Frontend Framework

Bootstrap

What is Bootstrap?

- Frontend framework
  - CSS/JavaScript
- Supports building web pages/responsive web pages
  - Increase dev. Speed
  - Cross browser compatibility
- Current version: Bootstrap 5
  - Mobile first
- Was created at Twitter in 2010

Setting up

เปิด local เอง
ข้อเสีย อัพเดทเอง, ก็ต้องทำทีเครื่อง

โหลด+ติดตั้งเอง

- Download from https://getbootstrap.com/docs/5.0/getting-started/download/

- CDN

อัพเดทให้เองอัตโนมัติ

```
<link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.mi
n.css" rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC"
crossorigin="anonymous">

<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bund
le.min.js" integrity="sha384-
MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
```

- Package managers *ใช้ตัว package manager โหลดให้*
  - npm install bootstrap   *or*
  - yarn add bootstrap

Template

```html
<!DOCTYPE html>
<html>
    <head>
        <meta charset="utf-8">
        <meta name="viewport" content="width=device-width, initial-scale=1">
        <title>Test Basic Bootstrap</title>
        <!-- Bootstrap CSS -->
        <linkhref="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css"
rel="stylesheet" integrity="sha384-
EVSTQN3/azprG1Anm3QDgpJLIm9Nao0Yz1ztcQTwFspd3yD65VohhpuuCOmLASjC" crossorigin="anonymous" >
    </head>
    <body>
        <h1>Hello World!!</h1>
        <!-- Bootstrap JS -->
        <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-MrcW6ZMFYlzcLA8Nl+NtUVF0sA7MsXsP1UyJoMp4YLEuNSfAP+JcXn/tWtIaxVXM"
crossorigin="anonymous"></script>
    </body>
</html>
```
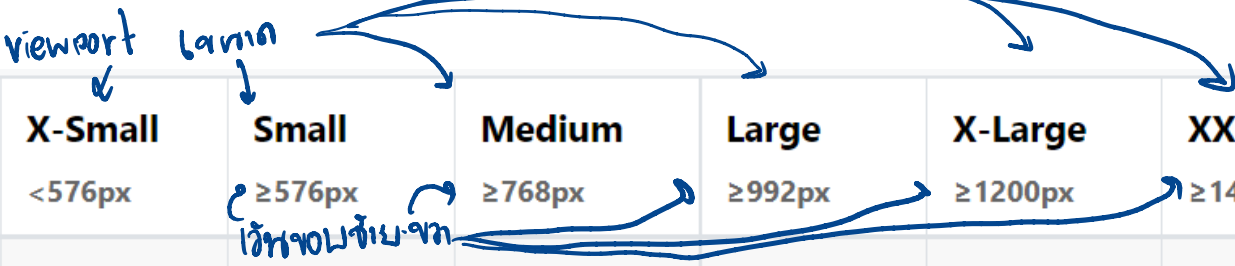
Layout

Grid system

- Container for Layout
- .container *ธรรมดา*
  - Max width at each breakpoint
- .container-fluid
  - 100% width at all breakpoint
- .container-[breakpoint] *กำหนด responsive design*
  - 100% width until specific breakpoint

Conclusion table for container

Handwritten annotations: viewport เลขเเก (viewport maximum), เว็บขอบซ้ายขวา, large

Classes	X-Small	Small	Medium	Large	X-Large	XX-Large
Bootstrap Grid System	<576px	≥576px	≥768px	≥992px	≥1200px	≥1400px
.container	100%	540px	720px	960px	1140px	1320px
.container-sm	100%	540px	720px	960px	1140px	1320px
.container-md	100%	100%	720px	960px	1140px	1320px
.container-lg	100%	100%	100%	960px	1140px	1320px
.container-xl	100%	100%	100%	100%	1140px	1320px
.container-xxl	100%	100%	100%	100%	100%	1320px
.container-fluid	100%	100%	100%	100%	100%	100%

Source: https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-containers.php

Grid system

- 12 columns per row
- 6 default responsive tiers

Features Bootstrap Grid System	X-Small (xs) <576px	Small (sm) ≥576px	Medium (md) ≥768px	Large (lg) ≥992px	X-Large (xl) ≥1200px	XX-Large (xxl) ≥1400px
Container max-width	None (auto)	540px	720px	960px	1140px	1320px
Class prefix	.col-	.col-sm-	.col-md-	.col-lg-	.col-xl-	.col-xxl-
Number of columns	12					
Gutter width	1.5rem (.75rem on left and right)					
Custom gutters	Yes					
Nestable	Yes					
Column ordering	Yes					

