

# Introduction to jQuery

jQuery Library, Selectors, DOM  
Manipulation, Events

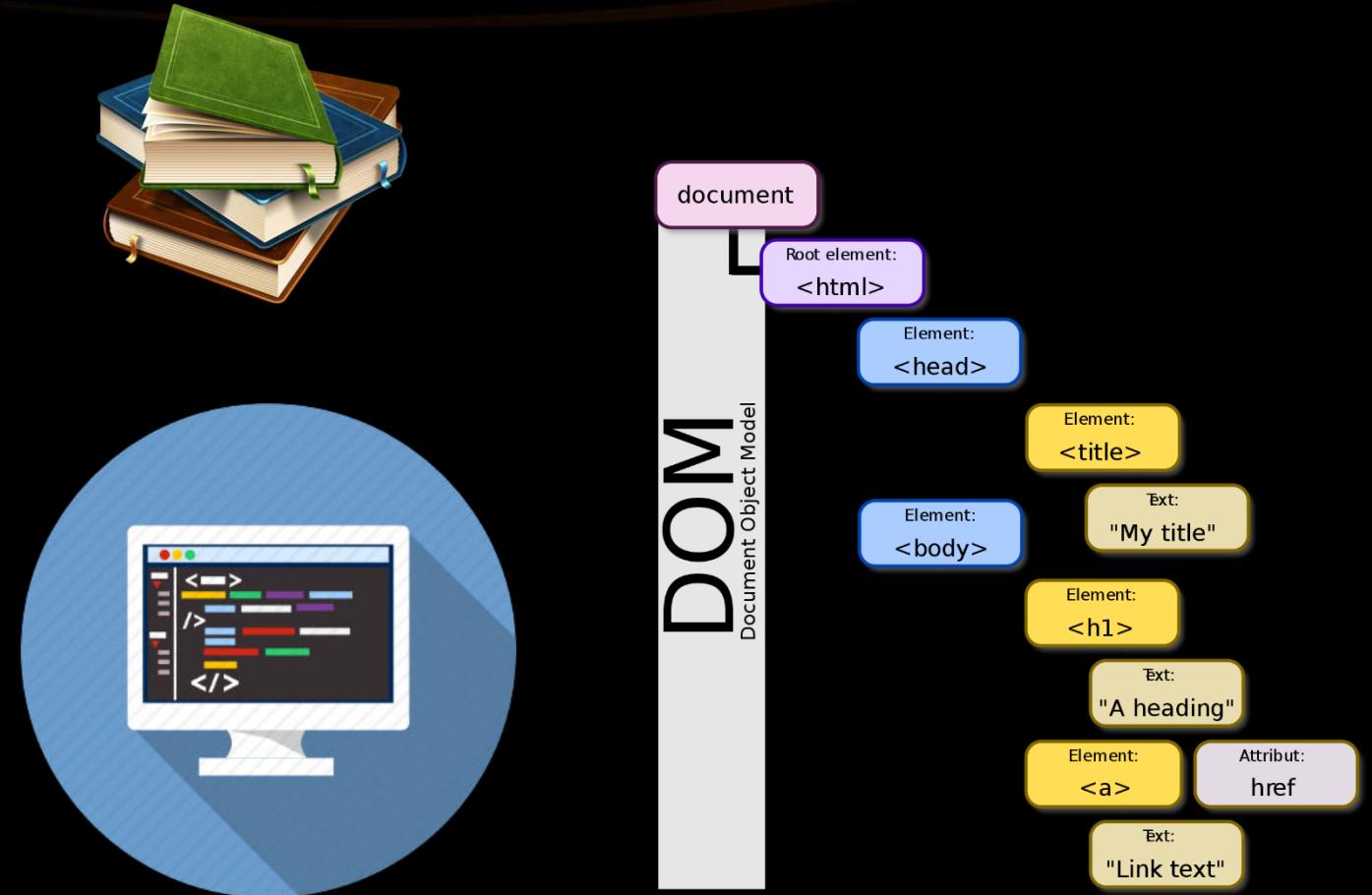


**SoftUni Team**  
Technical Trainers  
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Have a Question?



sli.do

#front-end

# What is jQuery?

jQuery is a cross-browser JavaScript library

- Dramatically simplifies DOM manipulation
- Free, open-source software: <https://jquery.com>

```
<script src="https://code.jquery.com/jquery-  
3.1.1.min.js"></script>
```

