Topic:
- Introduction to basic concepts of jQuery
- Introduction to basic concepts of Bootstrap

Objectives:
Students are expected to be able to:
1. Understand the basic concepts of jQuery and Bootstrap
2. Implementing jQuery and Bootstrap
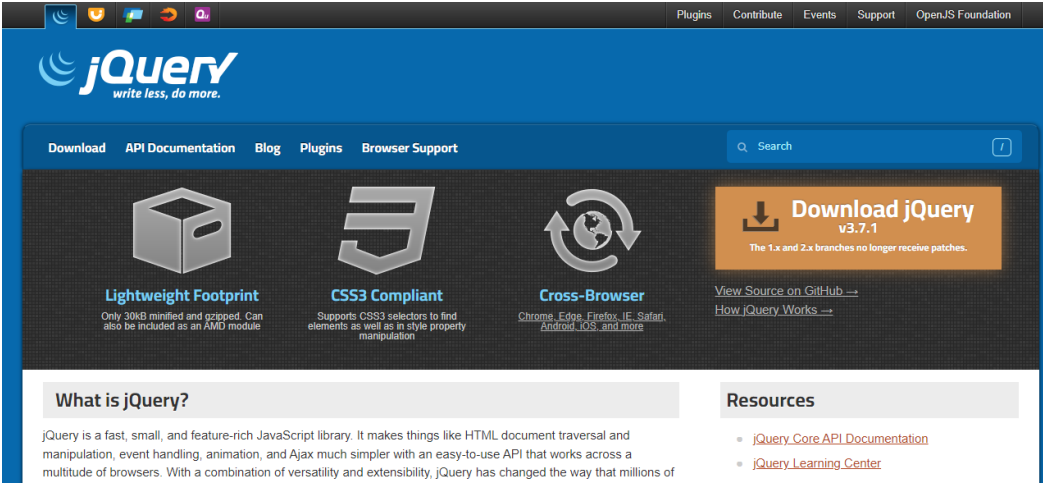
Introduction

Introduction to jQuery

JQuery was released in 2006 by John Resig. JQuery is a JavaScript library or a collection of "ready-made" JavaScript code/functions. In line with jQuery's slogan, which is "*write less, do more*", jQuery is used to make it easier to compile javaScript code on HTML files. jQuery's syntax is designed in such a way that it makes it easier for programmers to navigate documents, select DOM elements, apply animations, apply *events*, and build AJAX applications. The advantages of using jQuery include:

- Comprehensive documentation and tutorials
  The functions provided are well documented along with examples of their use, read on the site http://jquery.com this makes it easier to learn jquery.
- Short and Clear
   jQuery prioritizes writing concise and clear code through the sharing of features such as chain-able functions and short function names.
- Addresses cross-browser compatibility issues
  JavaScript engines in various browsers are different from each other, so scripts that run in one browser can fail in another. jQuery addresses any of these inconsistencies between browsers and provides an interface that works consistently across all browsers.
- Extensible
  jQuery makes framework development very simple. Various new events, elements, and methods can be easily added and reused as plugins.

Practical Section 1. Preparing to Use JQuery

There are 2 ways to input jQuery files into HTML: download and access jQuery locally or use a CDN (*Content Delivery Network*).

- download and access jQuery locally
  In order to use jQuery, users must download the jQuery file and then associate it with the `<script>` tag. Then follow these steps:

Step	Description
1	Create a new directory "**week6**".
2	Open the official jQuery website on http://jquery.com/ . then it will appear the main page of jQuery, click the "Download jQuery" button.
3	Click link "Download the uncompressed, development version of jQuery 3.7.1. Then right clict and choose \"Save as ..".
4	Save jquery-3.5.1.js files in the **"week6"** directory.
| 5 | To connect the jQuery file with HTML, add a **<script tag>** by changing the address of the jquery-3.7.1.js to the version we have downloaded i.e. jquery-3.7.1.js. Create a new file and then type in the code like the following example:<br>```html
1 <!DOCTYPE HTML>
2 <html>
3 <head>
4     <title>Praktikum jQuery</title>
5     <script src="jquery-3.3.1.js"></script>
6 </head>
7 <body>
8 </body>
9 </html>
```<br>The above HTML code must be stored in 1 directory with the jquery-3.7.1.js file |

- input jQuery files using CDN (*Content Delivery Network*). CDN is a global repository that can be accessed by anyone. Using a CDN does not require downloading jQuery files, but in order for jQuery to run, it must always be connected to the internet. There are many CDN options, such as Google CDN and Microsoft CDN, how to use them is as follows:

1. Google CDN

```
1 <!DOCTYPE html>
2 <html>
3     <head>
4         <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
5     </head>
6     <body>
7     </body>
8 </html>
```

Changed with the last version

2. Microsoft CDN

```
1 <!DOCTYPE html>
2 <html>
3     <head>
4         <script src="https://ajax.aspnetcdn.com/ajax/jQuery/jquery-3.3.1.min.js"></script>
5     </head>
6     <body>
7     </body>
8 </html>
```

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In this practicum, you are advised to use jQuery by downloading/accessing jQuery locally. This aims to avoid the possibility of problems in the internet connection.

Practical Section 2. Document Ready Function

Once you understand how to use jQuery. Before executing the next code, jQuery will make sure that all the desired elements or elements are already displayed on the web page, the function to be used is the document **ready()** function. Here is the basic syntax of the document **ready()** function:

```
$(document).ready(function()(
  jQuery code line
});
```

To understand the function of document **ready()** perform the following practicum steps:

Step	Description
1	Create a new HTML file named **ready.html** in the **week6** directory, type the following program code:

```
1 <!DOCTYPE html>
2 <html>
3     <head>
4         <script type="text/javascript" src="jquery-3.3.1.js"></script>
5         <script>
6         $(document).ready(function(){
7             $("#button1").click(function(){
8                 alert("Ini Praktikum Minggu ke-4");
9             });
10         });
11         </script>
12     </head>
13     <body>
14         <input type="button" id="button1" value="Klik Saya!"/>
15     </body>
16 </html>
```

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3

2	Save the file, then open a browser and run it by typing **localhost/week6/ready.html**	
3	After the program is run, click the "Click Me!" button, then observe the display on the browser.	
4	Next, modify the file by removing the program code on lines 6 and 10, so that the program code looks like this:	

```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <script type="text/javascript" src="jquery-3.3.1.js"></script>
5          <script>
6
7              $("#button1").click(function(){
8                  alert("Ini Praktikum Minggu ke-4");
9              });
10
11         </script>
12     </head>
13     <body>
14         <input type="button" id="button1" value="Klik Saya!"/>
15     </body>
16 </html>
```

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5	Save the file. Then open a browser and run the program code by typing **localhost/week6/ready.html**
6	After the program is run, click the "Click Me!" button, then observe the display on the browser.
7	From your observations, what do you understand from the document **ready()** function? Record the results of your observations and explanations of your understanding below (Question No. 1)

Practical Section 3. Selector

It was previously explained that jQuery makes it easy for us to simplify JavaScript code. In other words, jQuery allows for much shorter writing of JavaScript program code. For example, if there is an HTML element like the following:

```
<button id="button"> Click Me! </button>
```

in JavaScript to find HTML elements use the getElementById() method, so that to access the <button> element that has id="button" is:

```
var x = document.getElemenById("button");
```

with jQuery selector the program code writing becomes shorter, to look for HTML elements with id="button" is:

```
var x = $("#button");
```

4

The jQuery selector functions to select/retrieve HTML elements to be manipulated. Here are some ways the `selector` selects/retrieves HTML elements:

- selector tag
  Use the Tag Selector by directly mentioning the name of the element tag, such as paragraph `<p>`, image `<img>`, header `<h1>`, and so on.
- id
  Using the id selector is to include a hashtag sign `(#)` before the element's name
- class
  Using a selector class is to include a period `(.)` before the name of the element.

The jQuery selector syntax is usually created to select HTML elements and perform actions on the selected elements. Here is the basic syntax of the jQuery selector:

