

Dasar Pemrograman Web

Pertemuan Ke-10 (Bootstrap)

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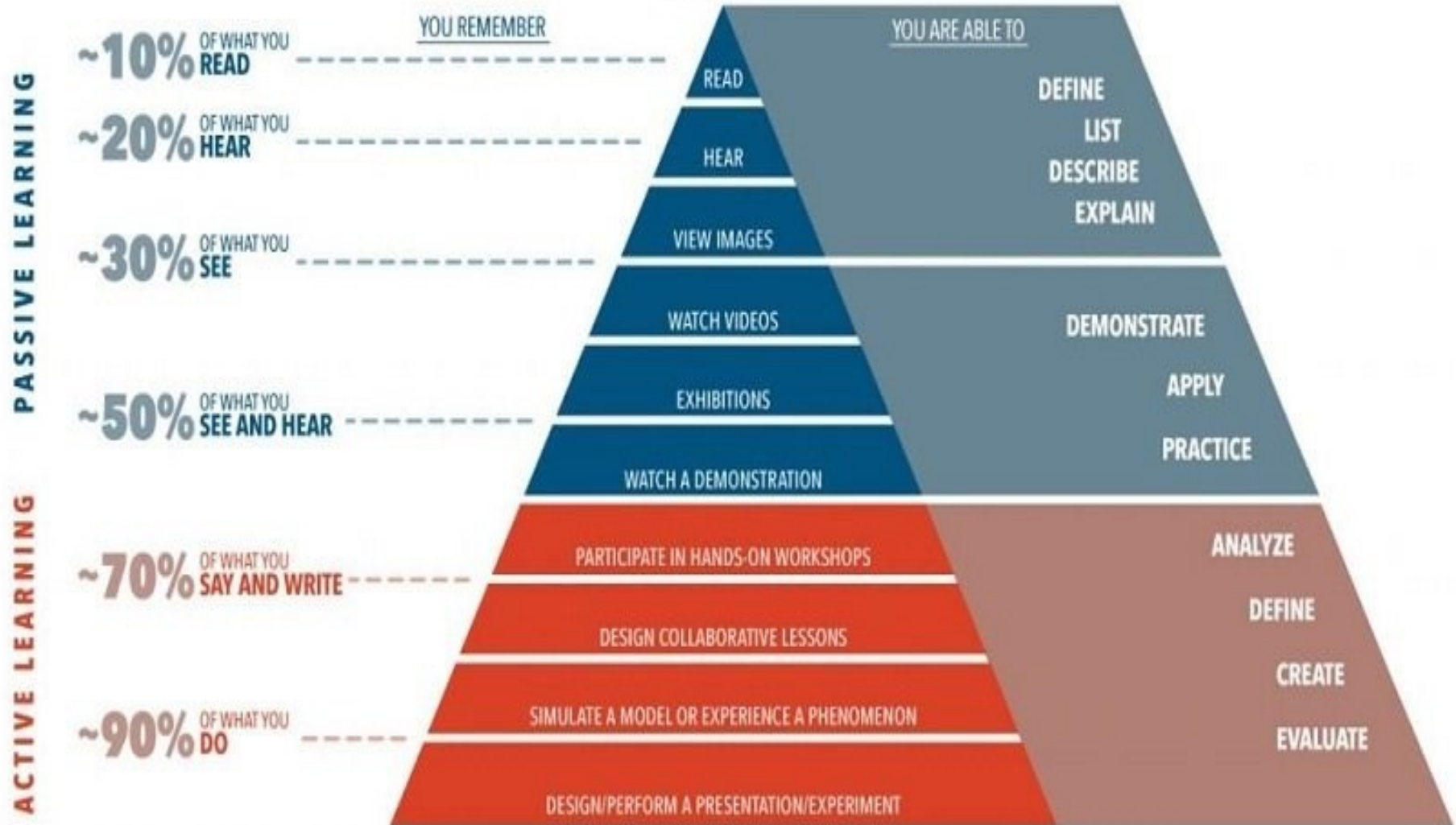
Google Scholar: [Noor Ifada](#)

ResearchGate: [Noor-Ifada](#)

Repository: [Trunojoyoan](#)

CONE OF EXPERIENCE

EDGAR DALE



<https://elearningindustry.com/>

SOFT SKILLS FOR STUDENTS

6 SKILLS TO HELP YOU SUCCEED



START

1 Problem Solving

Do you see problems as **interesting opportunities**? Problem solvers anticipate potential stumbling blocks and act to prevent them or mitigate their effects.