(handwritten annotation above None (auto): ความกว้าง แบบ ๆ)
(handwritten annotation above 540px: ความกว้างคงที่ ๆ)

Source: https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-grid-system.php

Example:

```html
<div class="container">
  <div class="row">
    <div class="col-6 border">left side</div>
    <div class="col-6 border">right side</div>
  </div>
</div>
```

รวม 12 column

This is heading

This is paragraph of text

left side	right side

Display 2 columns at any view port width

Example

```
<div class="container">
  <div class="row">
    <div class="col-md-6 border">left side</div>
    <div class="col-md-6 border">right side</div>
  </div>
</div>
```

View port width >= 768px

This is heading

This is paragraph of text

| left side | right side |

This is heading

This is paragraph of text

left side
right side

View port width < 768px

Auto layout

- .col

```
<div class="container">
  <div class="row">
    <div class="col border">left side</div>
    <div class="col border">middle</div>
    <div class="col border">right side</div>
  </div>
</div>
```

This is heading

This is paragraph of text

| left side | middle | right side |

Column wrapping

```
<div class="container">
  <div class="row">
    <div class="col-md-4 border">left side</div>
    <div class="col-md-8 border">middle</div>
    <div class="col-md-12 border">right side</div>
  </div>
</div>
```

} 12 column 1 แถว

→ แสดงผลว่าให้ นับ ทัด สิ่งมา

View port width >= 768px

This is heading
This is paragraph of text

left side	middle
right side	

Responsive layout

```html
<div class="container">
  <div class="row">
    <div class="col-sm-6 col-md-4 border">left side</div>
    <div class="col-sm-6 col-md-4 border">middle</div>
    <div class="col-sm-6 col-md-4 border">right side</div>
  </div>
</div>
```

View port width >= 768px

This is heading

This is paragraph of text

left side	middle	right side

This is heading

This is paragraph of text

left side	middle
right side	

View port width < 768px

Responsive layout (cont.)

```
<div class="container">
  <div class="row">
    <div class="col-sm-6 col-md-4 border">left side</div>
    <div class="col-sm-6 col-md-4 border">middle</div>
    <div class="col-sm-12 col-md-4 border">right side</div>
  </div>
</div>
```

View port width >= 768px

This is heading

This is paragraph of text

left side	middle	right side

This is heading

This is paragraph of text

left side	middle
right side	

View port width < 768px

Nested

```html
<div class="container">
  <div class="row">
    <div class="col-sm-6 col-md-4 border">left side</div>
    <div class="col-sm-6 col-md-4 border">middle</div>
    <div class="col-sm-12 col-md-4 border">right side
      <div class="row">
        <div class="col border">left</div>
        <div class="col border">right</div>
      </div>
    </div>
  </div>
</div>
```

View port width >= 768px

This is heading

This is paragraph of text

left side	middle	right side	
		left	right

This is heading

This is paragraph of text

left side	middle
right side	
left	right

View port width < 768px

Flexbox

- Class d-flex or d-inline-flex for container
  - d-xx-flex or d-xx-inline-flex (xx=sm,md,lg,..)
- Horizontal direction
  - .flex-row (default)
- Right-align horizontal direction
  - .flex-row-reverse
- Vertical direction
  - .flex-column
- Right-align vertical direction
  - .flex-column-reverse

Flexbox (cont.)

- Wrap item in flex container
  - .flex-wrap
  - .flex-wrap-reverse
  - .flex-nowrap (default)
- Align flex items (multirow)
  - .align-content-[option] (no effect on single row)
  - where [option] can be:
    - start (default)
    - end
    - center
    - around
    - stretch

Flexbox (cont.)

- Align flex item (single row)
  - .align-items-[option]
  - where [option] can be:
    - start (default)
    - end
    - center
    - around
    - stretch

Flexbox (cont.)