```
$(selector).action()
```

- dollar sign ($), to define jQuery
- `(selector),` to indicate the selected element
- `action(),` is the jQuery action that will be performed on the selected element

To understand the use of `tag,` `id,` and `class` selectors follow the steps of the practicum below:

Step	Description
| 1 | Create a new HTML file named **selector.html** in the **week6** directory, type the following program code into the file. <br><br> Changed with the last version <br><br> ```
1 <!DOCTYPE html>
2 <html>
3    <head>
4        <script src="jquery-3.3.1.js"></script>
5        <script>
6            $(document).ready(function(){
7                $("button").click(function(){
8                    $("h2").hide();
9                    $(".subjudul").hide();
10                   $("#paragraf").hide();
11                   $("#paragraf.dua").hide();
12                   $("div p.paragraf").hide();
13               });
14           });
15       </script>
16   </head>
17   <body>
18       <h2> Ini adalah Judul Bab</h2>
19       <h3 class="subjudul"> Ini adalah Sub Judul Bab</h3>
20       <p id="paragraf"> Ini adalah paragraf pertama </p>
21       <p id="paragraf" class="dua"> Ini adalah paragraf kedua </p>
22       <div>
23           <p class="paragraf">
24               Ini adalah paragraf ketiga
25           </p>
26       </div>
27       <p> Ini paragraf yang akan tetap ditampilkan</p>
28       <button> Klik Saya! </button>
29   </body>
30 </html>
``` |
| 2 | Save the file, then open a browser and run the program code by typing **localhost/week6/selector.html** |
| 3 | After the program is run, click the "Click Me!" button, then observe the display on the browser. |

4	Record and explain your observations after running the program code above. (Question No. 2)
5	In the program code in step number 1, there are some jQuery selector writings. Write down and explain what jQuery Selector is in your code. (Question No. 3)

Practical Section 4. Events

An event is something that the user can do to an HTML element. Examples *of events* are *click*, *double click*, *mouseover* (the mouse cursor is on top of the element), *mouseout* (the mouse cursor is out of the top of the element), and so on. The basic syntax of jQuery events is as follows:

```
$("jquery_selector").jquery_event(function() {
    ... event out ... });
```
- dollar sign ($), to define jQuery
- ("jquery_selector"), to indicate the selected element
- jquery_event(function(), is an event that will be performed on the selected element

To understand the use of jQuery events follow these steps:

Step	Description

1	Create a new HTML file named **event.html** in the **week6** directory, then type the following program code:
	```1 <!DOCTYPE html>```
	```2 <html>```
	```3 <head>```
	```4 <style>```
	```5 #paragraf {```

```
  6                  width:600px;
  7                  height:80px;
  8                  background-color:pink;
  9                  line-height:80px;
 10                  text-align:center;
 11                  font-size:30px;
 12              }                              Changed with the last version
 13          </style>
 14          <script src="jquery-3.3.1.js"></script>
 15          <script>
 16              $( document ).ready(function() {
 17
 18                  $( "#paragraf" ).click(function() {
 19                      $( "#paragraf" ).css( "color", "white" );
 20                  });
 21
 22                  $( "#paragraf" ).mouseover(function() {
 23                      $( "#paragraf" ).css( "background-color", "silver" );
 24                  });
 25
 26                  $( "#paragraf" ).mouseout(function() {
 27                      $( "#paragraf" ).css( "background-color", "blue" );
 28                  });
 29
 30                  $( "#paragraf" ).dblclick(function() {
 31                      $( "#paragraf" ).css( "border", "solid 3px black" );
 32                  });
 33              });
 34          </script>
 35      </head>
 36      <body>
 37          <p id="paragraf">Praktikum Minggu ke-4 JQuery</p>
 38      </body>
 39 </html>
```

2	Save the file, then open a browser and run the program code by typing **localhost/week6/event.html**
3	Once the program is running, do the following: - Place the mouse cursor over the element - Move the mouse cursor out the element - one-click on the element - Double-click on the element Then observe the changes that occur
4	Record and describe the changes that occurred based on your observations (Question No. 4)

Practical Section 5. Hide and Show Effect

JQuery provides "ready-to-use" functions that can be used to give a variety of interesting visual effects to elements. The basic syntax of jQuery effects is:

```
$("jquery_selector").jquery_effect({parameter}, {value})
```

- dollar sign ($), to define jQuery
- ("jquery_selector"), to indicate the selected element
- jquery_effect({parameter}, {value}), is the effect that will be applied to the element. Effects can have certain parameters and values to set the effect to be given.

There are various effects that jQuery provides, including `hide()` to hide elements and `show()` to show elements. There are also `fadeIn()`, `fadeOut()`, and `fadeTo()` effects that are used to show or fade elements slowly, making the transitions look smoother. To understand jQuery Effect, follow these steps:

Step	Description
1	Create a new HTML file named **hideshow.html** in the **week6** directory, then type the following program code:

	``html
	1 <!DOCTYPE html>
	2 <html>
	3 <head>
	4 <link rel="stylesheet" type="text/css" href="style.css"/>
	5 <script src="jquery-3.3.1.js"></script> (Changed with the last version)
	6 <script>
	7 $(document).ready(function(){
	8 $(".tomboll").click(function()
	9 $("div").hide();
	10 });
	11 $(".tombol2").click(function(){
	12 $("div").show();
	13 });
	14 $(".tombol3").click(function(){
	15 $("#div1").fadeOut();
	16 $("#div2").fadeOut("slow");
	17 $("#div3").fadeOut(3000);
	18 });
	19 $(".tombol4").click(function(){
	20 $("#div1").fadeIn();
	21 $("#div2").fadeIn("slow");
	22 $("#div3").fadeIn(3000);
	23 });
	24 $(".tombol5").click(function(){
	25 $("#div1").fadeTo("slow", 0.15);
	26 $("#div2").fadeTo("slow", 0.4);
	27 $("#div3").fadeTo("slow", 0.7);
	28 });
	29 });
	30 </script>
	31 </head>
	32 <body>
	33 <p>JQuery Effect</p>
	34 <div id="div1" class="kotak"></div>
	
	35 <div id="div2" class="kotak"></div>
	
	36 <div id="div3" class="kotak"></div>
	
	37 <button class="tomboll">Sembunyikan</button>
	38 <button class="tombol2">Tampilkan</button>
	39 <button class="tombol3">Fade Out</button>
	40 <button class="tombol4">Fade In</button>
	41 <button class="tombol5">Fade To</button>
	42 </body>
	43 </html>
	``

2	In the same directory, create a new file named **style.css** then type the following program code:

8

```
 1 .kotak{
 2     width:80px;
 3     height:80px;
 4 }
 5
 6 #div1{
 7     background-color:red;
 8 }
 9
10 #div2{
11     background-color:green;
12 }
13
14 #div3{
15     background-color:blue;
16 }
```

3	Save the file, then open a browser and run the program code by typing **localhost/week6/hideshow.html**
4	After the program clicks the buttons in order, then observe the changes that occur.
5	Record and describe the changes that occurred based on your observations (Question No. 5)

Practical Section 6. Slide Effect

The slide effect that jQuery provides is used to remove or display elements as if they were opening/closing something. The basic syntax used is the same as the syntax for adding `hide()` or `show()` effects, but uses a different jQuery effect function.

There are 3 types of slide effects, namely `slideUp, slideDown,` and `slideToogle.` To understand the effect of slides, follow these practicum steps:

Step	Description
1	Create a new HTML file named **slide1.html** in the **week6** directory, then type the following program code:

```
 1 <!DOCTYPE html>
 2 <html>
 3     <head>
 4         <link rel="stylesheet" type="text/css" href="styleSlide.css"/>
 5         <script src="jquery-3.3.1.js"></script>
 6         <script>
 7             $(document).ready(function(){
 8                 $("#flip").click(function(){
 9                     $("#kotak2").slideUp("slow");
10                 });
11             });
12         </script>
13     </head>
14     <body>
15         <div id="flip">Klik untuk Efek Slide</div>
16         <div id="kotak2">Selamat Pagi</div>
17     </body>
18 </html>
```

9

2	In the same directory, create a new file named **styleSlide.css** and type the following program code:
| | ```css
1 #kotak2, #flip {
2   padding:5px;
3   text-align:center;
4   background-color:#a7dbd8;
5   border: solid 2px #e0e4cc;
6   border-radius: 5px;
7 }
8
9 #kotak2 {
10   padding: 50px;
11 }
``` |
3	Save the file, then open a browser and run the program code by typing **localhost/week6/slide1.html**
4	Once the program is running, click on the "Click for Slide Effect" panel, then observe the changes that occur
5	Record and explain the changes that occurred based on your observations (Question No. 6)
6	Create a new HTML file file named **slide2.html**, copy the program code in step 1 and modify it by changing a few lines of program code, so that the program code looks like this:

```html
1 <!DOCTYPE html>
2 <html>
3     <head>
4         <link rel="stylesheet" type="text/css" href="styleSlide.css"/>
5         <script src="jquery-3.3.1.js"></script>
6         <script>
7             $(document).ready(function(){
8                 $("#flip").click(function(){
9                     $("#kotak2").slideDown("slow");
10                });
11            });
12        </script>
13    </head>
14    <body>
15        <div id="flip">Klik untuk Efek Slide</div>
16        <div id="kotak2 style=display:none;">Selamat Pagi</div>
17    </body>
18 </html>
```

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7	Save the file, then open a browser and run the program code by typing **localhost/week6/slide2.html**
8	Once the program is running, click on the "Click for Slide Effect" panel, then observe the changes that occur.
9	Record and describe the changes that occur based on your observations (Question No. 7)

10	Create a new HTML file named **slide3.html**, copy the program code in step 1 and modify it by changing a few lines of program code, so that the program code looks like this:

```html
 1 <!DOCTYPE html>
 2 <html>
 3     <head>
 4         <link rel="stylesheet" type="text/css" href="styleSlide.css"/>
 5         <script src="jquery-3.3.1.js"></script>
 6         <script>
 7             $(document).ready(function(){
 8                 $("#flip").click(function(){
 9                     $("#kotak2").slideToggle("slow");
10                 });
11             });
12         </script>
13     </head>
14     <body>
15         <div id="flip">Klik untuk Efek Slide</div>
16         <div id="kotak2">Selamat Pagi</div>
17     </body>
18 </html>
```

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11	Save the file, then open a browser and run the program code by typing **localhost/week6/slide3.html**
12	Once the program is running, click on the "Click for Slide Effect" panel, then observe the changes that occur.
13	Record and describe the changes that occurred based on your observations (Question No. 8)

Practical Section 7. Animation

Animation effects are used to move an element. The `animate()` method can be used to create animation effects. The jQuery `animate()` syntax is as follows:

```
$("jquery_selector").animate({parameter},{value})
```

- dollar sign ($), to define jQuery
- `("jquery_selector"),` to indicate the selected element
- Method `animate({parameter},{value}),` has parameters and values. Parameters define the properties of the element to be animated, e.g. "top", "left". Value defines the value of a parameter, for example "fast", "slow", or it can be in milliseconds (5000 = 5 seconds).

Method `Animate()`
To understand the use of the `animate()` method in jQuery, follow these steps:

Step	Description
1	Create a new HTML file named **animate.html** in the **week6** directory, then type the following program code:

11

```
 1 <!DOCTYPE html>
 2 <html>
 3     <head>
 4         <link rel="stylesheet" type="text/css" href="styleAnimate.css"/>
 5         <script src="jquery-3.3.1.js"></script>
 6         <script>
 7         $(document).ready(function(){
 8             $("button").click(function(){
 9                 $("div").animate({left: 300});
10             });
11         });
12         </script>
13     </head>
14     <body>
15         <button type="button">Start Animation</button>
16         <div class="box"></div>
17     </body>
18 </html>
```

(Changed with the last version)

| 2 | In the same directory, create a new file named **styleAnimate.css** and then type the following program code:<br><br>```
 1 .box{
 2     width: 100px;
 3     height: 100px;
 4     background: #9d7ede;
 5     margin-top: 30px;
 6     border-style: solid;
 7     border-color: #6f40ce;
 8     position:relative;
 9     }
``` |
3	Save the file, then open a browser and run the program code by typing **localhost/week6/animate.html**
4	Once the program is running, click the "Start Animation" button, then observe the changes that occur.
5	Record and describe the changes that occurred based on your observations (Question No. 9)

Method Chaining

Chaining inside jQuery makes it possible to assign multiple animation methods into a single element using a single *statement*. Follow these steps to understand method chaining:

Step	Description
1	Create a new HTML file named **chaining.html** in the **week6** directory, and then type the following HTML code:

```
 1 <!DOCTYPE html>
 2 <html>
 3    <head>
 4        <link rel="stylesheet" type="text/css" href="styleAnimate.css"/>
 5        <script src="jquery-3.3.1.js"></script>
 6        <script>
 7        $(document).ready(function(){
 8            $("button").click(function(){
 9                $(".box")
10                    .animate({width: "300px"})
11                    .animate({height: "300px"})
12                    .animate({marginLeft: "150px"})
13                    .animate({borderWidth: "10px"})
14                    .animate({opacity: 0.5});
15            });
16        });
17        </script>
18    </head>
19    <body>
20        <button type="button">Start Animation</button>
21        <div class="box"></div>
22    </body>
23 </html>
```

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Step	Description
2	Save the file, then open a browser and run the program code by typing **localhost/week6/chaining.html**
3	Once the program is running, click the "Start Animation" button, then observe the changes that occur.
4	Record and explain the changes that occur based on your observations (Question No. 10)

Practical Section 8. JQuery DOM Manipulation

JQuery provides methods for efficiently manipulating the DOM (*Document Object Model*). Here are some of the methods used to manipulate the DOM:

- text(), sets or returns the text of the selected element
- html(), set or *return* the content of the selected element while retaining the HTML tags present in the element
- val(), set or *return* the value of the form

Fetching (GET) Content from HTML Elements

Practicum steps:

Step	Description
1	Create a new HTML named **get.html** in the **week6** directory, then type the following program code:

Changed with the last version

```
 1 <!DOCTYPE html>
 2 <html>
 3    <head>
 4        <script src="jquery-3.3.1.js"></script>
```

13

```
 5        <script>
 6            $(document).ready(function(){
 7              $("#btn1").click(function(){
 8                 alert($("#test1").text())
 9              });
10              $("#btn2").click(function(){
11                 alert($("#test2").html())
12              });
13              $("#btn3").click(function(){
14                 alert($("#test3").val())
15              });
16            });
17        </script>
18      </head>
19      <body>
20          <p id="test1">This is the first paragraph.</p>
21          <p id="test2">This is <b> another </b> paragraph.</p>
22
23          <p>Your Name: <input type="text" id="test3"></p>
24
25          <button id="btn1">Get Text</button>
26          <button id="btn2">Get HTML</button>
27          <button id="btn3">Get Value</button>
28      </body>
29 </html>
```

2	Save the file, then open a browser and run the program code by typing **localhost/week6/get.html**
3	Once the program is running, click the buttons in order, then observe the changes.
4	Record your observations and explain the differences between the get text(), html(), and val() methods (Question No. 11)

Modifying (SET) Content from HTML Elements

Practicum steps:

Step	Description
1	Create a new HTML file named **set.html** in the **week6** directory, then type the following program code:

```
 1 <!DOCTYPE html>
 2 <html>
 3     <head>
 4         <script src="jquery-3.3.1.js"></script>          Changed with the last version
 5             <script>
 6             $(document).ready(function(){
 7               $("#btn1").click(function(){
 8                  $("#test1").text("<b>Hello World</b>");
 9               });
10               $("#btn2").click(function(){
11                  $("#test2").html("<b>Hello World!</b>");
12               });
13               $("#btn3").click(function(){
14                  $("#test3").val("Polinema");
```

