

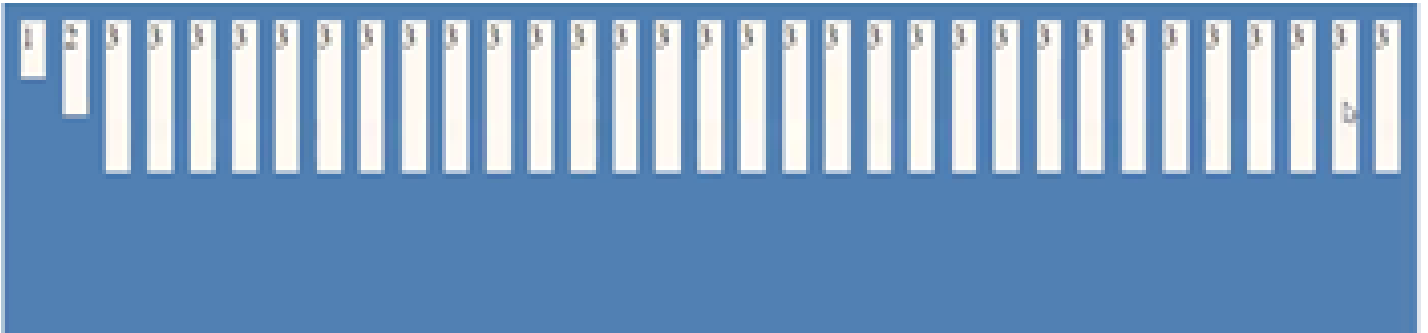
CSS

flex-wrap:

It defines whether the flex items are forced in a single line or can be flowed into multiple lines. If set to multiple lines, it also defines the cross-axis which determines the direction new lines are stacked in.

***Reminder:** The cross axis is the axis perpendicular to the main axis. Its direction depends on the main axis direction.*

A flexbox accommodates all the elements in one row by adjusting the width of the elements. It will not go to the next line.



The **flex-wrap** property accepts 3 different values:

- **nowrap**: this is the default value, a single-line which may cause the container to flow.
- **wrap**: multi-lines, direction is defined by the **flex-direction**.
- **wrap-reverse**: multi-lines, opposite to direction defined by **flex-direction**

NOTE:

- The red list is set to nowrap
flex-direction: nowrap
- The yellow list is set to wrap
flex-direction: wrap
- The blue list is set to wrap-reverse
flex-direction: wrap-reverse

1	2	3	4	5	6	7	8
1	2	3	4	5	6		
7	8						
7	8						
1	2	3	4	5	6		

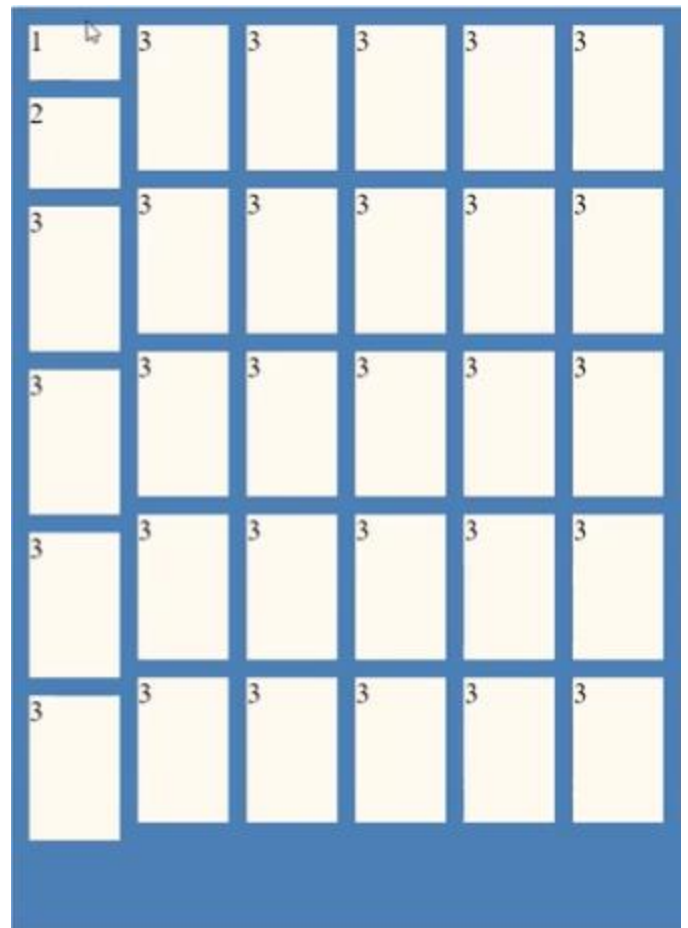
flex-flow:

This is combination of **flex-wrap** and **flex-direction**. It is like a short hand for **flex-wrap** and **flex-direction**.