TIP: You don't always need to start by trying to solve the problem. First, aim to understand the root of the problem.



2 Creativity

Are you able to think **outside of the box** even when you're not asked to? Everyone has creative abilities. Creative thinking skills help you to look at problems and situations from a fresh perspective.

3 Communication

Are you an **effective communicator and active listener**? Communication skills will help you understand others and be better understood in return. This can help make each interaction you have in both your work and social life a more positive experience.



4 Time Management

Are you an **organized person who meets deadlines**? Good time management skills enable you to do more in less time, helping you reduce stress and maintain a better work-life balance.

TIP: Prioritize your tasks and delegate a time limit to how long you spend on each one.

5 Stress Management

Can you **identify and tackle your stress triggers**? Being able to manage stress allows you to break the hold it can have on your life. This will make you happier, healthier, and more productive in return.

TIP: Set limits and learn to say no to requests that would create excessive stress in your life.



6 Teamwork

Are you a **team player who collaborates well with others**? Teamwork requires leadership and goal orientation. Whether in school or a job, the better you work within a team, the better your work will be!

TIP: Always clarify roles, responsibilities and accountability with your team members.




END



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Tabu Bagi Mahasiswa Teknik Informatika

- Tidak dapat beradaptasi dengan (perkembangan) teknologi
- Tidak dapat membaca atau memahami instruksi
- Tidak dapat membuat program



**LEARNING IS NEVER
DONE WITHOUT
ERRORS AND DEFEAT**

VLADIMIR LENIN
—
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PICTUREQUOTES

Sub Pokok Bahasan

- *Framework CSS*
- *Bootstrap*
- Contoh *Bootstrap* Sederhana
- Sistem Kolom pada *Bootstrap*
- Teks (*Typography*)
- Tabel pada *Bootstrap*
- Tombol pada *Bootstrap*
- *Form* pada *Bootstrap*

Framework CSS

Fungsi dan Manfaat:

- Pengembangan *Web* dapat dilakukan dengan cepat
- Dapat diimplementasikan di berbagai *web browser*
- Membiasakan untuk menerapkan standar desain *web* yang baik
- Menghasilkan *layout web* yang rapi dan simetris
- Skrip yang dihasilkan menjadi *productive, clean* dan *maintainable*

The Most Popular CSS Frameworks Comparison

2020

Bootstrap



Bulma



Foundation



MaterializeCSS



UIKit



Parameters

Release date

Aug 19, 2011

Jan 24, 2016

Sep 2011

Nov 4, 2014

Jul 19, 2013

Licence

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MIT

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Git star, forks, contributors

141k 68.7k 1115

39.6k 3.4k 302

28.6k 5.8k 982

37.5k 4.8k 250

15.7k 2.2k 28

Hacker News, Reddit, StackOverflow

3.3k 9k 98k

- 1.2k 581

- 1.2k 803

- 374 3.2k

139 21 8.2k

Current version

4.4.1

0.8.2

6.6.3

1.0.0

3.4.3

Size

Minified CSS: ~61.7 kB
Gzip: ~15.8 kBMinified CSS: ~209.5 kB
Gzip: ~25.9 kBMinified CSS: ~139.2 kB
Gzip: ~34 kBMinified CSS: ~175.2 kB
Gzip: ~41.5 kBMinified CSS: ~131.2 kB
Gzip: ~41.1 kB

No. Of Sites

~20,737,671

~30,987

~441,292

~111,481

~311,897

Language & Pre-Processor

Sass JS

Sass JS

Sass JS

Sass JS

Sass {less}

Grid

Mobile-first
Flexbox grid, 12
column systemPower of
Flexbox grid
with 12 Column
in a simple
interfaceXY 12- Column
Grid, Floated
(flexbox in
latest version)Standard 12
column fluid
responsive grid
systemFully
responsive,
fluid and
nestable grid
layout.