Load jQuery from  
its official CDN

```
$('.li').css('background', '#DDD');
```

Change the CSS for all <li> tags

# Why jQuery?

- Very popular
  - 60 000 000 sites use jQuery (75.8% of top 1 million sites)
  - <http://trends.builtwith.com/javascript/jQuery>
- Easy to learn
- Large community
- Cross-browser support
- Official web site: <http://jquery.com>



# Selection with jQuery

- jQuery **selectors** return a collection matched items
  - Even if there is only one item

```
$('div') // document.getElementsByTagName('div');  
$('.menu-item') // document.getElementsByClassName('.menu-item');  
$('#navigation') // document.getElementById('navigation');  
$('ul.menu li') // document.querySelectorAll('ul.menu li');
```

- <http://learn.jquery.com/using-jquery-core/selecting-elements/>
- Selected elements can be processed as a group

```
($('div').css('background', 'blue'); // Make all DIVs blue
```

- DOM elements selection in jQuery is much like as in JavaScript

- All selector

```
$('*') // Selects all elements
```

- Class selector

```
$('.class') // Selects all elements by class name
```

- Element selector

```
$('section') // Selects all elements by tag name
```

- Id selector

```
$('#id') // Selects a element by given id
```

- Multi-selector

```
('selector1, selector2') // Combined selector
```

# Filter Selectors in jQuery

`$('li:even') // Even <li>`

`$('li:odd') // Odd <li>`

`$('li:first') // First <li>`

`$('li:last') // Last <li>`

`$('li:first-child') // Selects the first child of <li>`

`$('li:has(p)') // Selects all <li> holding <p> inside`

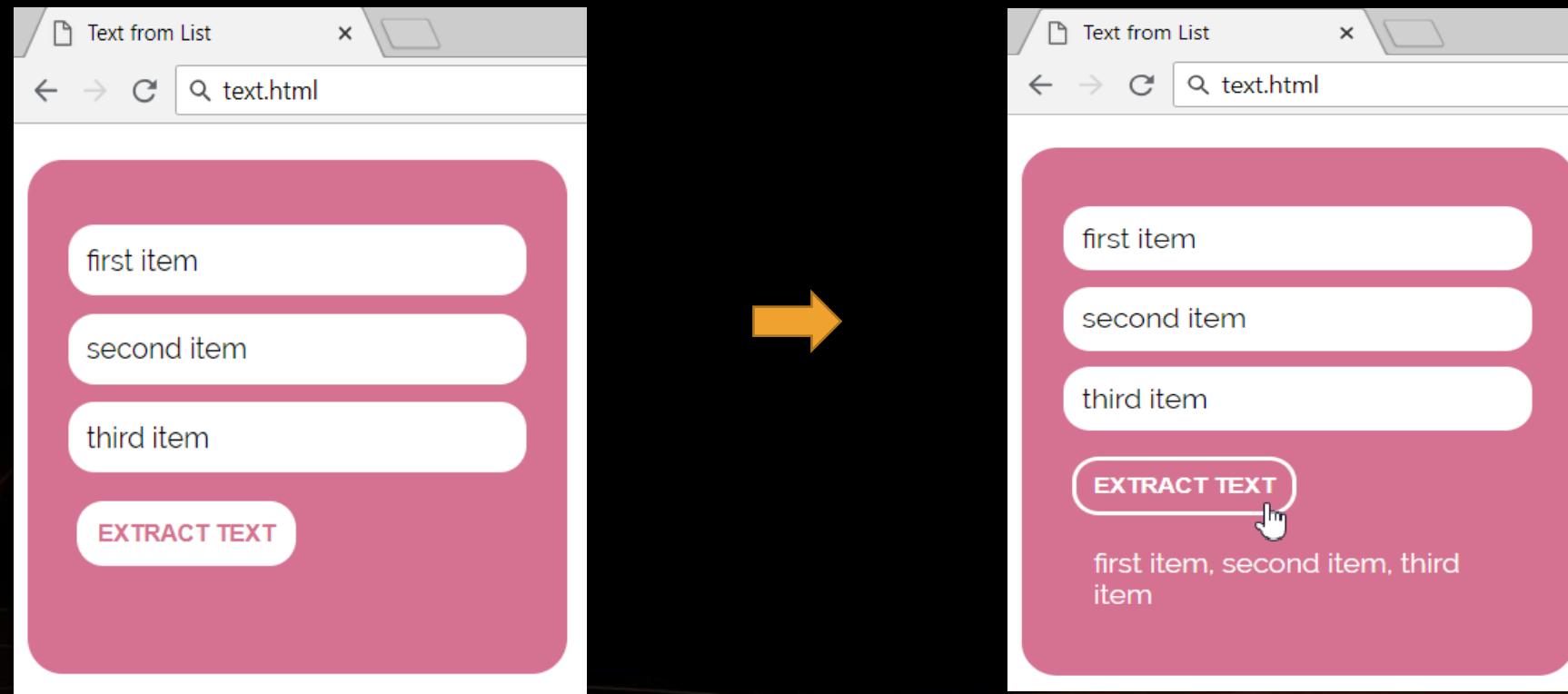
`$('li:contains("Sofia")') // Selects <li> holding given text`