```
15                          });
16                      });
17                  </script>
18              </head>
19              <body>
20                  <p id="test1">This is the first paragraph.</p>
21                  <p id="test2">This is <b> another </b> paragraph.</p>
22
23                  <p>Your Name: <input type="text" id="test3"></p>
24
25                  <button id="btn1">Set Text</button>
26                  <button id="btn2">Set HTML</button>
27                  <button id="btn3">Set Value</button>
28          </body>
29 </html>
```

2	Save the file, then open a browser and run the program code by typing **localhost/week6/set.html**
3	Once the program is running, click the buttons in order, then observe the program code as it runs.
4	Record your observations and explain the differences between the set text(), html(), and val() methods (Question No. 12)

Adding and Removing Content from HTML Elements

JQuery provides methods for adding and removing HTML elements. Some of the methods that can be used are `append()` and `remove()`. Here are the practicum steps to understand these methods:

Step	Description
| 1 | Create a file named **styleTable.css** in the **week6** directory,   then type the following code:<br><br>```
1 form{
2     margin: 20px 0;
3     }
4
5 form input, button{
6     padding: 5px;
7     }
8
9 table{
10    width: 100%;
11    margin-bottom: 20px;
12    border-collapse: collapse;
13    }
14
15 table, th, td{
16    border: 1px solid #cdcdcd;
17    }
18
19 table th, table td{
20    padding: 10px;
21    text-align: left;
22    }
``` |
| 2 | Create a new HTML file named **addremove.html** in the **week6** directory, then type the following program code: |

```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <link rel="stylesheet" type="text/css" href="styleTable.css"/>
5          <script src="jquery-3.3.1.js"></script>
6          <script>
7              $(document).ready(function(){
8                  //menambah baris
9                  $(".add-row").click(function(){
10                     var name = $("#name").val();
11                     var email = $("#email").val();
12                     var markup = "<tr><td><input type='checkbox' name='record'></td><td>"
13                     + name + "</td><td>" + email + "</td></tr>";
14                     $("table tbody").append(markup);
15                 });
16
17                 //menghapus baris yang di centang
18                 $(".delete-row").click(function(){
19                     $("table tbody").find('input[name="record"]').each(function(){
20                         if($(this).is(":checked")){
21                             $(this).parents("tr").remove();
22                         }
23                     });
24                 });
25             });
26         </script>
27     </head>
28     <body>
29         <form>
30             <input type="text" id="name" placeholder="Name">
31             <input type="text" id="email" placeholder="Email Address">
32             <input type="button" class="add-row" value="Add Row">
33         </form>
34         <table>
35             <thead>
36                 <tr>
37                     <th>Select</th>
38                     <th>Name</th>
39                     <th>Email</th>
40                 </tr>
41             </thead>
42             <tbody>
43                 <tr>
44                     <td><input type="checkbox" name="record"></td>
45                     <td>Tony Stark</td>
46                     <td>tonystark@mail.com</td>
47                 </tr>
48             </tbody>
49         </table>
50         <button type="button" class="delete-row">Delete Row</button>
51     </body>
52 </html>
```

Changed with the last version

3	Save the file, then open a browser and run the program code by typing `localhost/week6/addremove.html`
4	Once the program is running, do the following: - Fill out the form with your name and email address - Click "Add Row" - Mark the row you added - Click "delete row" Then observe the changes
5	Record and explain your observations (Question No. 13)

Practical Section 9. JQuery CSS Manipulation

JQuery also has the ability to manipulate CSS. There are several functions, namely:

- addClass(), adds one or more classes to the selected element
- removeClass(), removes one or more classes into the selected element
- css(), set and return the style attribute

Step	Description
| 1 | Create a file named **styleCSS.css** in the **week6** directory, then type the following code:<br><br>```css
1 .important {
2   font-weight: bold;
3   font-size: xx-large;
4 }
5
6 .blue {
7   color: blue;
8 }
``` |
| 2 | Create a new HTML file named **cssmanipulation.html** in the **week6** directory, then type the following program code:<br><br>```html
1 <!DOCTYPE html>
2 <html>
3    <head>
4       <link rel="stylesheet" type="text/css" href="styleCSS.css">
5       <script src="jquery-3.3.1.js"></script>
6       <script>
7       $(document).ready(function(){
8         $(".btn1").click(function(){
9           $("h1, h2, p").addClass("blue");
10          $("div").addClass("important");
11        });
12        $(".btn2").click(function(){
13          $("h1, h2, p").removeClass("blue");
14        });
15        $(".btn3").click(function(){
16          $("h1, h2, p, div").css({"background-color": "yellow", "font-size": "100%"});
17   });
18        });
19       </script>
20    </head>
21    <body>
22       <h1>Heading 1</h1>
23       <h2>Heading 2</h2>
24       <p>This is a paragraph.</p>
25       <p>This is another paragraph.</p>
26       <div>This is some important text!</div><br>
27
28       <button class="btn1">Add classes to elements</button>
29       <button class="btn2">Remove classes to elements</button>
30       <button class="btn3">Set classes to elements</button>
31    </body>
32 </html>
```<br><br>*Changed with the last version* (annotation pointing to line 5) |
3	Save the file, then open a browser and run the program code by typing **localhost/week6/cssmanipulation.html**
4	Once the program is running, click the buttons in order, then observe the program code as it runs.
5	Record and explain your observations (Question No. 14)

Practical Section 10. Create a Slide Show

In this practicum, a slideshow is made to display photos. Slideshows are created without using UI plug-ins, but use several jQuery functions including: `appendTo()`, `fadeIn()`, `fadeOut()`, `delay()` using method chaining which allows to pass multiple animation methods into a single element using a single statement.

Step	Description
1	Create a new folder named **img** inside **week6**
2	Put three .jpg formatted images, rename them to "gambar1.jpg, gambar2.jpg, and gambar3.jpg", then place them in the **week6/img** directory
| 3 | Create a new CSS file named **styleSlideShow.css** then type the following code: <br><br> ```css
1 #slider {
2  padding:10px 0 10px;
3  position:relative;
4  width:300px;
5  height:300px;
6 }
7
8 #slider img{
9  width:300px;
10  height:300px;
11  position:absolute;
12  -webkit-border-radius:5px 5px 5px 5px;
13  border-radius:5px;
14  -moz-border-radius:5px 5px 5px 5px;
15 }
16
17 .slidertitle{
18  width:280px;
19  margin-top:265px;
20  text-align:center;
21  position:absolute;
22  padding:10px;
23  -webkit-border-radius:0px 0px 5px 5px;
24  border-radius:0px 0px 5px 5px;
25  -moz-border-radius:5px 5px 5px 5px;
26  color:#FFF;
27  background-color:rgba(12, 22, 23, 0.50);
28 }
``` |
| 4 | Create a new HTML file named **slideshow.html** in the **week6** directory, then type the following program code: <br><br> ```html
1 <!DOCTYPE html>
2 <html>
3     <head>
4         <link rel="stylesheet" type="text/css" href="styleSlideShow.css">
5         <script src='jquery-3.3.1.js'></script>
6         <script>
7             var i=0;
8             $(document).ready(function () {
9                 $('.slidertitle, #slider img').hide();
10                 showNextImage();
11                 setInterval('showNextImage()', 3000);
12             });
13
14             function showNextImage() {
15                 i++;
16                 $('#sliderImage' + i).appendTo('#slider').fadeIn(1100).delay(1100).fadeOut(1100);
17                 $('#title' + i).appendTo('#slider').fadeIn(1100).delay(1100).fadeOut(1100);
18                 if(i==3){
19                     i=0;
20                 }
21             };
22         </script>
23     </head>
``` <br> *Changed with the last version* (annotation pointing to line 5) |

```
24        <body>
25            <div id="slider">
26                <img id="sliderImage1" src="img/gambar1.jpg">
27                <div class="slidertitle" id="title1">Gambar1</div>
28
29                <img id="sliderImage2" src="img/gambar2.jpg">
30                <div class="slidertitle" id="title2">Gambar2</div>
31
32                <img id="sliderImage3" src="img/gambar3.jpg">
33                <div class="slidertitle" id="title3">Gambar3</div>
34            </div>
35        </body>
36 </html>
```

5	Save the file, then open a browser and run the program code by typing **localhost/week6/slideshow.html**
6	Observe the program code as it runs.
7	Record and explain your observations (Question No. 15)

Practical Section 11. JQuery UI Plugin

jQuery UI (*user interface*) is the most popular plugin among jQuery programmers. Because to the point that it is made into one manual with the jQuery manual on the official website. jQuery UI was created by Paul Bakaus who worked with Stefan Petre to create sophisticated effects and components of jQuery's complementary libraries, such as accordion and datepicker.