Description

Most popular
HTML, CSS, and
JS frameworkCSS framework
based on
Flexbox and
built with SassMost advanced
responsive
front-end
frameworkCSS framework
based on
Material DesignA lightweight
and modular
front-end
framework

Core concept

RWD and
mobile firstRWD, mobile
first, Modern
freeRWD, mobile
first, semanticRWD and based
on Google
Material DesignRWD and
mobile first

Unique Features

Card
component,
Jumbotron,
Responsive
navbar

-

Iconbar,
Flex video,
Pricing tableScroll fire,
Toast,
Parallax,Article,
Cover,
HTML editorBrowser Support
(L) - LatestJavascript skill
require

+ -

-

+

+

+ -

Learning Curve

Mild

Mild

Steep

Mild

Moderate

Documentation

★★★★★
Excellent 😊★★★★☆
Good 😊★★★★☆
Good 😊★★★★☆
Good 😊★★★★☆
Good 😊

Companies using



Reference:

<https://getbootstrap.com/>
<https://bulma.io/>
<https://get.foundation/>
<https://materializecss.com/>
<https://getuikit.com/>
<https://github.com/>
<https://builtwith.com/>
<https://bundlephobia.com/>
<https://stackshare.io/stackups/bootstrap-vs-materialize-vs-uikit>

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BOOTSTRAP THEMES

www.themeselection.com

Image Source: <https://themeselection.com/the-most-popular-css-framework-comparison/>

Bootstrap

- Pertama kali dikembangkan oleh Mark Otto dan Jacob Thornton di Twitter pada tahun 2011
- Adalah *front-end* framework (HTML, CSS dan JavaScript) untuk menciptakan **Responsive Web Design**
- Responsif terhadap perangkat *mobile* → *Mobile-first styles* merupakan bagian dari *framework* utama
- Tutorial *Bootstrap*:
<https://www.w3schools.com/bootstrap4/>



Materi ini menggunakan versi *Bootstrap 4*

Contoh *Bootstrap* Sederhana

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title> Contoh Bootstrap </title>
    <meta charset="utf-8">
    <!-- to be responsive to mobile devices -->
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <!-- Latest compiled and minified CSS -->
    <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">
    <!-- jQuery, Popper.js, dan JS plugins -->
    <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></scri
pt>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.16.0/umd/popper.min.j
s"></script>
    <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/js/bootstrap.min.js">
</script>
  </head>
  <body>
    <div class="container"> <!-- ATAU <div class="container-fluid"> -->
      <p>Kami sedang belajar menggunakan <i>Bootstrap</i></p>
    </div>
  </body>
</html>
```

Elemen yang diperlukan dalam Bootstrap

Class "container" dan "container-fluid" menghasilkan tampilan yang berbeda

Hasil tampilan (jenis font pasti bukan Times New Roman)

Kami sedang belajar menggunakan *Bootstrap*

Sistem Kolom pada *Bootstrap*

Ukuran Kolom:

- `.col-` : perangkat berukuran *extra small* (ukuran *screen* < 576px)
- `.col-sm-` : perangkat berukuran *small* (ukuran *screen* ≥ 576px)
- `.col-md-` : perangkat berukuran *medium* (ukuran *screen* ≥ 768px)
- `.col-lg-` : perangkat berukuran *large* (ukuran *screen* ≥ 992px)
- `.col-xl-` : perangkat berukuran *extra large* (ukuran *screen* ≥ 1200px)

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											

Sistem Kolom pada *Bootstrap* [2]

```
<div class= "row">
  <div class="col-sm-1">span 1</div><div class="col-sm-1">span 1</div>
  <div class="col-sm-1">span 1</div><div class="col-sm-1">span 1</div>
  <div class="col-sm-1">span 1</div><div class="col-sm-1">span 1</div>
  <div class="col-sm-1">span 1</div><div class="col-sm-1">span 1</div>
  <div class="col-sm-1">span 1</div><div class="col-sm-1">span 1</div>
</div>
<div class="row">
  <div class="col-sm-4">span 4</div><div class="col-sm-4">span 4</div>
  <div class="col-sm-4">span 4</div>
</div>
<div class="row">
  <div class="col-sm-4">span 4</div><div class="col-sm-8">span 8</div>
</div>
<div class="row">
  <div class="col-sm-6">span 6</div><div class="col-sm-6">span 6</div>
</div>
<div class="row">
  <div class="col-sm-12">span 12</div>
</div>
```

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											

Heading pada Bootstrap

