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Grid Layout

The CSS Grid Layout Module offers a grid-based layout system, with rows and columns, making it easier to design web pages without having to use floats and positioning.

Browser Support

The grid properties are supported in all modern browsers.

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Grid Elements

A grid layout consists of a parent element, with one or more child elements.

Example

```
<div class="grid-container">
  <div class="grid-item">1</div>
  <div class="grid-item">2</div>
  <div class="grid-item">3</div>
  <div class="grid-item">4</div>
  <div class="grid-item">5</div>
  <div class="grid-item">6</div>
  <div class="grid-item">7</div>
  <div class="grid-item">8</div>
  <div class="grid-item">9</div>
</div>
```

1	2	3
4	5	6
7	8	9

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Display Property

An HTML element becomes a grid container when its `display` property is set to `grid` or `inline-grid`.

Example

```
.grid-container {  
  display: grid;  
}
```

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Example

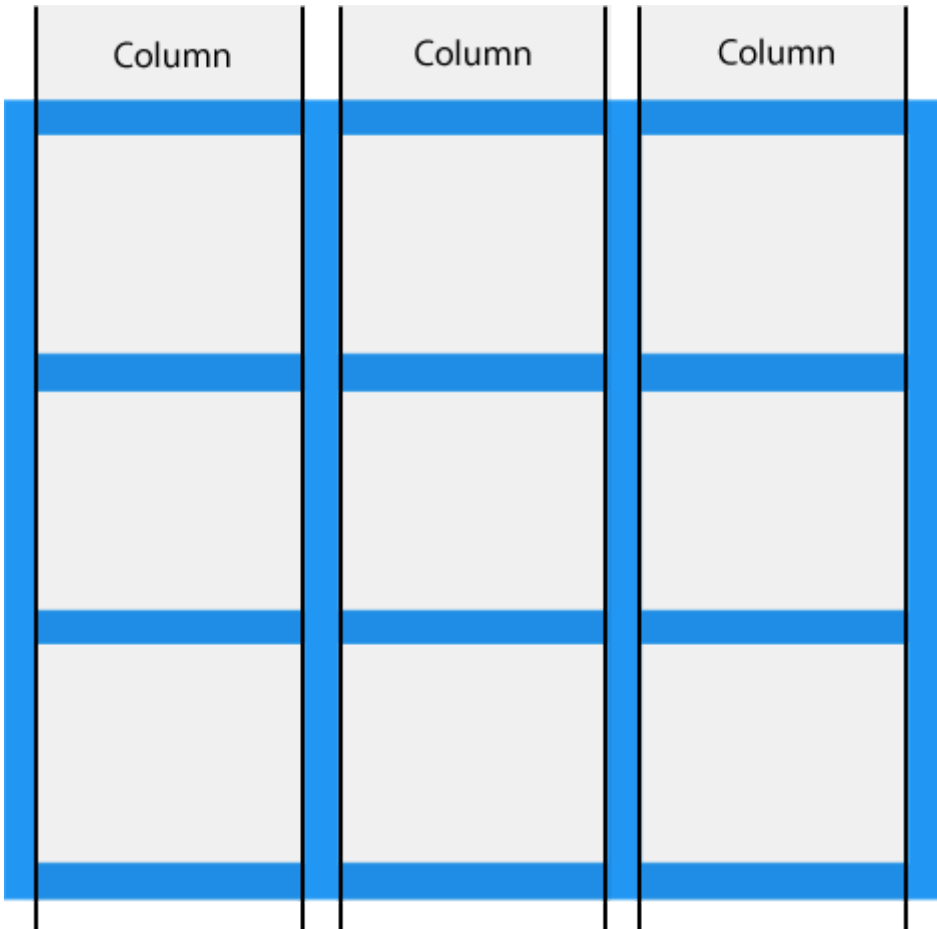
```
.grid-container {  
  display: inline-grid;  
}
```

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All direct children of the grid container automatically become *grid items*.