NOTE: If the elements are not flexible items, the **flex-flow** property has no effect.

```
.container {  
    flex-flow: column wrap  
}
```

Value	Description
<i>flex-direction</i>	Possible Values: row row-reverse column column-reverse initial inherit Default Value is “row”
<i>flex-wrap</i>	Possible Values: nowrap wrap wrap-reverse initial inherit Default Value is “nowrap”



flex-grow:

The **flex-grow** property is a sub-property. It defines the ability for a flex item to grow if necessary. It accepts a unitless value that serves as a proportion. it dictates what amount of the available space inside the flex container the item should take up.

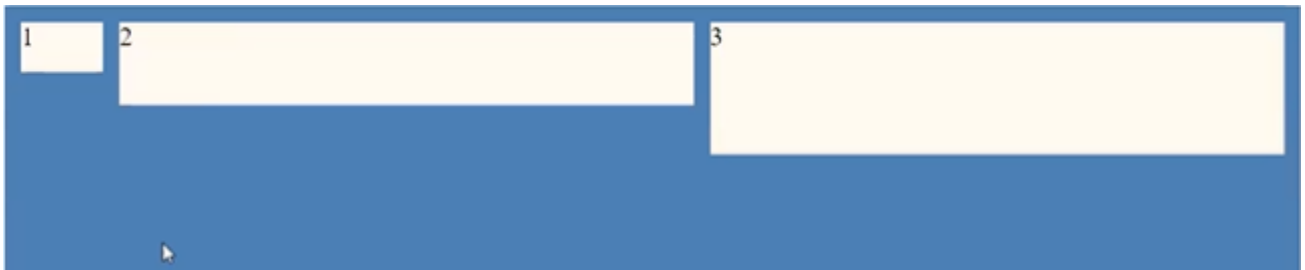
For example, if all the items have **flex-grow** set to 1, every child will set to an equal size inside the container. If you were to give one of the children a value of 2, that child would take up twice as much space as the others.

NOTE: If the element is not a flexible item, the **flex-grow** property has no effect:

```
.box-3 {  
  flex-grow: 1;  
}
```



```
.box-2, .box-3 {  
  flex-grow: 1;  
}
```



Based on the empty space available, it is being shared between box-2 and box-3 in equal ratio.

```
.box-2 {flex-grow: 2;}  
.box-3 {flex-grow: 1;}  

```

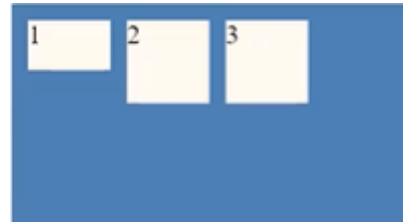


flex-shrink:

The `flex-shrink` property specifies the “flex shrink factor”, which determines how much the flex item will shrink relative to the rest of the flex items in the flex container when there isn’t enough space on the row.

When omitted, it is set to 1 and the flex shrink factor is multiplied by the flex basis when distributing negative space.

```
.box-3 {  
    flex-shrink: 1;  
}
```