```
<h1>h1 Heading 1 (40px)</h1>  
<h2>h2 Heading 2 (32px)</h2>  
<h3>h3 Heading 3 (28px)</h3>  
<h4>h4 Heading 4 (24px)</h4>  
<h5>h5 Heading 5 (20px)</h5>  
<h6>h6 Heading 6 (16px)</h6>
```

h1 Heading 1 (40px)
h2 Heading 2 (32px)
h3 Heading 3 (28px)
h4 Heading 4 (24px)
h5 Heading 5 (20px)
h6 Heading 6 (16px)



Di dalam *Bootstrap 4*, secara *default*:

- Ukuran teks adalah 16px
- Jenis huruf adalah "Helvetica Neue", Helvetica, Arial, Sans-serif

Blockquote pada Bootstrap

```
<p>Contoh quote:</p>  
<blockquote class= "blockquote">  
  <p>No gain without pain</p>  
</blockquote>
```

Contoh quote:

No gain without pain

Konteks Warna pada *Bootstrap*

```
<p class="text-muted">This text is muted.</p>
<p class="text-primary">This text is important.</p>
<p class="text-success">This text indicates success.</p>
<p class="text-info">This text represents some information.</p>
<p class="text-warning">This text represents a warning.</p>
<p class="text-danger">This text represents danger.</p>
<p class="text-secondary">Secondary text.</p>
<p class="text-dark">Dark grey text.</p>
<p class="text-body">Body text.</p>
<p class="text-light">This text is light grey(on white background) .</p>
<p class="text-white">This text is white (on white background) .</p>
```

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.

This text is light grey(on white background).

Konteks *Background*

```
<p class="bg-primary">This text is important.</p>
<p class="bg-success">This text indicates success.</p>
<p class="bg-info">This text represents some information.</p>
<p class="bg-warning">This text represents a warning.</p>
<p class="bg-danger">This text represents danger.</p>
<p class="bg-secondary">Secondary background color.</p>
<p class="bg-dark">Dark grey background color.</p>
<p class="bg-light">Light grey background color.</p>
```



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.

Tabel pada *Bootstrap*

```
<table class="table">
  <thead>
    <tr>
      <th>Judul 1</th><th>Judul 2</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Baris 1 Kolom 1</td><td>Baris 1 Kolom 2</td>
    </tr>
    <tr>
      <td>Baris 2 Kolom 1</td><td>Baris 2 Kolom 2</td>
    </tr>
  </tbody>
</table>
```

Judul 1	Judul 2
Baris 1 Kolom 1	Baris 1 Kolom 2
Baris 2 Kolom 1	Baris 2 Kolom 2



Pilihan tampilan tabel:

- *Basic*: gunakan class **.table**
- *Striped*: gunakan kombinasi class **.table** & **.table-striped**
- *Bordered*: gunakan kombinasi class **.table** & **.table-bordered**
- *Hover*: gunakan kombinasi class **.table** & **.table-hover**
- *Dark*: gunakan kombinasi class **.table** & **.table-dark**
- *Borderless*: gunakan kombinasi class **.table** & **.table-borderless**

Tombol pada *Bootstrap*

```
<button type="button" class="btn">Basic</button>  
<button type="button" class="btn btn-primary">Primary</button>  
<button type="button" class="btn btn-secondary">Secondary</button>  
<button type="button" class="btn btn-success">Success</button>  
<button type="button" class="btn btn-info">Info</button>  
<button type="button" class="btn btn-warning">Warning</button>  
<button type="button" class="btn btn-danger">Danger</button>  
<button type="button" class="btn btn-dark">Dark</button>  
<button type="button" class="btn btn-light">Link</button>  
<button type="button" class="btn btn-link">Link</button>
```

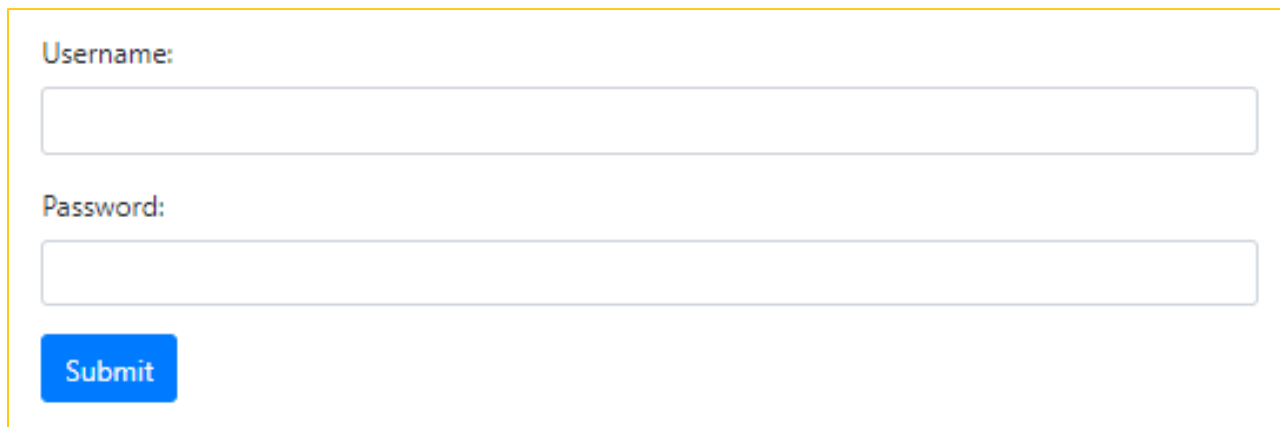
Basic Primary Secondary Success Info Warning Danger Dark Light Link

Ukuran Tombol:

- .btn-lg
- .btn-sm

Layout Form: Stacked (full-width)