`$('li:eq(2)') // Selects the third <li> element`

`$('li:not(:checked)') // Elements not matching the selector`

# Problem: Text from List

- An HTML page holds a **list** of text items + [Extract Text] button
- Write a JS function to display all list items, separated by ",,"

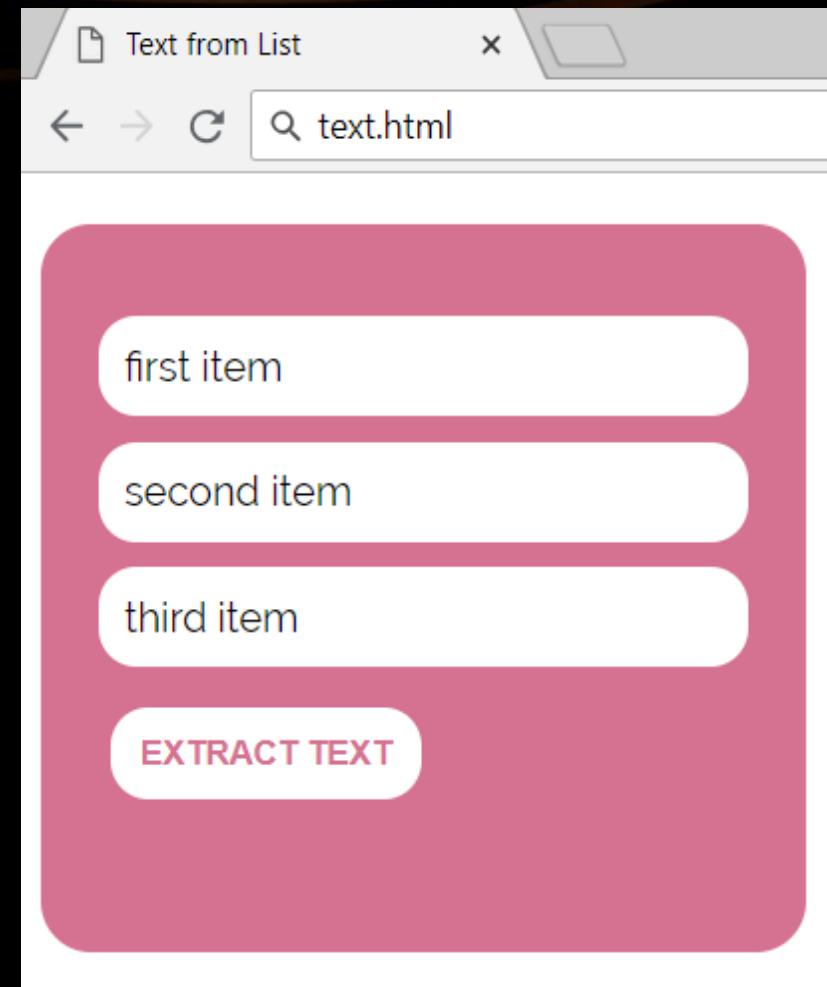


# Problem: Text from List – HTML

```
<ul id="items">
  <li>first item</li>
  <li>second item</li>
  <li>third item</li>
</ul>