Follow these steps to perform the jQuery UI installation:

Step	Description
1	Download jQuery UI in http://jqueryui.com/download/ choose version (stable)
2	The downloaded file is still a .zip file. to use it, extract the jQuery file (jquery-ui-1.12.1.zip) in the `week6/jquery-ui-1.14.0`
3	To connect the jQuery UI Plugin file with HTML, add `the <script>` tag with the address `jquery-ui-1.14.0/jquery-ui.js`. Create a new HTML file and then type in the code like the following example:

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Datepicker

Datepicker functions to retrieve dates from the calendar system on the computer, making it easier for us to choose dates, because they are displayed in their entirety with an attractive appearance. To use the datepicker, follow these steps:

Step	Description

1	Create a new HTML file named **date.html** in the **week6** directory, and type the following code:
	
	 ``html
	1 <!DOCTYPE html>
	2 <html>
	3 <head>
	4 <link rel="stylesheet" href="jquery-ui-1.12.1/jque Changed with the last version
	5 <script src="jquery-3.3.1.js"></script>
	6 <script src="jquery-ui-1.12.1/jquery-ui.js"></script>
	7 <script>
	8 $(function() {
	9 $("#date_ex").datepicker();
	10 });
	11 </script>
	12 </head>
	13 <body>
	14 Selected Date: <input type="text" id="date_ex">
	15 </body>
	16 </html>
	``

2	Save the file, then open a browser and run the program code by typing **localhost/week6/date.html**
3	Record and explain your observations (Question No. 15)

Accordion

Accordion functions to group content in separate panels. Web visitors can open and close the desired panels. Follow these steps:

Step	Description

1	Create a new HTML file named **accordion.html** in the **week6** and type the following code:
	
	 ``html
	1 <!DOCTYPE html>
	2 <html> Changed with the last version
	3 <head>
	4 <link rel="stylesheet" href="jquery-ui-1.12.1/jquery-ui.css">
	5 <script src="jquery-3.3.1.js"></script>
	6 <script src="jquery-ui-1.12.1/jquery-ui.js"></script>
	7 <script>
	8 $(function() {
	9 $("#jQuery_accordion").accordion();
	10 });
	11 </script>
	12 </head>
	13 <body>
	14 <div id="jQuery_accordion">
	15 <h3>header 1</h3>
	16 <p> This is section 1.
	17 Place your content here in paragraphs or use div elements etc. </p>
	18 <h3>header 2</h3>
	19 <p> This is section 2. You can also include images like this:
	20
	 </p>
	21 <h3>header 3</h3>
	22 <div>
	23 <p>This is section 3. Content can include listing as well.
	24
	``

20

| | | ```
25          <li>item l</li>
26          <li>Item 2</li>
27          <li>Item 3</li>
28      </ol>
29      </p>
30    </div>
31  </div>
32 </body>
33 </html>
``` |
|---|---|---|
| 2 | Save the file, then open a browser and run the program code by typing `localhost/week6/accordion.html` |
| 3 | Record and explain your observations (Question No. 16) |

Introduction to AJAX

AJAX stands for *Asynchronous Javascript and Xml*. AJAX is not a programming language, but it is a technique for creating better, faster and more interactive web applications. With AJAX, JavaScript can load data from the server into a web browser without reloading the entire page. What AJAX does is use the JavaScript-based XMLHttpRequest object to send and receive Description to and from a web server.

XMLHttpRequest
XMLHttpRequest is a JavaScript object. Here is the code used to create the XMLHttpRequest object:

```
<script language="javascript" type="text/javascript">
    var xmlHttp = new XMLHttpRequest();
</script>
```

To get and send data from/to a database or file on a server using traditional javascript, you need to create an HTML Form. And the user has to click the "submit" button to send/get Description, wait for a response from the server, then a new page in the form of results will be loaded. Since the server always gives a new page every time the user presses the submit button, a simple web application will run slowly and will be less user-friendly.

With Ajax, javascript will communicate directly with the server through the javascript object that is the XMLHttpRequest. With the XMLHttpRequest object, a web page can make a request to, and get a response from, the web server without reloading the entire page. The user will stay on the same page. Even the user will not know if there is data sent and received from the server, because javascript performs data transactions behind the scenes. Requests are sent *asynchronously*, which means that JavaScript code (and the user) doesn't wait on the server to respond. So that users can continue to enter data and use the application. The following image shows a comparison of a traditional web application and a web application that uses AJAX.
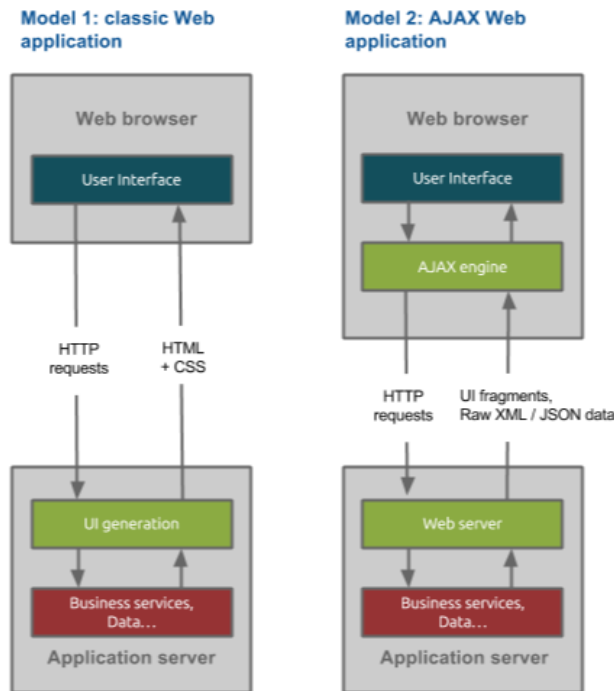
Figure 1. Comparison of traditional and AJAX web applications

Practical Section 12. JQuery AJAX

Different browsers implement AJAX differently. If you adopt the JavaSricpt way, different code is required for different browsers. For this reason, JQuery provides a solution to simplify the implementation of AJAX so that it can be used across browsers.

JQuery `Load()`

One of the functions of jQuery is `load()`. The `load()` method is used to load data from the server and place the returned HTML to the selected element. The basic syntax of the `load()` method is:

```
$(selector).load(URL, data, complete);
```

- URL, is the address or name of the file on the server to be retrieved
- Data, optional, is a key-value pair that will be sent to the server
- Complete, optional, is a function that is executed when data is retrieved.

To understand the `load() function,` follow these steps:

Step	Description
1	Put a .jpg formatted image, rename it to "gambar.jpg", then place the image in the **week6/img**
2	Create a new HTML file named **test-content.html** then type the following code: ```html\n1 <!DOCTYPE HTML>\n2 <html>\n3 <head>\n4 </head>\n5 <body>\n6 <h1>Tutorial AJAX sederhana</h1>\n7 <p id="hint">Tutorial Fungsi Load()</p>\n8 <p><img src="img/gambar.jpg"></p>\n9 </body>\n10 </html>\n```
4	Create a new HTML file named **home.html** and then type the following code:

Changed with the last version

22

