
Bootstrap4

Bootstrap4

❖ CDN

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.4.1/css/bootstrap.min.css">

<!-- jQuery library -->
<script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js">
</script>

<!-- Popper JS -->
<script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js
"> </script>

<!-- Latest compiled JavaScript -->
<script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.4.1/js/bootstrap.min.js">
</script>
```

Bootstrap4

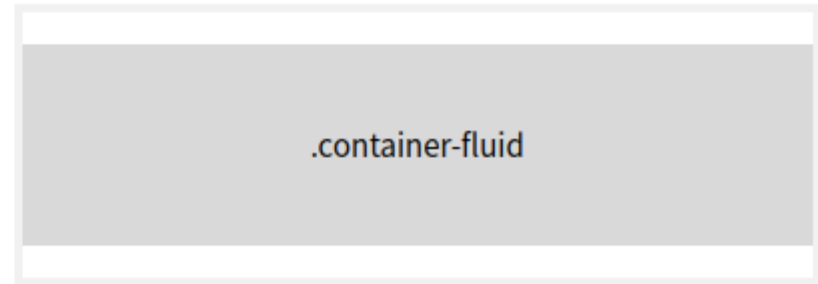
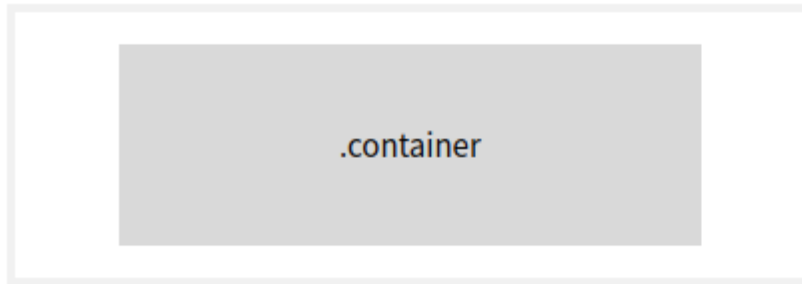
❖ HTML 템플릿

```
<!DOCTYPE html>
<html lang="ko">
<head>
  <title>Bootstrap 4 Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
    href="https://maxcdn.bootstrapcdn.com/bootstrap/4.4.1/css/bootstrap.min.css">
  <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js">
  </script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.js">
  </script>
  <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.4.1/js/bootstrap.min.js">
  </script>
</head>
<body>

</body>
</html>
```

❖ Container

- `.container`
 - 반응 형 고정 너비 컨테이너를 제공
- `.container-fluid`
 - 뷰포트의 전체 너비에 걸쳐 전체 너비 컨테이너를 제공



```
<div class="container">
  <h1>My First Bootstrap Page</h1>
  <p>This is some text.</p>
</div>
```

```
<div class="container-fluid">
  <h1>My First Bootstrap Page</h1>
  <p>This is some text.</p>
</div>
```

❖ 너비(max-width)는 다른 화면 크기에서 변경

	Extra small <576px	Small ≥576px	Medium ≥768px	Large ≥992px	Extra large ≥1200px
max-width	100%	540px	720px	960px	1140px

Bootstrap4

❖ .container

```
<div class="container p-3 my-3 border"></div>
```

```
<div class="container p-3 my-3 bg-dark text-white"></div>
```

```
<div class="container p-3 my-3 bg-primary text-white"></div>
```

My First Bootstrap Page

This container has a border and some extra padding and margins.

My First Bootstrap Page

This container has a dark background color and a white text, and some extra padding and margins.

My First Bootstrap Page

This container has a blue background color and a white text, and some extra padding and margins.

Grid System

Grid System

❖ Grid System

- 1행 당 12개의 컬럼을 스크린 크기에 따라 재조정

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											

- Grid 클래스
 - .col- (초소형 장치-화면 너비가 576px 미만)
 - .col-sm- (작은 장치-화면 너비가 576px 이상)
 - .col-md- (중형 장치-화면 너비가 768px 이상)
 - .col-lg- (대형 기기-화면 너비가 992px 이상)
 - .col-xl- (큰 장치-화면 너비가 1200px 이상)

Grid System

❖ 열 너비를 제어하고 다른 장치에서 열 너비를 표시하는 방법

```
<div class="row">  
  <div class="col-*-*"></div>  
  <div class="col-*-*"></div>  
</div>
```

```
<div class="row">  
  <div class="col-*-*"></div>  
  <div class="col-*-*"></div>  
  <div class="col-*-*"></div>  
</div>
```

```
<div class="row">  
  <div class="col"></div>  
  <div class="col"></div>  
  <div class="col"></div>  
</div>
```

Grid System

❖ 세 개의 동일한 열

Three equal width columns

Note: Try to add a new div with class="col" inside the row class - this will create three equal-width columns.

.col

.col

.col

```
<div class="container-fluid">
  <h1>Three equal width columns</h1>
  <p>Note: Try to add a new div with class="col" inside the row class - this
will create three equal-width columns.</p>
  <div class="row">
    <div class="col" style="background-color:lavender;">.col</div>
    <div class="col" style="background-color:orange;">.col</div>
    <div class="col" style="background-color:lavender;">.col</div>
  </div>
</div>
```

Grid System

❖ 반응형 열

Two Unequal Responsive Columns

Resize the browser window to see the effect.

The columns will automatically stack on top of each other when the screen is less than 576px wide.

.col-sm-4

.col-sm-8

```
<div class="container-fluid">
  <h1>Two Unequal Responsive Columns</h1>
  <p>Resize the browser window to see the effect.</p>
  <p>The columns will automatically stack on top of each other when the screen
is less than 576px wide.</p>