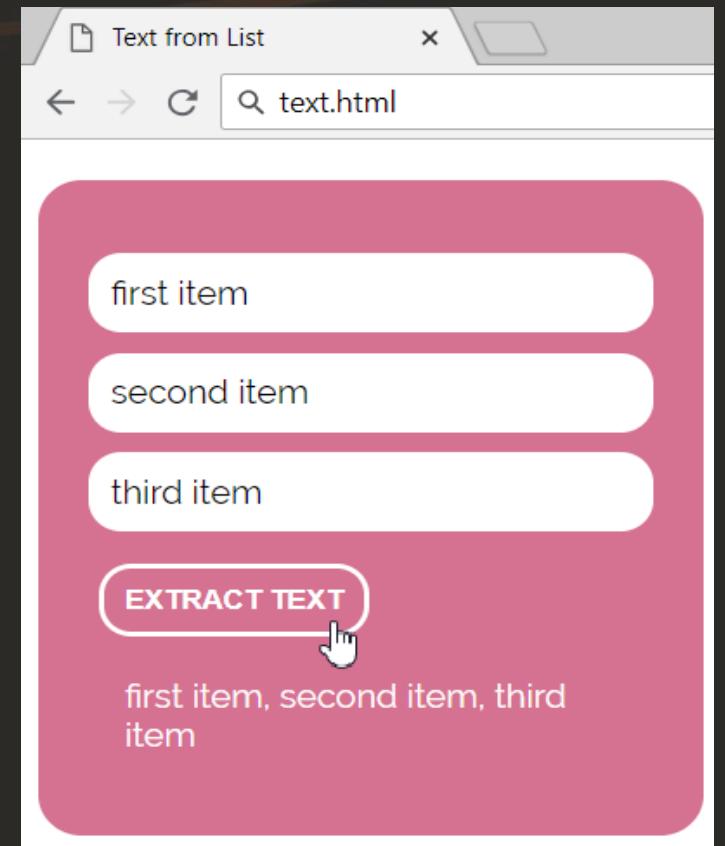
<button
  onclick="extractText()"
>Extract Text</button>

<div id="result"></div>
```



# Solution: Text from List

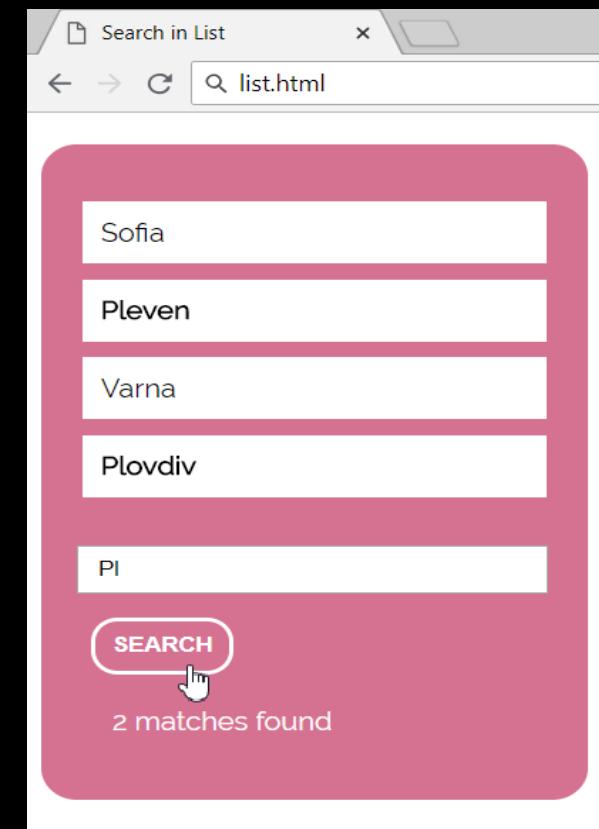
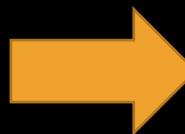
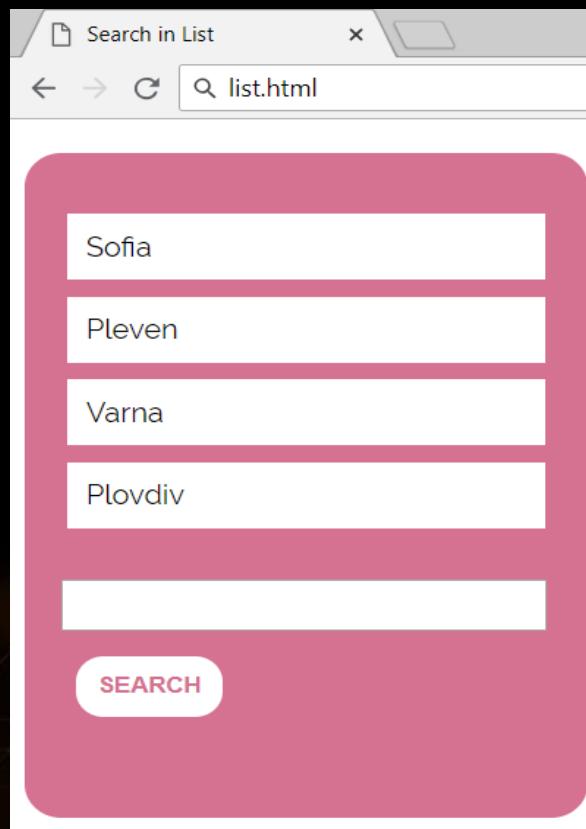
```
function extractText() {  
    let items = $("ul#items li")  
        .toArray()  
        .map(li => li.textContent)  
        .join(", ");  
    $("#result").text(items);  
}
```