```
 1 <!DOCTYPE>
 2 <html>
 3    <head>
 4        <script src="jquery-3.3.1.js"></script>
 5        <script>
 6        $(document).ready(function(){
 7            $("button").click(function(){
 8                $("#box").load("/dasarWeb/praktik_jquery/test-content.html");
 9            });
10        });
11        </script>
12    </head>
13    <body>
14        <div id="box">
15            <h2>Klik tombol dibawah untuk menampilkan konten</h2>
16        </div>
17        <button type="button">Klik Saya!</button>
18    </body>
19 </html>
```

5	Save the file, then open a browser and run the program code by typing `localhost/week6/home.html`
6	Once the program is running, click the "Click Me!" button, then observe the program code run.
7	Record and explain your observations (Question No. 17)

Introduction to Bootstrap

Bootstrap is a *front*-end *framework* for faster and easier web development. Bootstrap includes HTML and CSS-based design templates to create common user interface components such as forms, buttons, navigation, dropdowns, alerts, modals, tabs, accordions, carousels, tooltips, and so on. Bootstrap provides CSS classes that are already integrated with javascript and jQuery. So we just need to call the classes that have been provided when we want to create a website that has an attractive design.

Bootstrap makes it easy for its users to create flexible and responsive web layouts. Bootstrap was originally created by a designer and developer at Twitter in the mid-2010s. Before it became an *open-source framework*, Bootstrap was known as the Twitter *blueprint*.
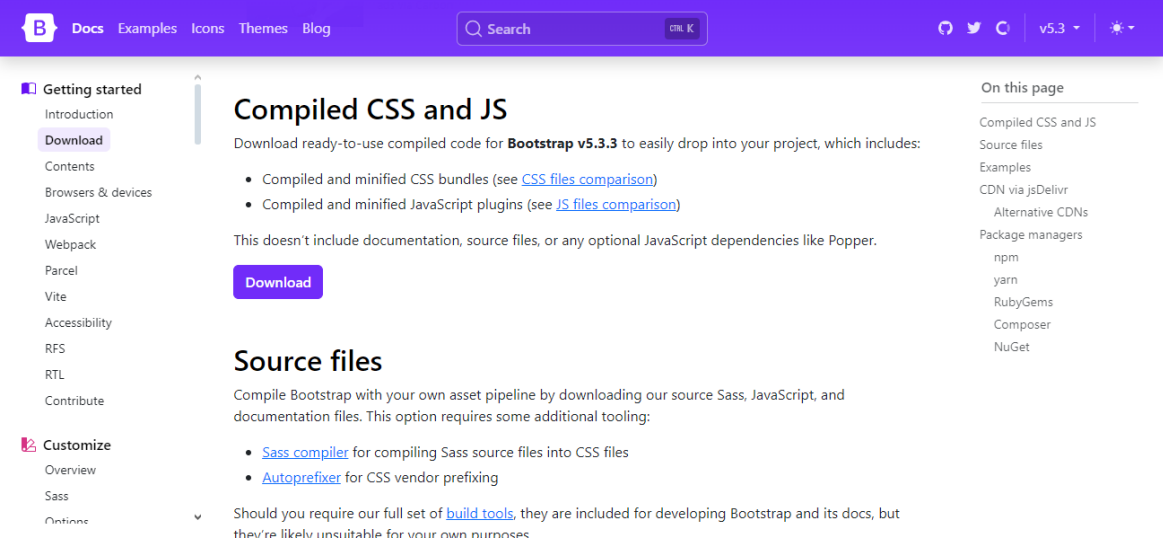
Practical Section 12. Getting Started with Bootstrap

There are several ways to use Bootstrap, including downloading the Bootstrap *package* on the official website or using a CDN (Content Delivery Network).

- **Via Bootstrap File Download**

Follow these steps to use Bootstrap by manually downloading *the package* on getbootstrap.com website.

Step	Description
1	Download Bootstrap in official website: https://getbootstrap.com/ Click the download button.
2	Next, select the Download link and scroll to the "Compiled CSS and JS" section and select the Download button.

Compiled CSS and JS

Download ready-to-use compiled code for **Bootstrap v5.3.3** to easily drop into your project, which includes:

- Compiled and minified CSS bundles (see CSS files comparison)
- Compiled and minified JavaScript plugins (see JS files comparison)

This doesn't include documentation, source files, or any optional JavaScript dependencies like Popper.

Download

Source files

Compile Bootstrap with your own asset pipeline by downloading our source Sass, JavaScript, and documentation files. This option requires some additional tooling:

- Sass compiler for compiling Sass source files into CSS files
- Autoprefixer for CSS vendor prefixing

Should you require our full set of build tools, they are included for developing Bootstrap and its docs, but they're likely unsuitable for your own purposes.

3	Extract file "bootstrap-5.3.3-dist.zip". Copy the css and js folders and paste them in the **week** folder6.
| 4 | Create **index.html** files inside the **week6** folder.<br><br>```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Pengenalan Bootstrap</title>
</head>
<body>
    <h1>Selamat Datang di Website "Nama Mahasiswa"</h1>
    <p>Saya sedang belajar Bootstrap</p>
</body>
</html>
``` |
| 5 | Open **index.html** file through a browser. And take a screenshot of the browser result. |
| 6 | Enter the code to insert Bootstrap on the index.html as below. (Change the sentence with your name)<br><br>```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Pengenalan Bootstrap</title>
    <!-- Menyisipkan Bootstrap-->
    <link rel="stylesheet" href="css/bootstrap.min.css" />
</head>
<body>
    <h1>Selamat Datang di Website "Nama Mahasiswa"</h1>
    <p>Saya sedang belajar Bootstrap</p>
</body>
</html>
```<br><br>Description:<br>- The <meta name="viewport"> tag serves to adjust the web appearance to the user's screen. This tag is mandatory if we want to create a responsive web.<br>- The <link rel="..."> tag serves to insert a bootstrap CSS file into an HTML document. |
| 7 | Reopen **index.html** file through the browser. Show the screenshot **index.html** and also provide the screenshot in step 5. Explain the difference with the result in step 5 (Question No. 17) |

- **Via CDN**

The addition of Bootstrap via CDN (Content Delivery Network) offers performance advantages by reducing loading times, as files are hosted on multiple servers spread across the globe. So when a user requests a file, it will be served from the nearest server. The disadvantage of using a CDN is that we have to be connected to the internet.

Follow these steps for using Bootstrap with a CDN.

Step	Description
1	Open the index.html file inside the **week6** folder. Change the section <link rel= ... > by inserting a CSS Bootstrap link.
2	Many Bootstrap components require the use of JavaScript to work, including jQuery, Popper.js, and JavaScript plugins. Add <script> to enable Javasript. jQuery should come first, then Popper.js, and then the JavaScript plugin from Bootstrap.

3	The code on index.html will look like this.
	 Add the following code to the head.
	
	 ``html
	<link
	href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css
	/bootstrap.min.css" rel="stylesheet" integrity="sha384-
	QWTKZyjpPEjISv5WaRU9OFeRpok6YctnYmDr5pNlyT2bRjXh0JMhjY6hW+A
	LEwIH" crossorigin="anonymous">
	
	<script
	src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/b
	ootstrap.bundle.min.js" integrity="sha384-
	YvpcrYf0tY3lHB60NNkmXc5s9fDVZLESaAA55NDzOxhy9GkcIdslK1eN7N6
	jIeHz" crossorigin="anonymous"></script>
	
	<script
	src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.11.8/dis
	t/umd/popper.min.js" integrity="sha384-
	I7E8VVD/ismYTF4hNIPjVp/Zjvgyol6VFvRkX/vR+Vc4jQkC+hVqc2pM8OD
	ewa9r" crossorigin="anonymous"></script>
	
	<script
	src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/b
	ootstrap.min.js" integrity="sha384-
	0pUGZvbkm6XF6gxjEnlmuGrJXVbNuzT9qBBavbLwCsOGabYfZo0T0to5eqr
	uptLy" crossorigin="anonymous"></script>
	``

4	Reopen index.html file through the browser. Then the result will have a look with the Bootstrap template.

Practical Section 13. Container Bootstrap

Bootstrap also requires container elements to wrap the content of the website. There are two container classes to choose from:

1. .container **class**: provides responsive fixed-width containers.

   The width of the container (max-width) will change on different screen sizes:

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

2. The .container-fluid **class**: provides a full-width container, which covers the entire width of the viewport (it is always 100% wide).

Follow these steps to create a container on Bootstrap:

Step	Description
1	Create `container.html` files inside the `week6` folder. Copy the contents of `the index.html file`

2	Change the code on the body to look like the one below.
	``html
	<body>
	<div class="container">
	    <h1>Selamat Datang di Website "Nama Mahasiswa"</h1>
	    <p>Saya sedang belajar Bootstrap</p>
	</div>
	</body>
	``

3	Run `container.html` on a browser. Resize the browser to smaller, explain what happened and screenshot the result in the browser (Question No. 18)

4	Change the code back to the body part of the `container.html` as shown below.
	``html
	<body>
	<div class="container-fluid">
	    <h1>Selamat Datang di Website "Nama Mahasiswa"</h1>
	    <p>Saya sedang belajar Bootstrap</p>
	</div>
	</body>
	``

5	Run `container.html` on a browser. Change the size of the browser to smaller. Screenshot the result in your browser and explain the difference in step 3 (Question No. 19)

Practical Section 14. Bootstrap Grid System

Bootstrap uses the Grid System to generate responsive website pages. The concept of website layout design uses a bootstrap grid system, namely by dividing a website page into several rows and columns. The Bootstrap grid system is built with flexbox and contains 12 columns. By determining the number of grids, websites built using bootstrap will be responsive to adjust to the width or screen resolution of the accessing device. We can group columns to create wider columns. Make sure that the number of grids is 12 or less, we don't have to use all (12 columns) available.

The Bootstrap 4 grid system has five classes:

1. .col- (extra small device - less than 576 pixels screen width)
2. .col-sm- (small devices - screen width equal to or greater than 576 pixels)
3. .col-md- (medium device - screen width equal to or greater than 768 pixels)
4. .col-lg- (large devices - screen width equal to or greater than 992px)
5. .col-xl- (xlarge devices - screen width equal to or greater than 1200 pixels)

Each class will be scale-up, so if you want to set the same width for sm and md, just specify sm.

We can also create columns of the same width for all devices (extra-small, small, medium, large, and extra-large) using just the .col class, without specifying any column numbers.

Some rules of the Bootstrap 4 grid system:

- Rows should be placed in .container or .container-fluid for proper alignment and padding
- Use row to create horizontal column groups
- Content must be placed in the
- Standard classes such as .row and .col-sm-4 are available to quickly create grid layouts
- A column grid is created by specifying the number of 12 available columns. For example, the same three columns would use three .col-sm-4
- Column widths in percentages, so they can always be adjusted and sized relative to their parent element

Follow these steps to create a Bootstrap grid column:

Step	Description
1	Create **grid.html** files inside the **week6** folder. Copy the contents of **the index.html** file
2	Change the code on the body to look like the one below.

| | ```html
<body>
<div class="container">
    <div class="row">
        <div class="col-md-6 bg-success">Column left 50%</div>
        <div class="col-md-6 bg-warning">Column right 50%</div>
    </div><hr>
    <div class="row">
        <div class="col-md-4 bg-success">Column left 33.3%</div>
        <div class="col-md-8 bg-warning">Column right 66.6%</div>
    </div><hr>
    <div class="row">
        <div class="col-md-3 bg-success">Column left 25%</div>
        <div class="col-md-9 bg-warning">Column right 75%</div>
    </div><hr>
    <div class="row">
        <div class="col-md-4 bg-success">Column left 33.3%</div>
        <div class="col-md-8 bg-warning">Column right 66.6%</div>
    </div><hr>
    <div class="row">
        <div class="col-md-4 bg-success">Column left 33.3%</div>
        <div class="col-md-4 bg-warning">Column middle 33.3%</div>
        <div class="col-md-4 bg-success">Column right 33.3%</div>
    </div><hr>
    <div class="row">
        <div class="col-md-3 bg-success">Column left 25%</div>
        <div class="col-md-6 bg-warning">Column middle 50%</div>
        <div class="col-md-3 bg-success">Column right 25%</div>
    </div>
</div>
</body>
``` |
| 3 | Run `grid.html` on a browser. Explain what happened and screenshot the result in the browser (Question No. 20) |
| 4 | Create `grid2.html` files inside the `week6` folder. Copy the contents of `the index.html` file |
| 5 | Change the code on the body to look like the one below.<br>```html
<body>
<div class="container">
    <div class="row">
        <div class="col bg-success">Column 1</div>
        <div class="col bg-warning">Column 2</div>
    </div><hr>
    <div class="row">
        <div class="col bg-success">Column 1</div>
        <div class="col bg-warning">Column 2</div>
        <div class="col bg-success">Column 3</div>
    </div><hr>
    <div class="row">
        <div class="col bg-success">Column 1</div>
        <div class="col bg-warning">Column 2</div>
        <div class="col bg-success">Column 3</div>
        <div class="col bg-warning">Column 4</div>
    </div>
</div>
</body>
``` |

Step	Description
6	Run `grid2.html` on a browser. Explain what happened and how it differed from step 3, and screenshot the result in the browser (Question No. 21)

To control how many columns should appear next to each other, we can use the .row-cols- * class:

Step	Description
1	Create `grid3.html` files inside the `week6` folder. Copy the contents of the `grid2.html` file

2	Change the code on the body to look like the one below.
	 ``html
	<body>
	<div class="container">
	    <div class="row row-cols-1">
	        <div class="col bg-success">1 of 2</div>
	        <div class="col bg-warning">2 of 2</div>
	    </div><hr>
	    <div class="row row-cols-2">
	        <div class="col bg-success">1 of 4</div>
	        <div class="col bg-warning">2 of 4</div>
	        <div class="col bg-success">3 of 4</div>
	        <div class="col bg-warning">4 of 4</div>
	    </div><hr>
	    <div class="row row-cols-3">
	        <div class="col bg-success">1 of 6</div>
	        <div class="col bg-warning">2 of 6</div>
	        <div class="col bg-success">3 of 6</div>
	        <div class="col bg-warning">4 of 6</div>
	        <div class="col bg-success">5 of 6</div>
	        <div class="col bg-warning">6 of 6</div>
	    </div>
	</div>
	</body>
	``

3	Run `grid3.html` on a browser. Explain what happened and screenshot the result in the browser (Question No. 22)

Practical Section 15. Table on Bootstrap

Bootstrap provides several classes that can be used in tables or <table> tags, which are as follows:

class	Description
Table	default class so it looks the same as a regular table but the table class should be included when using the bootstrap class.
table-stripped	used to display tables with a "dotted" format, or the color of the rows is different/striped
table-bordered	used to create lines, borders on a table
table-hover	used to make the table change color on each row when the cursor is over the row

In the <tr> and cell (data table) or <td> rows or tags there are also several classes that we can use. The classes are as follows:

class	Description

Active	Used to display rows or cells that are active/selected, the default color is gray
success	used to display rows that have been successfully updated (successful), the color is green
Info	used to display rows of information, blue in color
warning	used to display orange rows
danger	used to display a red line

Follow these steps to understand how to design tables with Bootstrap:

Step	Description
1	Create `tabel.html` files inside the `week6` folder. Copy the contents of the `grid2.html` file
2	Change the code on the body to look like the one below.