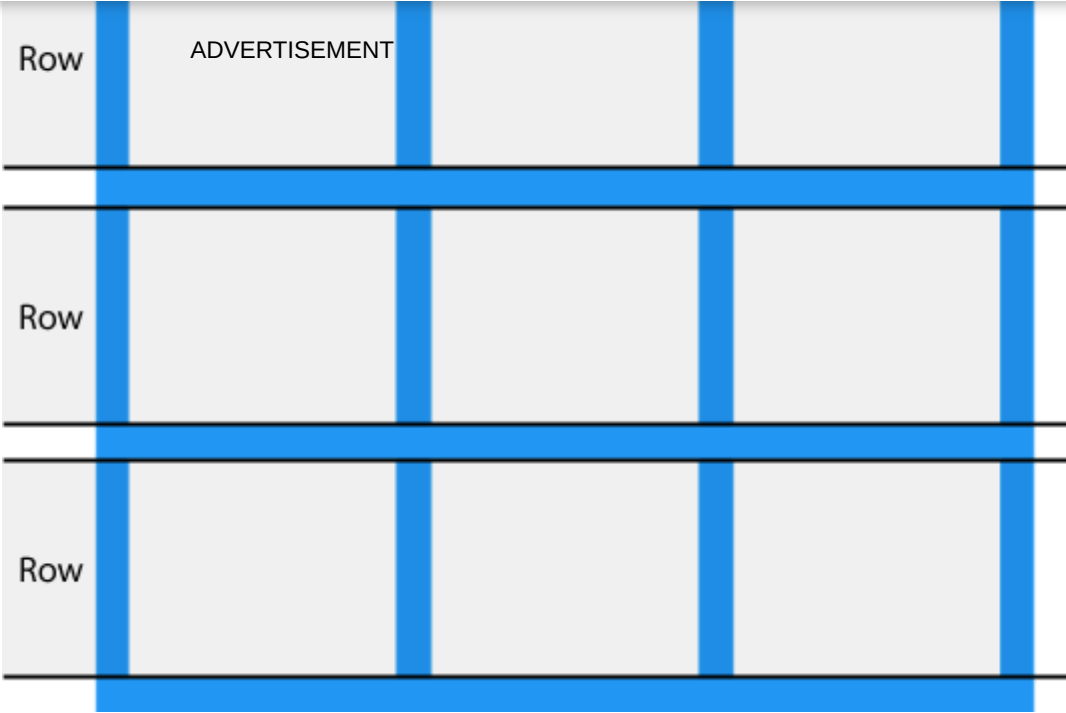
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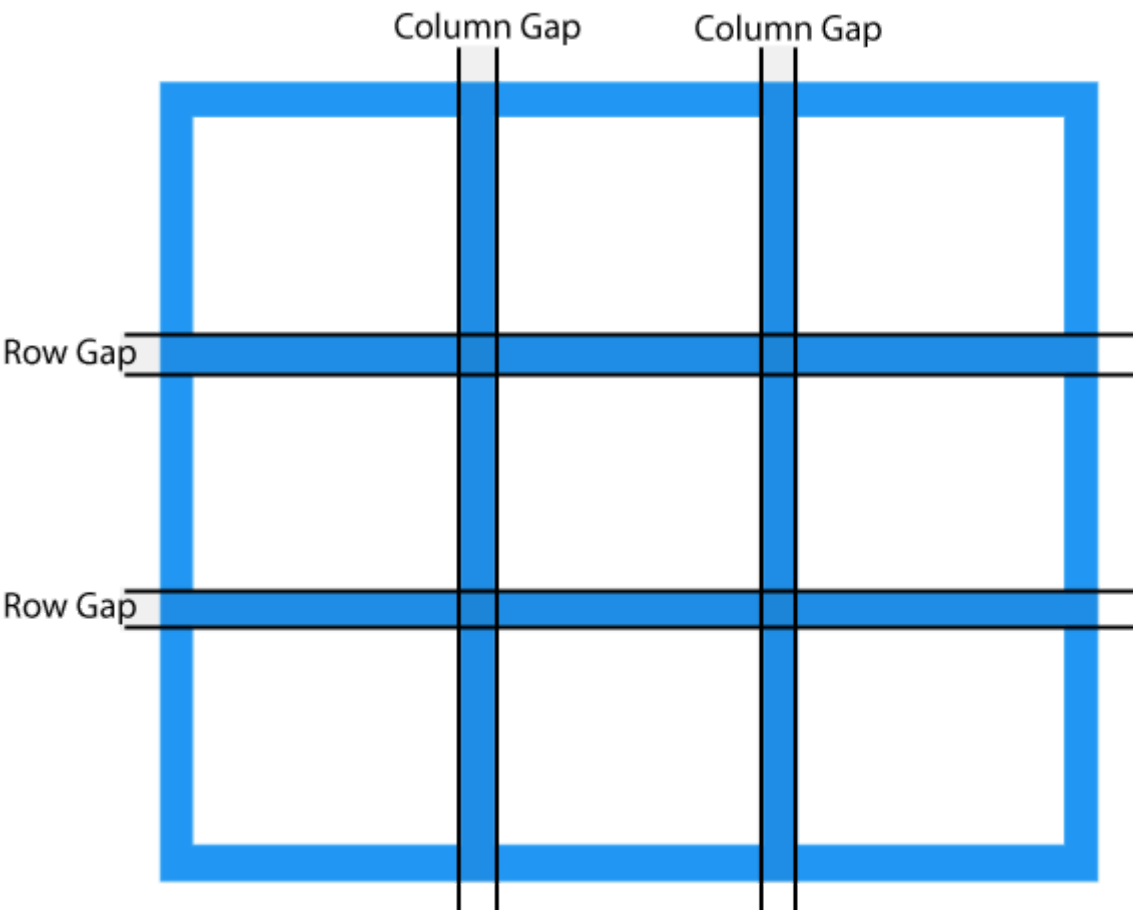
Grid Rows

