Bootstrap4

준비

❖ 설치

- bower install jquery
- bower install popper.js
- bower install bootstrap4

준비

❖ 기본 골격

```
<head>
  <title>Bootstrap 4 Example</title>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet"
   href="bower_components/bootstrap4/dist/css/bootstrap.min.css">

  <script src="bower_components/jquery/dist/jquery.min.js"></script>
  <script
      src="bower_components/popper.js/dist/umd/popper.min.js"></script>
  <script src="bower_components/bootstrap4/dist/js/bootstrap.min.js">
  </script>
</head>
```
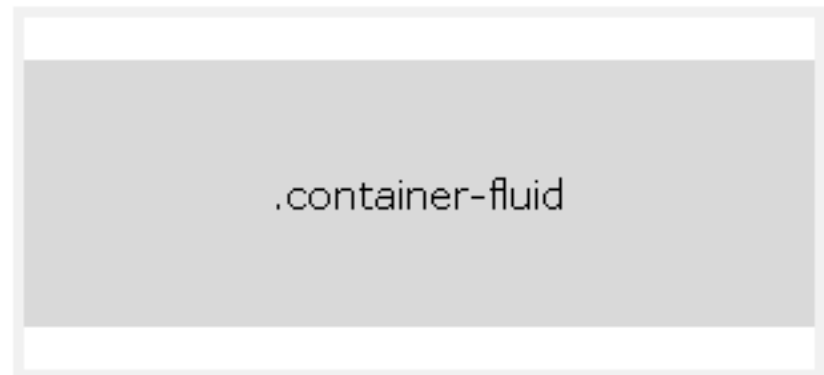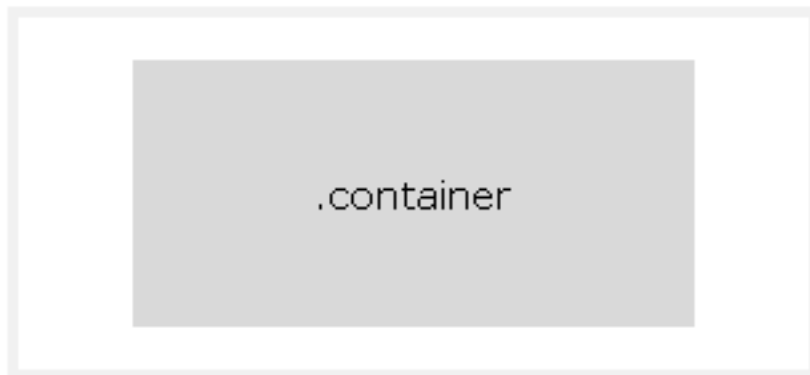 o 배치 순서 중요
    ▪ bootstrap 스타일
    ▪ jQuery
    ▪ popper
    ▪ bootstrap

기본 클래스

❖ **container 클래스**
- 사이트 내용을 감싸는 요소 클래스
- .container : 반응 형 고정 폭 컨테이너 제공
- .container-fluid : 뷰포트 전체 너비에 걸쳐 전체 너비 컨테이너를 제공

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


.container

.container-fluid

기본 클래스

❖ **Grid System**
  o 한 행에 최대 12개의 열을 허용
  o 열을 그룹화하여 더 넓은 열 운영 가능

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											

기본 클래스

❖ **Grid 클래스**
- .col- (추가 소형 장치 - 화면 너비가 576px 미만)
- .col-sm- (소형 장치 - 화면 너비가 576px 이상)
- .col-md- (보통 기기 - 화면 너비가 768px 이상)
- .col-lg- (대형 기기 - 화면 너비가 992px 이상)
- .col-xl- (대형 장치 - 화면 너비가 1200px 이상)

기본 클래스

❖ **3컬럼 Grid**
  ○ .col
    ▪ sm 이상에서 해상도와 상관없이 항상 컬럼 개수 유지

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

.col	.col	.col

기본 클래스

❖ 반응형(responsive) 컬럼

```
<div class="row">
  <div class="col-sm-3">.col-sm-3</div>
  <div class="col-sm-3">.col-sm-3</div>
  <div class="col-sm-3">.col-sm-3</div>
  <div class="col-sm-3">.col-sm-3</div>
</div>
```