```html
<div class="container">
    <h2>Tabel Pelanggan</h2>
    <table class="table table-bordered table-striped table-hover">
        <tr>
            <th>No.</th><th>Nama</th><th>Alamat</th>
        </tr>
        <tr>
            <td>1.</td><td>Alifa</td><td>Malang</td>
        </tr>
        <tr>
            <td>2.</td><td>Bima</td><td>Surabaya</td>
        </tr>
        <tr>
            <td>3.</td><td>Cindy</td><td>Sidoarjo</td>
        </tr>
    </table>
</div>
</body>
```

Step	Description
3	Run `tabel.html` on a browser. Describe your observations and screenshot the results in your browser (Question No. 23)

Practical Section 16. Image Settings in Bootstrap

Bootstrap provides classes for image settings so that we can easily display images with rounded, circle and thumbnail shapes as well as responsively following the user's screen resolution. The classes for image settings in bootstrap are as follows:

class	Description
.rounded	To create a round/curved image at its four corners
.rounded-circle	To create a circular image
.img-thumbnail	To create thumbnail images that have a separation distance such as a frame
.img-fluid	To create a responsive image display

Follow these steps to understand the image settings in Bootstrap:

Step	Description
1	Create `image.html` files inside the `week6` folder. Copy the contents of the `index.html` file
2	Change the code on the body to look like the one below.