Check your solution here: <https://judge.softuni.bg/Contests/1098>

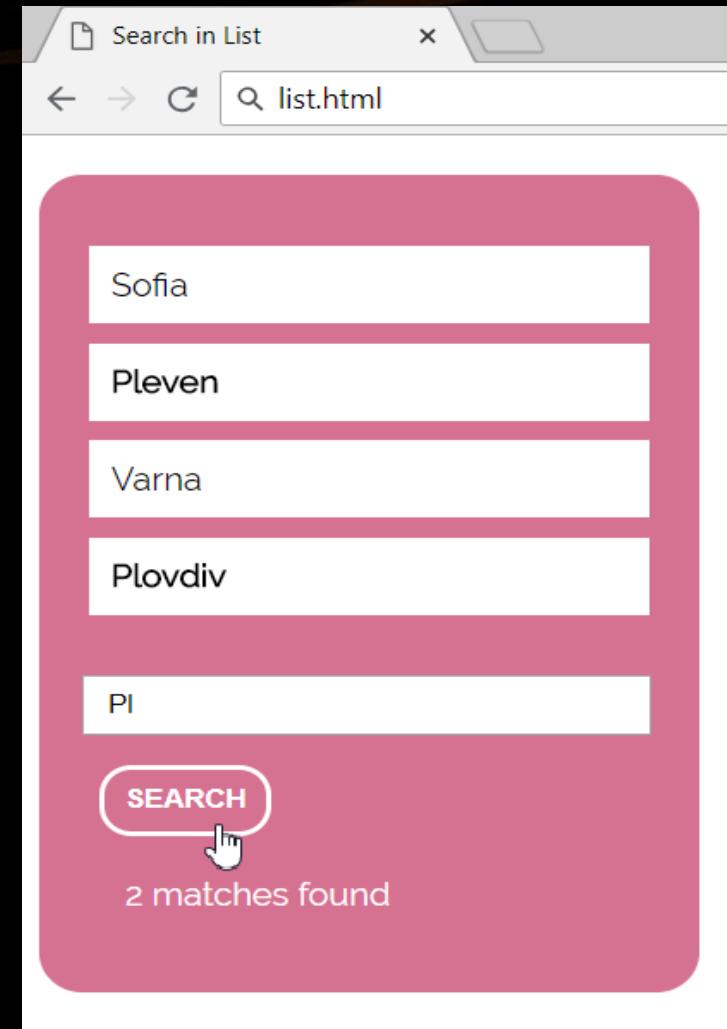
# Problem: Search in List

- A HTML page holds a list of towns + search box + [Search] button
- Write a JS function to highlight all towns holding the search text



# Problem: Search in List – HTML

```
<ul id="towns">
  <li>Sofia</li>
  <li>Pleven</li>
  <li>Varna</li>
  <li>Plovdiv</li>
</ul>
<input type="text" id="searchText"/>
<button onclick="search()">
  Search
</button>
<div id="result"></div>
```