The horizontal lines of grid items are called *rows*.



Grid Gaps

The spaces between each column/row are called *gaps*.



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- **column-gap**
- **row-gap**
- **gap**

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Example

The **column-gap** property sets the gap between the columns:

```
.grid-container {  
  display: grid;  
  column-gap: 50px;  
}
```

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Example

The **row-gap** property sets the gap between the rows:

```
.grid-container {  
  display: grid;  
  row-gap: 50px;  
}
```

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Example

The **gap** property is a shorthand property for the **row-gap** and the **column-gap** properties:

```
.grid-container {  
  display: grid;  
  gap: 50px 100px;  
}
```

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Example

The **gap** property can also be used to set both the row gap and the column gap in one value:

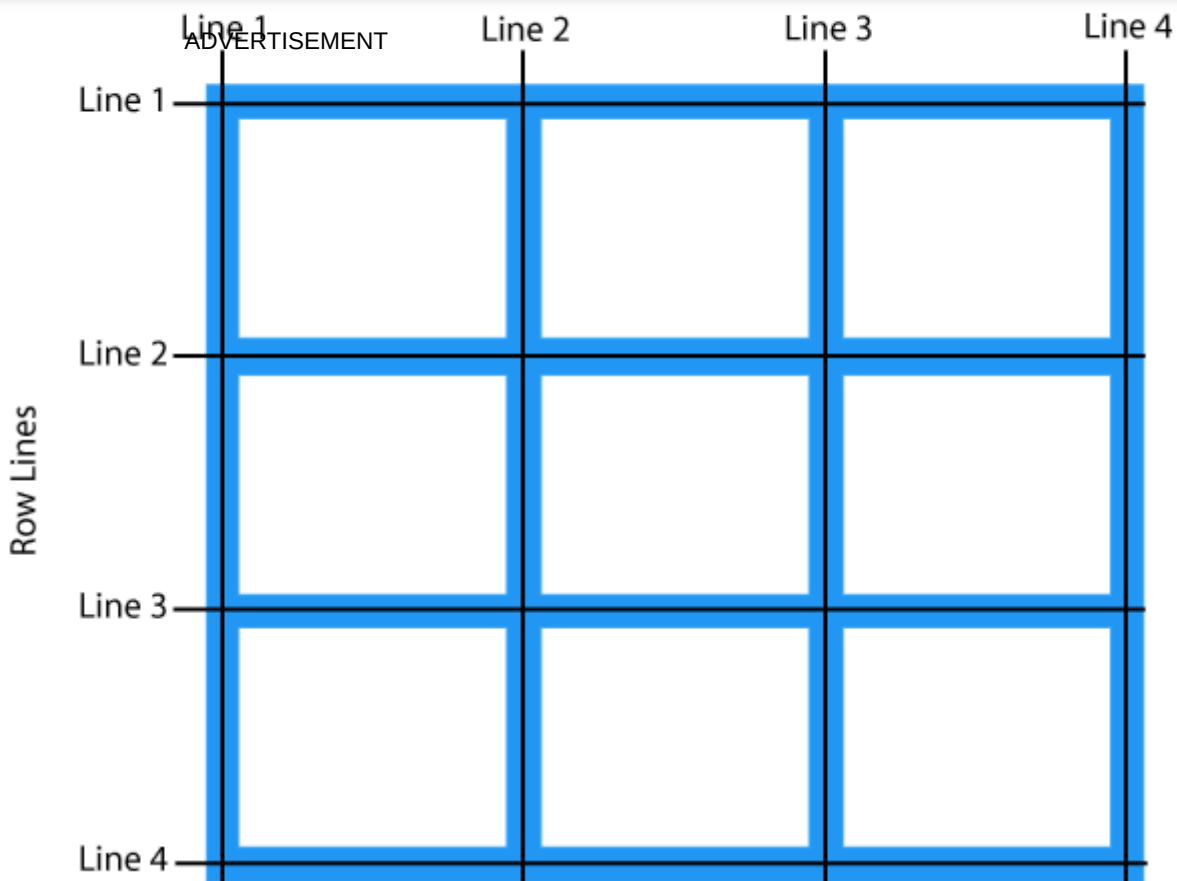
```
.grid-container {  
  display: grid;  
  gap: 50px;  
}
```

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Grid Lines

The lines between columns are called *column lines*.

The lines between rows are called *row lines*.



Refer to line numbers when placing a grid item in a grid container:

Example

Place a grid item at column line 1, and let it end on column line 3:

```
.item1 {  
  grid-column-start: 1;  
  grid-column-end: 3;  
}
```

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Example

Place a grid item at row line 1, and let it end on row line 3:

```
.item1 {  
  grid-row-start: 1;
```

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All CSS Grid Properties

Property	Description
column-gap	Specifies the gap between the columns