.col-sm-3	.col-sm-3	.col-sm-3	.col-sm-3

.col-sm-3
.col-sm-3
.col-sm-3
.col-sm-3

기본 클래스

❖ 비균등 컬럼

```html
<div class="row">
  <div class="col-sm-4">.col-sm-4</div>
  <div class="col-sm-8">.col-sm-8</div>
</div>
```

.col-sm-4	.col-sm-8

텍스트/색상

❖ 텍스트 관련 디폴트 값
- ○ font-size : 16px
- ○ line-height : 1.5.
- ○ font-family : "Helvetica Neue", Helvetica, Arial, sans-serif
- ○ <p> : margin-top: 0,margin-bottom: 1rem (16px)
  - ▪ rem : 루트 엘리먼트의 폰트 크기 비율
  - ▪ em : 현재 엘리먼트의 폰트 크기 비율

텍스트/색상

❖ **<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)

텍스트/색상

❖ **Display Headings**

○ .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>
```

Display 1

Display 2

Display 3

Display 4

텍스트/색상

❖ ⟨small⟩
- ○ 헤더 태그에서 2차 보조 텍스트 표현

```
<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>
```

h1 heading secondary text

h2 heading secondary text

h3 heading secondary text

h4 heading secondary text

h5 heading secondary text

h6 heading secondary text

텍스트/색상

❖ <mark>

```
<p>Use the mark element to <mark>highlight</mark> text.</p>
```

Use the mark element to highlight text.

❖ <abbr>

```
<p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>
```

The WHO was founded in 1948.

World Health Organization

텍스트/색상

❖ 〈blockquote〉

```
<blockquote class="blockquote">
   <p>For 50 years, WWF has been protecting the future of nature. The
world's leading conservation organization, WWF works in 100 countries
and is supported by 1.2 million members in the United States and close
to 5 million globally.</p>
   <footer class="blockquote-footer">From WWF's website</footer>
</blockquote>
```

For 50 years, WWF has been protecting the future of nature. The world's leading
conservation organization, WWF works in 100 countries and is supported by 1.2
million members in the United States and close to 5 million globally.

— From WWF's website

텍스트/색상

❖ ‹**dl**›

```
<dl>
   <dt>Coffee</dt>
   <dd>- black hot drink</dd>
   <dt>Milk</dt>
   <dd>- white cold drink</dd>
 </dl>
```

Coffee

- black hot drink

Milk

- white cold drink

텍스트/색상

❖ <code>

```
<p>The following HTML elements: <code>span</code>, <code>section</code>,
and <code>div</code> defines a section in a document.</p>
```

The following HTML elements: span, section, and div defines a section in a document.

❖ <kbd>

```
<p>Use <kbd>ctrl + p</kbd> to open the Print dialog box.</p>
```

Use `ctrl + p` to open the Print dialog box.

텍스트/색상

❖ 주요 클래스

.font-weight-bold	.text-justify
.font-italic	.text-monospace
.font-weight-light	.text-nowrap
.font-weight-normal	.text-lowercase
.lead	.text-uppercase
.small	.text-capitalize
.text-left	.initialism
.text-*-left	.list-unstyled
.text-center	.list-inline
.text-*-center	.pre-scrollable
.text-right	
.text-*-right	

텍스트/색상

❖ 색상 클래스

○ .text-muted, .text-primary, .text-success, .text-info, .text-warning, .text-danger, .text-secondary, .text-white, .text-dark, .text-body, .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.

텍스트/색상

❖ 투명도 클래스
  ○ .text-black-50,text-white-50

```
 <p class="text-black-50">Black text with 50% opacity on white
background</p>
  <p class="text-white-50 bg-dark">White text with 50% opacity on black
background</p>
```

Black text with 50% opacity on white background

White text with 50% opacity on black background

텍스트/색상

❖ Background Colors

- `.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.