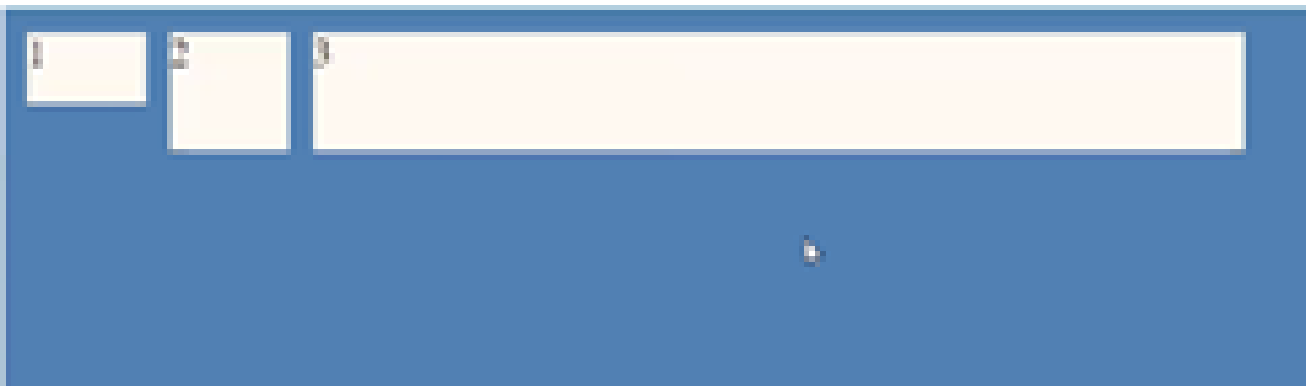
flex-basis:

it specifies the initial size of the flex item, before any available space is distributed according to the flex factors. When omitted from the flex shorthand, its specified value is the length zero.

A flex basis value set to `auto` sizes the element according to its size property (which can itself be the keyword `auto` which sizes the element based on its contents).

```
flex-basis: 50%;
```

NOTE: if the element is not a flexible item, the `flex-grow` property has no effect.



The element at its default state before it grows.

flex:

```
.container {  
    flex: 1 2 20px;  
}
```

This is the short hand for **flex-grow**, **flex-shrink** and **flex-basis** (same order).

Bootstrap

What is Bootstrap?

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs

Advantages of Bootstrap:

- **Easy to use:** Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- **Responsive features:** Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- **Mobile-first approach:** In Bootstrap, mobile-first styles are part of the core framework
- **Browser compatibility:** Bootstrap 4 is compatible with all modern browsers (Chrome, Firefox, Internet Explorer 10+, Edge, Safari, and Opera)

<https://getbootstrap.com/docs/5.0/getting-started/introduction/>

Explore!!

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/css/bootstrap.min.css" rel="stylesheet">
CSS

copy-paste the stylesheet <link> into your <head> before all other stylesheets to load the Bootstrap CSS.

It is better to link it from the HTML page and not the CSS page.

<https://getbootstrap.com/docs/5.0/getting-started/introduction/#starter-template>

Without the Bootstrap Link

With the Bootstrap Link

<p>This is Heading 1</p> <p>This is Heading 2</p> <p>This is Heading 3</p> <p>This is Heading 4</p> <p>This is Heading 5</p> <p>This is Heading 6</p>	<p>This is Heading 1</p> <p>This is Heading 2</p> <p>This is Heading 3</p> <p>This is Heading 4</p> <p>This is Heading 5</p> <p>This is Heading 6</p>
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We can clearly see the font and margin areas have been changed.

While using button tag,

<button >Click Me</button>

Click Me

But when we add <button *class="btn btn-success"*>Click Me</button> then,

Click Me

These details regarding how to provide styles for button tag or any other element in HTML or CSS, we can find them in the [getbootstrap.com](https://getbootstrap.com/docs/5.0/getting-started/introduction/).

(<https://getbootstrap.com/docs/5.0/getting-started/introduction/>)

Cards:

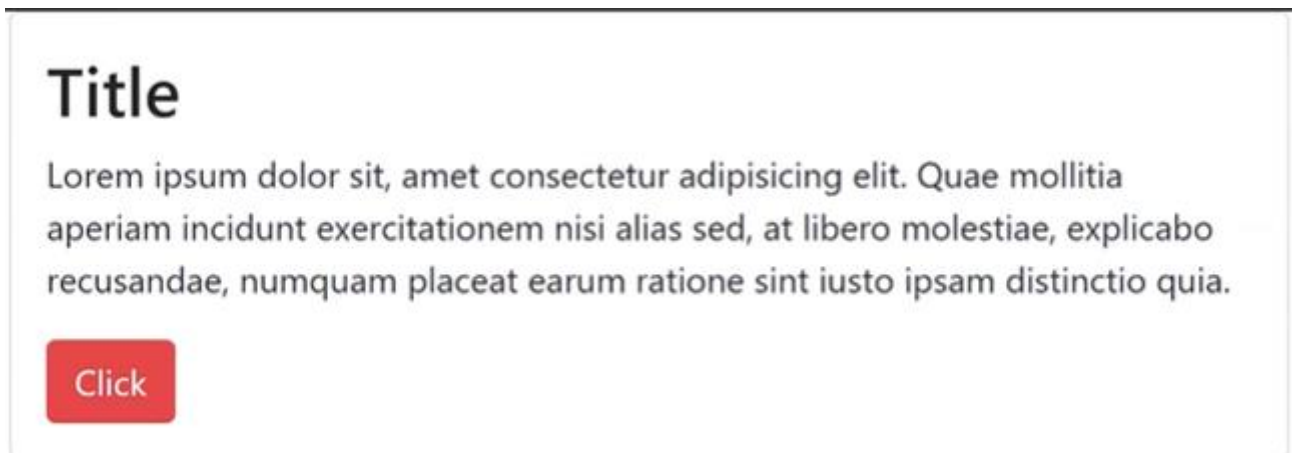
```
<div class="card">
  <div class="card-body">
    <h1>Title</h1>
  </div>
</div>
```



`<h1 class="card-title">Title</h1>`, will add margin-bottom: 0.5rem.

```
<div class="card">
  <div class="card-body">
    <h1 class="card-title">Title</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipisicing
elit, sed do eiusmod tempor incididunt ut labore et dolore
magna aliqua.</p>
    <button class="btn btn-danger">Click</button>
  </div>
</div>
```

OUTPUT:



List Group:

The default unordered list

```
<ul>
```

```
  <li>1</li>
```

```
  <li>2</li>
```

```
  <li>3</li>
```

```
  <li>4</li>
```

```
</ul>
```

- 1
- 2
- 3
- 4

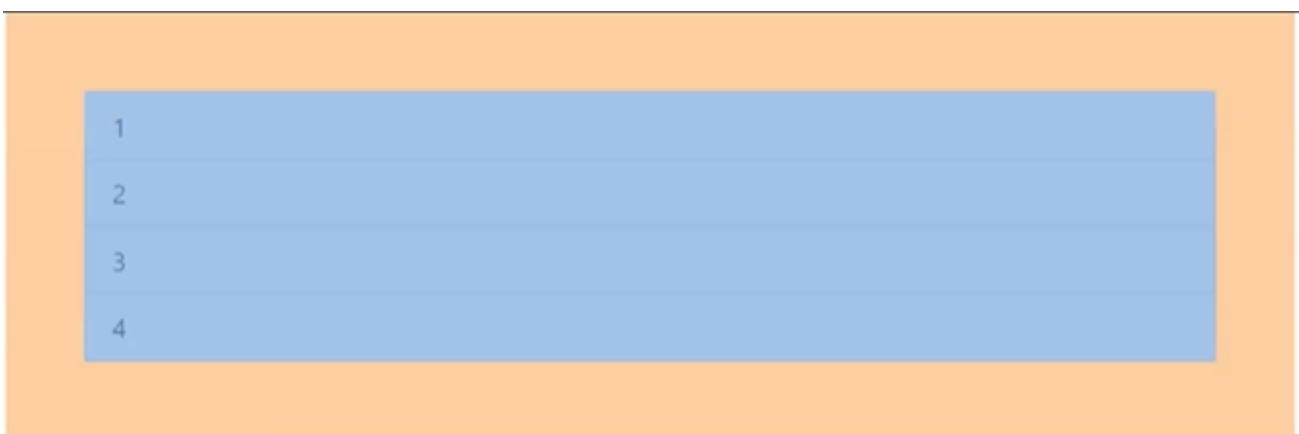
With the bootstrap CSS

- 1
- 2
- 3
- 4

If we use the class **list-group**

1
2
3
4

<https://getbootstrap.com/docs/5.0/utilities/spacing/#margin-and-padding>



If we put s5 – it means we need margin on the left side with margin width as 3 rem.

1
2
3
4

The margin on the other three side has been removed. There is margin only on the left side of the list-group.