```
<form>
  <div class="form-group">
    <label for="username">Username:</label>
    <input type="text" class="form-control" id="username">
  </div>
  <div class="form-group">
    <label for="pwd">Password:</label>
    <input type="password" class="form-control" id="pwd">
  </div>
  <button type="submit" class="btn btn-primary ">Submit</button>
</form>
```



Username:

Password:

Submit

Layout Form: Inline

```
<form class="form-inline">
  <label for="username">Username:</label>
  <input type="text" class="form-control" id="username">
  <label for="pwd">Password:</label>
  <input type="password" class="form-control" id="pwd">
  <button type="submit" class="btn btn-primary">Submit</button>
</form>
```

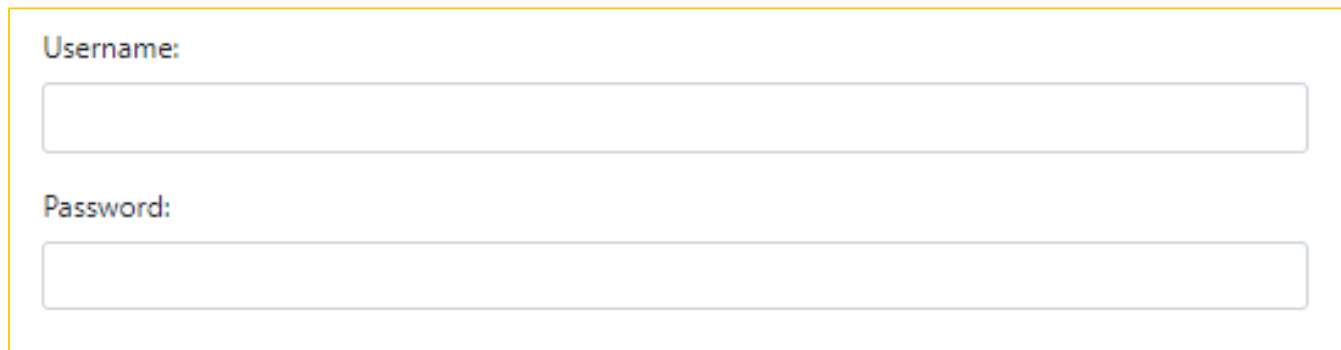
Username:

Password:

Submit

Kontrol *Form: Input*

```
<form>
  <div class="form-group">
    <label for="username">Username:</label>
    <input type="text" class="form-control" id="username">
  </div>
  <div class="form-group">
    <label for="pwd">Password:</label>
    <input type="password" class="form-control" id="pwd">
  </div>
</form>
```



Username:

Password:

Kontrol Form: Radio Button

Pilihan:

☐ Pilihan 1

☐ Pilihan 2

☐ Pilihan 3