gap	A shorthand property for the <i>row-gap</i> and the <i>column-gap</i> properties
grid	A shorthand property for the <i>grid-template-rows</i> , <i>grid-template-columns</i> , <i>grid-template-areas</i> , <i>grid-auto-rows</i> , <i>grid-auto-columns</i> , and the <i>grid-auto-flow</i> properties
grid-area	Either specifies a name for the grid item, or this property is a shorthand property for the <i>grid-row-start</i> , <i>grid-column-start</i> , <i>grid-row-end</i> , and <i>grid-column-end</i> properties
grid-auto-columns	Specifies a default column size
grid-auto-flow	Specifies how auto-placed items are inserted in the grid
grid-auto-rows	Specifies a default row size
grid-column	A shorthand property for the <i>grid-column-start</i> and the <i>grid-column-end</i> properties
grid-column-end	Specifies where to end the grid item
grid-column-gap	Specifies the size of the gap between columns
grid-column-start	Specifies where to start the grid item
grid-gap	A shorthand property for the <i>grid-row-gap</i> and <i>grid-column-gap</i> properties
grid-row	A shorthand property for the <i>grid-row-start</i> and the <i>grid-row-end</i> properties
grid-row-end	Specifies where to end the grid item

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<u>grid-row-start</u>	Specifies where to start the grid item
<u>grid-template</u>	A shorthand property for the <i>grid-template-rows</i> , <i>grid-template-columns</i> and <i>grid-areas</i> properties
<u>grid-template-areas</u>	Specifies how to display columns and rows, using named grid items
<u>grid-template-columns</u>	Specifies the size of the columns, and how many columns in a grid layout
<u>grid-template-rows</u>	Specifies the size of the rows in a grid layout
<u>row-gap</u>	Specifies the gap between the grid rows

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