# Solution: Search in List

```
function search() {  
    let searchText = $('#searchText').val();  
    let matches = 0;  
    $("#towns li").each((index, item) => {  
        if (item.textContent.includes(searchText)) {  
            $(item).css("font-weight", "bold");  
            matches++;  
        } else  
            $(item).css("font-weight", "");  
    });  
    $('#result').text(matches + " matches found.");  
}
```

Check your solution here: <https://judge.softuni.bg/Contests/1098>



# Altering the DOM with jQuery

## Adding and Removing DOM Elements

# Adding Elements with jQuery

- Select the parent element, then use:
  - **append()** / **prepend()**
  - **appendTo()** / **prependTo()**

```
<div id="wrapper">
  <div>Hello, student!</div>
  <div>Goodbye, student!</div>
</div>
```

```
<h1>Greetings</h1>
▼<div id="wrapper">
  ▼<div>
    "Hello, student!"
    <p>It's party time :)</p>
  </div>
  ▼<div>
    "Goodbye, student!"
    <p>It's party time :)</p>
  </div>
</div>
```

```
$('#wrapper div').append("<p>It's party time :)</p>");
```

```
$( '<h1>Greetings</h1>' ).prependTo('body');
```

# Creating / Removing Elements

```
let div = $('

');
div.text('I am a new div.');
div.css('background', 'blue');
div.css('color', 'white');
$(document.body).append(div);

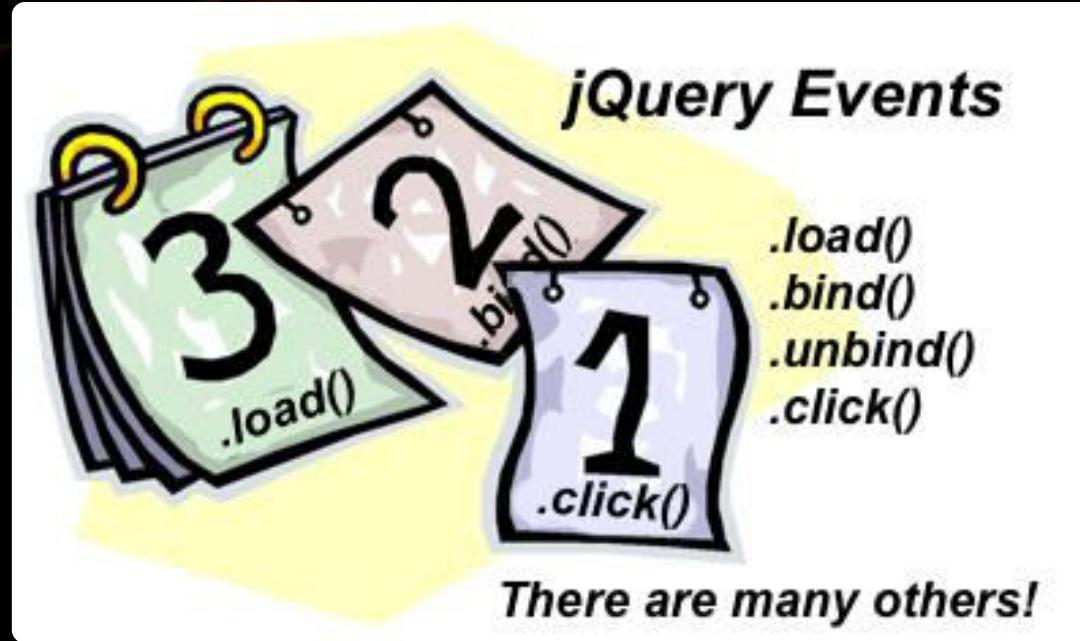

```

```
let paragraph = $('

Some text

');
paragraph.appendTo(div);
```

```
$('.div').remove();
```



# jQuery Events

## Handling Events with Ease

# jQuery Events: Attach / Remove

- Attaching events on certain elements

```
$('a.button').on('click', buttonClicked);  
function buttonClicked() {  
    $('.selected').removeClass('selected');  
    $(this).addClass('selected');  
    // "this" is the event source (the hyperlink clicked)  
}
```