- Flexbox classes applied to the flex items
- .flex-fill
  - Equal width of items
- .flex-grow-1
  - To take up the rest of the space
- .order-n
  - Change visual order of items
  - n is number from 0 – 5, lower number – higher priority
- .align-self-[option]
  - Control vertical alignment of a specific flex item
  - Same [option] as align flex item

[Example: https://getbootstrap.com/docs/4.0/utilities/flex/]

Display

- .d-inline
- .d-inline-block
- .d-block

[Example: https://getbootstrap.com/docs/4.0/utilities/display/]

Spacing

Box model

margin

จาก margin 0-5

m = ทุกด้าน
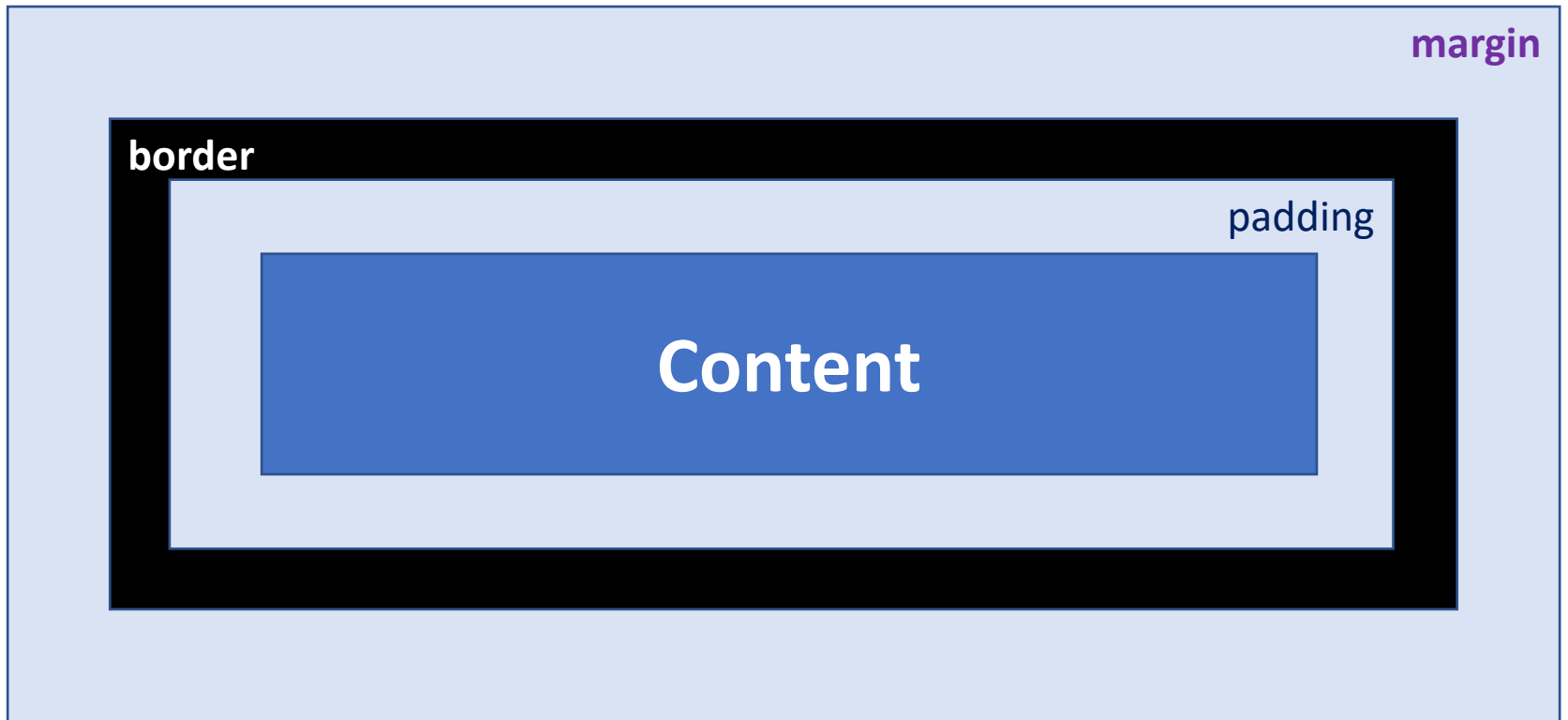
- .m[side]-[size]
- Sides:
  - t = top
  - b = bottom
  - s = left (start)
  - e = right (end)
  - x = horizontal (both left and right)
  - y = vertical (both top and bottom)
- Sizes:
  - 0 – 5 and auto

padding

- .p[side]-[size]
- Sides:
  - t = top
  - b = bottom
  - s = left (start)
  - e = right (end)
  - x = horizontal (both left and right)
  - y = vertical (both top and bottom)
- Sizes:
  - 0 – 5 and auto

Border

- .border
  - Draw border line (all sides)