  <div class="row">
    <div class="col-sm-4" style="background-color:lavender;">
      .col-sm-4</div>
    <div class="col-sm-8" style="background-color:lavenderblush;">
      .col-sm-8</div>
  </div>
</div>
```

Text, Typography

Text, Typography

❖ 디폴트 설정

- font-size : 16px
- line-height : 1.5em
- font-family : "Helvetica Neue", Helvetica, Arial, sans-serif
- 모든 <p> 요소
 - margin-top: 0
 - margin-bottom: 1rem (16px by default)

Text, Typography

❖ h1~h6

h1 Bootstrap heading (2.5rem = 40px)

h2 Bootstrap heading (2rem = 32px)

h3 Bootstrap heading (1.75rem = 28px)

h4 Bootstrap heading (1.5rem = 24px)

h5 Bootstrap heading (1.25rem = 20px)

h6 Bootstrap heading (1rem = 16px)

Text, Typography

❖ Display Headings

- .display-1, .display-2, .display-3, .display-4

Display 1

Display 2

Display 3

Display 4

```
<h1 class="display-1">Display 1</h1>  
<h1 class="display-2">Display 2</h1>  
<h1 class="display-3">Display 3</h1>  
<h1 class="display-4">Display 4</h1>
```

Text, Typography

❖ <small>

h1 heading secondary text

h2 heading secondary text

h3 heading secondary text

h4 heading secondary text

h5 heading secondary text

h6 heading secondary text

```
<h1>h1 heading <small>secondary text</small></h1>  
<h2>h2 heading <small>secondary text</small></h2>  
<h3>h3 heading <small>secondary text</small></h3>  
<h4>h4 heading <small>secondary text</small></h4>  
<h5>h5 heading <small>secondary text</small></h5>  
<h6>h6 heading <small>secondary text</small></h6>
```


Text, Typography

❖ 폰트 설정 클래스

Class	Description
<code>.font-weight-bold</code>	Bold text
<code>.font-weight-bolder</code>	Bolder text
<code>.font-italic</code>	Italic text
<code>.font-weight-light</code>	Light weight text
<code>.font-weight-lighter</code>	Lighter weight text
<code>.font-weight-normal</code>	Normal text

❖ 폰트 크기 클래스

Class	Description
<code>.lead</code>	Makes a paragraph stand out
<code>.small</code>	Indicates smaller text (set to 80% of the size of the parent)

Text, Typography

❖ 텍스트 정렬/설정 클래스

Class	Description
.text-left	Indicates left-aligned text
.text-*-left	Indicates left-aligned text on small, medium, large or xlarge screens
.text-break	Prevents long text from breaking layout
.text-center	Indicates center-aligned text
.text-*-center	Indicates center-aligned text on small, medium, large or xlarge screens
.text-decoration-none	Removes the underline from a link
.text-right	Indicates right-aligned text
.text-*-right	Indicates right-aligned text on small, medium, large or xlarge screens
.text-justify	Indicates justified text
.text-monospace	Monospaced text
.text-nowrap	Indicates no wrap text
.text-lowercase	Indicates lowercased text
.text-reset	Resets the color of a text or a link (inherits the color from its parent)
.text-uppercase	Indicates uppercased text
.text-capitalize	Indicates capitalized text

색상

색상

❖ 텍스트 색상 클래스

- .text-muted,
- .text-primary,
- .text-success,
- .text-info,
- .text-warning,
- .text-danger,
- .text-secondary,
- .text-white,
- .text-dark,
- .text-body
 - default body color/often black
- .text-light

This text is muted.

This text is important.

This text indicates success.

This text represents some information.

This text represents a warning.

This text represents danger.

Secondary text.

Dark grey text.

Body text.

색상

❖ 텍스트 색상 클래스

- `.text-black-50`
- `.text-white-50`

Black text with 50% opacity on white background

White text with 50% opacity on black background

색상

❖ 배경 색상 클래스

- .bg-primary
- .bg-success
- .bg-info
- .bg-warning
- .bg-danger
- .bg-secondary
- .bg-dark
- .bg-light

This text is important.

This text indicates success.

This text represents some information.

This text represents a warning.

This text represents danger.

Secondary background color.

Dark grey background color.

Light grey background color.

테이블

테이블

❖ .table

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

❖ .table-striped

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

테이블

❖ .table-bordered

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

❖ .table-hover

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

테이블

❖ .table-dark

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

❖ .table-dark, .table-striped

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

테이블

❖ .table-borderless

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

테이블

❖ 상황 클래스

- <tr>, <td>에 적용
 - .table-primary Blue
 - .table-success Green
 - .table-danger Red
 - .table-info Light blue
 - .table-warning Orange
 - .table-active Grey
 - .table-secondary Grey
 - .table-light Light grey
 - .table-dark Dark grey

테이블

❖ 상황 클래스

Firstname	Lastname	Email
Default	Defaultson	def@somemail.com
Primary	Joe	joe@example.com
Success	Doe	john@example.com
Danger	Moe	mary@example.com
Info	Dooley	july@example.com
Warning	Refs	bo@example.com
Active	Activeson	act@example.com
Secondary	Secondson	sec@example.com
Light	Angie	angie@example.com
Dark	Bo	bo@example.com

테이블

❖ 헤더 컬러 : <thead>에 지정

- .thead-dark

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

- .thead-light

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

테이블

❖ .table-sm

Firstname	Lastname	Email
John	Doe	john@example.com
Mary	Moe	mary@example.com
July	Dooley	july@example.com

이미지

이미지

❖ .round, .rounded-circle, .img-thumbnail

Rounded Corners:



Circle:



Thumbnail:



```

```

```

```

```

```

이미지

❖ .float-left, .float-right



```

```

```

```

이미지

❖ .mx-auto .d-block



```

```

이미지

❖ .img-fluid

- max-width: 100%; height: auto;

```

```