```
<form>
  <label>Pilihan:</label>
  <div class="form-check">
    <label>
      <input type="radio" class="form-check-input" name="pil1">Pilihan 1
    </label>
  </div>
  <div class="form-check">
    <label>
      <input type="radio" class="form-check-input" name="pil2">Pilihan 2
    </label>
  </div>
  <div class="form-check">
    <label>
      <input type="radio" class="form-check-input" name="pil3">Pilihan 3
    </label>
  </div>
</form>
```

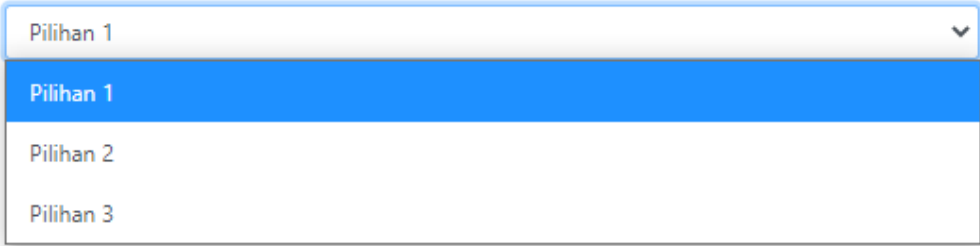


Pilihan tampilan *radio button*:

- *Stacked*: menggunakan class **.form-check**
- *Inline*: menggunakan class **.form-check-inline**

Daftar *Dropdown* pada *Bootstrap*

```
<form>
  <div class="form-group">
    <label for="pil">Pilihan</label>
    <select class="form-control" id="pil">
      <option>Pilihan 1</option>
      <option>Pilihan 2</option>
      <option>Pilihan 3</option>
    </select>
  </div>
</form>
```



Jika *user* diijinkan untuk memilih lebih dari satu pilihan, maka tambahkan atribut **multiple** di dalam elemen **select**

Kontrol *Form*: *Checkbox*

Pilihan:

☐ Pilihan 1

☐ Pilihan 2

☐ Pilihan 3

```
<form>
  <label>Pilihan:</label>
  <div class="form-check">
    <label>
      <input type="checkbox" class="form-check-input" name="pil1">Pilihan 1
    </label>
  </div>
  <div class="form-check">
    <label>
      <input type="checkbox" class="form-check-input" name="pil2">Pilihan 2
    </label>
  </div>
  <div class="form-check">
    <label>
      <input type="checkbox" class="form-check-input" name="pil3">Pilihan 3
    </label>
  </div>
</form>
```



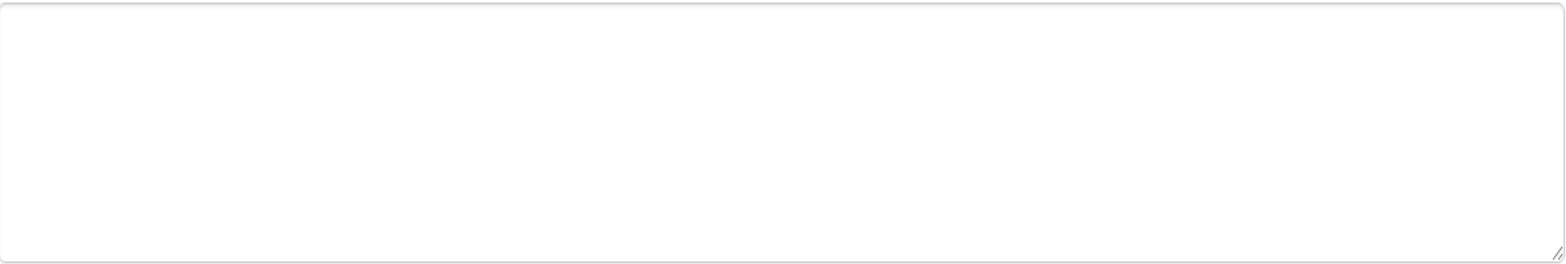
Pilihan tampilan *checkbox*:

- *Stacked*: menggunakan class **.form-check**
- *Inline*: menggunakan class **.form-check-inline**

Kontrol *Form: Text Area*

```
<form>
  <div class="form-group">
    <label for="comment">Comment:</label>
    <textarea class="form-control" rows="5" id="comment">
  </textarea>
  </div>
</form>
```

Comment:



Challenge #1

Ubah tampilan halaman *web* (hasil) TM2 Anda dengan menggunakan *Bootstrap* (cek dokumen *Workshop* pertemuan ke-10)!

Video Perkuliahan

- Penjelasan materi kuliah dapat dilihat via YouTube (*recording* Semester Genap 2020/2021):
<https://youtu.be/0ddAJNIIVqk>
- *Note: Kerjakan Challenge(s) berdasarkan slide Semester Genap 2022/2023 (bukan berdasarkan slide yang ditampilkan dalam recording Semester Genap 2020/2021)*



there is
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something to
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for



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