```
<body>
<div class="container">
    <h2>Pengaturan Gambar pada Bootstrap</h2>
    <div class="row row-cols-1">
        <div class="col">
            <img src="tower.jpg" class="rounded" alt="gambar round">
        </div>
        <div class="col">
            <img src="tower.jpg" class="rounded-circle" alt="gambar circle">
        </div>
        <div class="col">
            <img src="tower.jpg" class="img-thumbnail" alt="gambar thumbnail">
        </div>
        <div class="col">
            <img src="tower.jpg" class="img-fluid" alt="gambar thumbnail">
        </div>
    </div>

</div>
</body>
```

3	Run `image.html` on a browser. Change the size of the browser to smaller. Describe your observations and screenshot the results in your browser (Question No. 24)

Practical Section 17. Creating a Jumbotron with Bootstrap

Jumbotron is a large gray box to show some specific content or information. Inside the jumbotron, we can put valid HTML elements, including other Bootstrap classes.

Step	Description
1	Create `jumbotron.html` files inside the `week6` folder. Copy the contents of the `index.html` file

2	Change the code on the body to look like the one below.
	 ``html
	<div class="container">
	    <div class="jumbotron">
	        <h1>Belajar Bootstrap</h1>
	        <p>Bootstrap adalah framework untuk membuat responsif website menggunakan HTML, CSS, and JS.</p>
	    </div>
	    <p>Mata Kuliah Desain dan Pemrograman Web</p>
	    <p>Nama Mahasiswa - NIM</p>
	</div>
	``

3	Run jumbotron.html on your browser. Describe your observations and screenshot the results in your browser (Question No. 25)

Practical Section 18. Creating Alerts with Bootstrap

Bootstrap already has a special class to display alerts. The user only needs to call the alert class and then add the type of alert class you want to use. The types of alert classes that can be used to create alert messages with bootstrap are as follows:

class	Description
alert-success	to display a message when the process in the form has been successfully executed (success). Alerts are displayed with a green background color.

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alert-info	to display information, help or tips in filling out a form. Alerts are displayed with a blue background color.
alert-warning	to display a warning message. Alerts are displayed with a yellow background color.
alert-danger	to display a message when a process in a form fails or a filling error occurs. Alerts are displayed with a red background color.

To dismiss the alert message, add the .alert-dismissible class to the alert container. Then add class="close" and data-dismiss="alert"

Step	Description
1	Create **alert.html** files inside the **week6** folder. Copy the contents of **the index.html** file
| 2 | Change the code on the body to look like the one below.<br><br>```html
<body>
<div class="container">
    <h2>Alerts</h2>
    <div class="alert alert-success alert-dismissible">
        <button type="button" class="close" data-dismiss="alert">&times;</button>
        <strong>Success!</strong> Ini adalah alert success
    </div>
    <div class="alert alert-info alert-dismissible">
        <button type="button" class="close" data-dismiss="alert">&times;</button>
        <strong>Info!</strong> Ini adalah alert info
    </div>
    <div class="alert alert-warning alert-dismissible">
        <button type="button" class="close" data-dismiss="alert">&times;</button>
        <strong>Warning!</strong> Ini adalah alert warning
    </div>
</div>
</body>
``` |
| 3 | Run **alert.html** on your browser. Describe your observations and screenshot the results in your browser (Question No. 26) |

Practical Section 19. Creating a Button with Bootstrap

Buttons are used to submit and reset the data in a form. Button can also be used as a link or link. To make the appearance of a website more attractive and interactive, bootstrap provides several classes. Here is the class used to set the button size.

class	Description
BTN-LG	To create a large button
BTN-MD	To create a medium-sized button
BTN-SM	To make a small button
BTN-XS	To make a very small button size
btn-block	To create a button whose width follows the width of the column

Based on color, bootstrap also provides several types of classes, namely:

class	Description
btn-default	To make the button default/white
btn-primary	To make the button blue
btn-success	To make the button green
btn-info	To make the button light blue

btn-warning	To make the button yellow
btn-danger	To make the button red
btn-link	To make a button without color only text

To use the button class above, you must first include the btn class before the class to determine the button size and button color. All of these Button classes can be used in the <button>, <a> and <input> tags.

Follow these steps to design the button:

Step	Description
1	Create `button.html` files inside the `week6` folder. Copy the contents of the `index.html` file

2	Change the code on the body to look like the one below.
	
	``html
	<div class="container">
	    <h2>Button Styles</h2>
	    <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">Light</button>
	    <button type="button" class="btn btn-link">Link</button>
	</div>
	``

3	Run button.html on a browser. Describe your observations and screenshot the results in your browser (Question No. 27)

Practical Section 20. Creating a Navbar with Bootstrap

The navbar is generally at the top of a website and on this navbar is displayed the main menu of a website. If a website has many menus, then the dropdown menu is a solution to organize the menus by group or category. Bootstrap already provides classes for navbars and dropdown menus, so we can easily create responsive navbars and dropdown menus.
The use of the navbar class is slightly different from the previous use of the class where it is in the <div> tag. Unlike Navbar, the navbar class is outside the container class or it can be said that the container class is inside the navbar class. The navbar class has the position of the outermost part of a website page.

Step	Description
1	Create `navbar.html` files inside the `week6` folder. Copy the contents of the `index.html` file
2	Change the code on the body to look like the one below.

	``html
	<body>
	<div class="container">
	    <h2>Membuat Navbar</h2>
	</div>
	<nav class="navbar navbar-expand-sm bg-light navbar-light">
	  <ul class="navbar-nav">
	    <li class="nav-item active">
	      Active
	
	    <li class="nav-item">
	      Link
	
	    <li class="nav-item">
	      Link
	
	    <li class="nav-item">
	      Disabled
	
	</nav>
	</body>
	``

3	Run navbar.html on a browser. Describe your observations and screenshot the results in the browser (Question No. 28)
4	Create **navbar2.html** files inside the **week6** folder. Copy the contents of the **navbar.html** file

5	Change the code on the body to look like the one below.
	``html
	<nav class="navbar navbar-expand-md bg-dark navbar-dark">
	  Navbar
	  <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#collapsibleNavbar">
	
	  </button>
	  <div class="collapse navbar-collapse" id="collapsibleNavbar">
	    <ul class="navbar-nav">
	      <li class="nav-item">
	        Link
	
	      <li class="nav-item">
	        Link
	
	      <li class="nav-item">
	        Link
	
	  </div>
	</nav>
	``

6	Run **navbar2.html** on a browser. Describe your observations and screenshot the results in your browser (Question No. 29)

Reference:

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4) https://www.w3schools.com/bootstrap4/bootstrap_get_started.asp
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