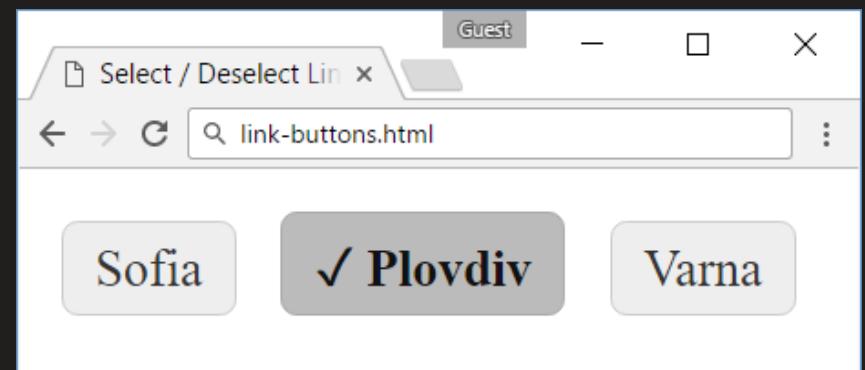
- Removing event handler from certain elements

```
$('a.button').off('click', buttonClicked);
```

# Problem: Link Buttons – HTML

```
<head>
  <link rel="stylesheet" href="link-buttons.css"/>
  <script src="jquery-3.1.1.min.js"></script>
  <script src="link-buttons.js"></script>
</head>

<body onload="attachEvents()">
  <a class="button">Sofia</a>
  <a class="button">Plovdiv</a>
  <a class="button">Varna</a>
</body>
```



## link-buttons.css

```
a.button {  
    border: 1px solid #CCC;  
    background: #EEE;  
    padding: 5px 10px;  
    border-radius: 5px;  
    color: #333;  
    text-decoration: none;  
    display: inline-block;  
    margin: 5px;  
}
```

```
a.button.selected {  
    color: #111;  
    font-weight: bold;  
    border: 1px solid #AAA;  
    background: #BBB;  
}  
a.button.selected::before {  
    content: "\2713\20\20";  
}  
a:hover {cursor: pointer;}
```

# Solution: Link Buttons – JavaScript

## link-buttons.js

```
function attachEvents() {  
    $('a.button').on('click', buttonClicked);  
  
    function buttonClicked() {  
        $('.selected').removeClass('selected');  
        $(this).addClass('selected');  
        // "this" is the event source (the hyperlink clicked)  
    }  
}
```

# jQuery Events: Multiple

- Handling events on multiple elements
  - Add a handler on the parent element

```
function onListItemClick() {  
    $('.selected').removeClass('selected');  
    $(this).addClass('selected');}  
  
$('ul').on('click', 'li', onListItemClick);
```

- For more events info visit [MDN Events](#)

# Summary

- jQuery is very powerful on DOM manipulation
  - Very popular library, run on 60 000 000 sites
- Select + edit DOM elements:

```
$('p.red').css('background', 'blue');
```

- Create elements:

```
$('<h1>Hello</h1>').appendTo('body');
```

- Handle events:

```
$('#items').click(function() { ... });
```

Summary



Js

# JS for Front-end – Introduction to jQuery



## Questions?



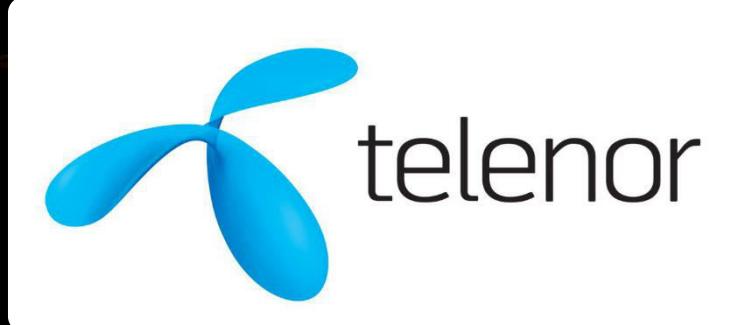
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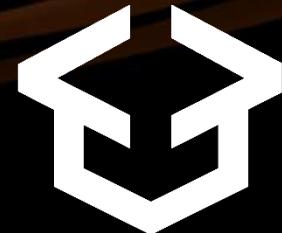
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