- .border-[option]
  - [option] can be
    - top, bottom, left, right

- .rounded
  - Rounded corner

- .rounded-[option]
  - Same [option] as .border
    - circle

เข้ามาด้วย

ต้องการให้แสดงผลแบบขอบมน
มาจากออน option (วงรี โวงกอม)

สี

[Example: https://www.tutorialrepublic.com/twitter-bootstrap-4-tutorial/bootstrap-helper-classes.php]

Sizing

Sizing กำหนดขนาด

- Width
  - .w-[option]
  - Where [option] can be:
    - 25, 50, 75, 100 (in %)
    - Auto
- Height
  - .h-[option]
    - The same [option] as .width

กำหนดจะชาด type

Typography

Heading

- Heading
  - <h1> - <h6>
  - .h1 - .h6 classes
- Customizing heading
  - <small> + .text-muted
- Display heading with lighter font weight
  - .display-n
  - n => 1 – 6

Paragraph

- Make a paragraph stands out
  - .lead
- Text-alignment
  - .text-start (align left)
  - .text-center (align center)
  - .text-end (align right)
- Text formatting
  - HTML text formatting tags
    - Ex. <strong>, <i>, <small>, <b>, <em>, <code>
- Text transformation
  - .text-lowercase
  - .text-uppercase
  - .text-capitalize   *camel case*

Paragraph (cont.)

- Text coloring
    - .text-primary
    - .text-secondary
    - .text-success
    - etc. (for more, check out
      https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-helper-classes.php)
- Blockquotes
    - <blockquote>
    - .blockquote
    - .blockquote-footer

[Example: https://www.tutorialrepublic.com/twitter-bootstrap-4-tutorial/bootstrap-typography.php]

Forms

Creating form

- Classes
    - .form-control
    - .form-label
    - .form-check-input (checkbox, radio)
    - .btn (button)
        - .btn-[option] (button color)
        - .btn-outline-[option] (outline button and color)
            - [option] can be primary, secondary, success, danger, warning, info, light, dark
        - .btn-lg or .btn-sm (button size)
        - .btn-block (button with full width of a parent)

Form (cont.)

- Lay out
  - .form-row instead of .row in gr
 - Check boxes or radios on the same row
    - .form-check-inline

[Example: https://www.tutorialrepublic.com/twitter-bootstrap-4-tutorial/bootstrap-forms.php]

