right;
}
div d {
  text-align: justify;
}
</style>
</head>
<body>
<h1>The text-align Property</h1>
<div class="a">
<h2>text-align: center:</h2>
<p>"text-align: center" is used to horizontally align text within its containing element, such as a paragraph or a heading, so that the text is centered in the middle of the element.</p>
</div>
<div class="b">
<h2>text-align: left:</h2>
<p>"text-align: left" is used to horizontally align text within its containing element, such as a paragraph or a heading, so that the text is aligned to the left edge of the element.</p>
</div>
<div class="c">
<h2>text-align: right:</h2>
<p>"text-align: right" is used to horizontally align text within its containing element, such as a paragraph or a heading, so that the text is aligned to the right edge of the element.</p>
</div>
<div class="d">
<h2>text-align: justify:</h2>
<p>"text-align: justify" is used to horizontally align text within its containing element so that the text is evenly spread across both the left and right edges.</p>
</div>
</body>
</html>
```

## Output:

### The text-align Property

#### text-align: center:

"text-align: center" is used to horizontally align text within its containing element, such as a paragraph or a heading, so that the text is centered in the middle of the element.

#### text-align: left:

"text-align: left" is used to horizontally align text within its containing element, such as a paragraph or a heading, so that the text is aligned to the left edge of the element.

#### text-align: right:

"text-align: right" is used to horizontally align text within its containing element, such as a paragraph or a heading, so that the text is aligned to the right edge of the element.

#### text-align: justify:

"text-align: justify" is used to horizontally align text within its containing element so that the text is evenly spread across both the left and right edges.

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# Mastery of CSS Properties and Artful Layout

**Note:** Refer to the Day 9 Demo 1 file on LMS.

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