คล้ายเมกูบ้าง

Navigation

Basic navigation

- Navigation container class: nav

- .nav modifier
  - .nav alignment
    - .justify-content-center
    - .justify-content-end
  - Column Nav.
    - .flex-column
  - Tab display
    - .nav-tabs
  - Pills display
    - .nav-pills
    - Can be used together with .flex-column
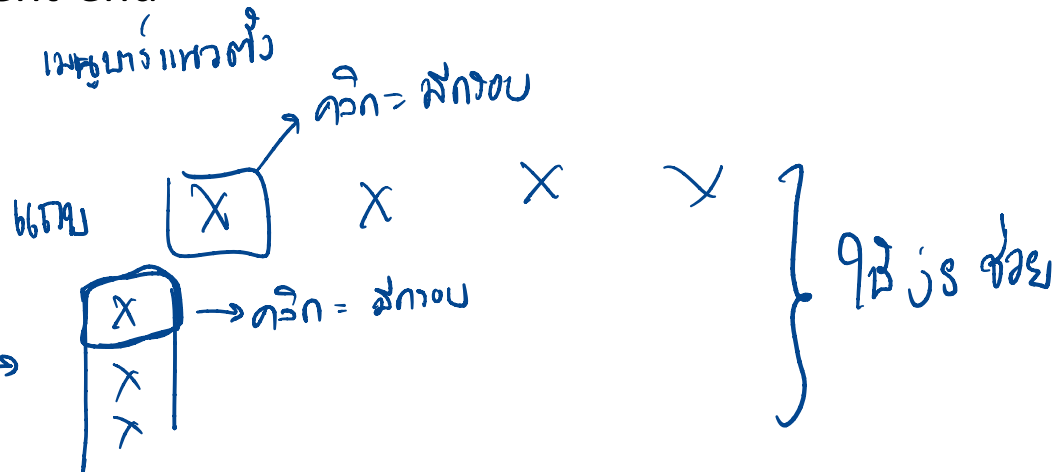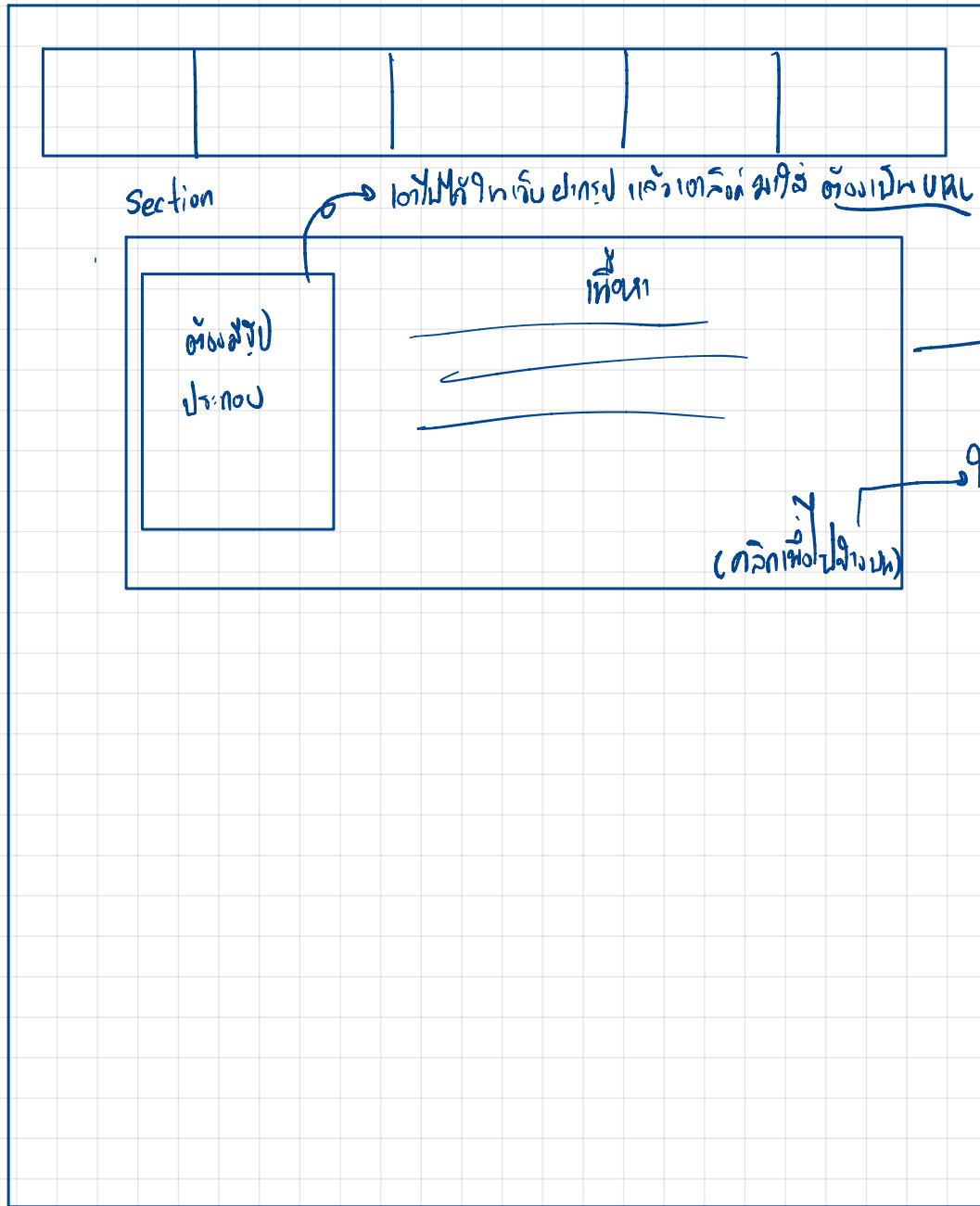
Basic navigation (cont.)

- Navigation items class: nav-item
  - Groups link, text, image of the same menu item together
- .nav-link represent link element of the menu item

[Example: https://www.tutorialrepublic.com/twitter-bootstrap-4-tutorial/bootstrap-navs.php]

References

- https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/

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

- https://www.w3schools.com/bootstrap5/index.php

ทำ magazine

menu จะดูปกแบบไหนก็ได้

Section

เอาปกมาใส่ในเว็บ ปกกรุ๊ป แล้วเอาลิ้งค์ มาทิ้ง ต้องเปิด URL

ต้นฉบับ
ประกอบ

เนื้อหา

มี 7 section/ 10 เรื่อง

วิธีต่างที่

(คลิกเพื่อไปข้างบน)