



**BMSCE**  
**IEEE**

# jQuery – DOM Manipulation and Events

Rahul Kumar

Webmaster BMSCE IEEE

Chairman BMSCE IEEE

# DOM Manipulation

# What we will do in DOM Manipulation ?

- Add a new element to DOM
- Remove existing element from DOM
- Manipulating existing element

# What we will do in DOM Manipulation ?

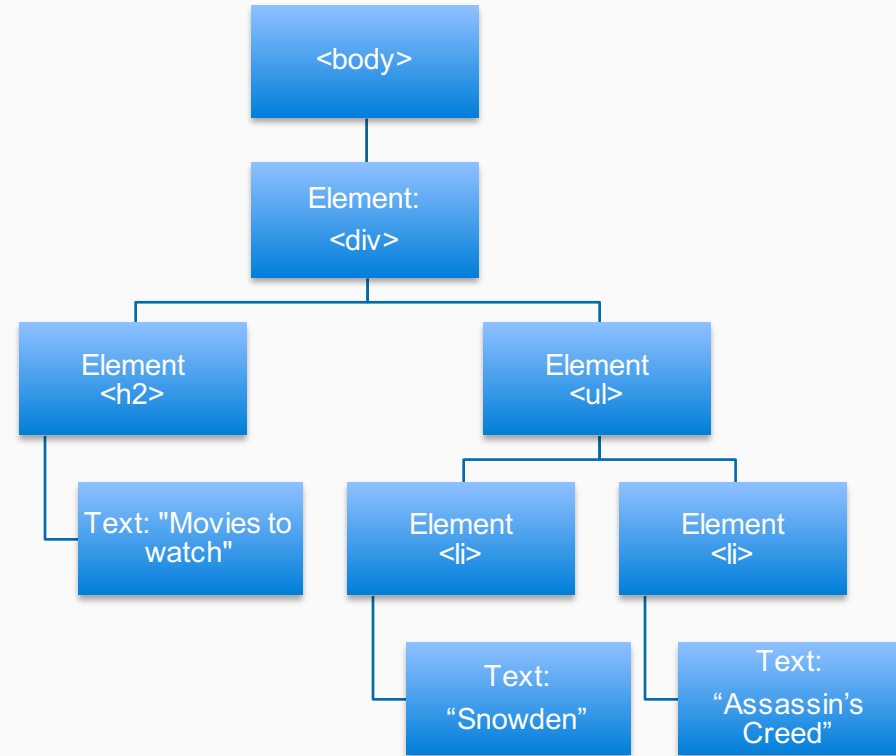
- **Add a new element to DOM**
- Remove existing element from DOM
- Manipulating existing element

# DOM Tree

```
<body>
  <div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
      <li>Snowden</li>
      <li>Assassin's Creed</li>
    </ul>
  </div>
</body>
```

## Movies to watch

- Snowden
- Assassin's Creed



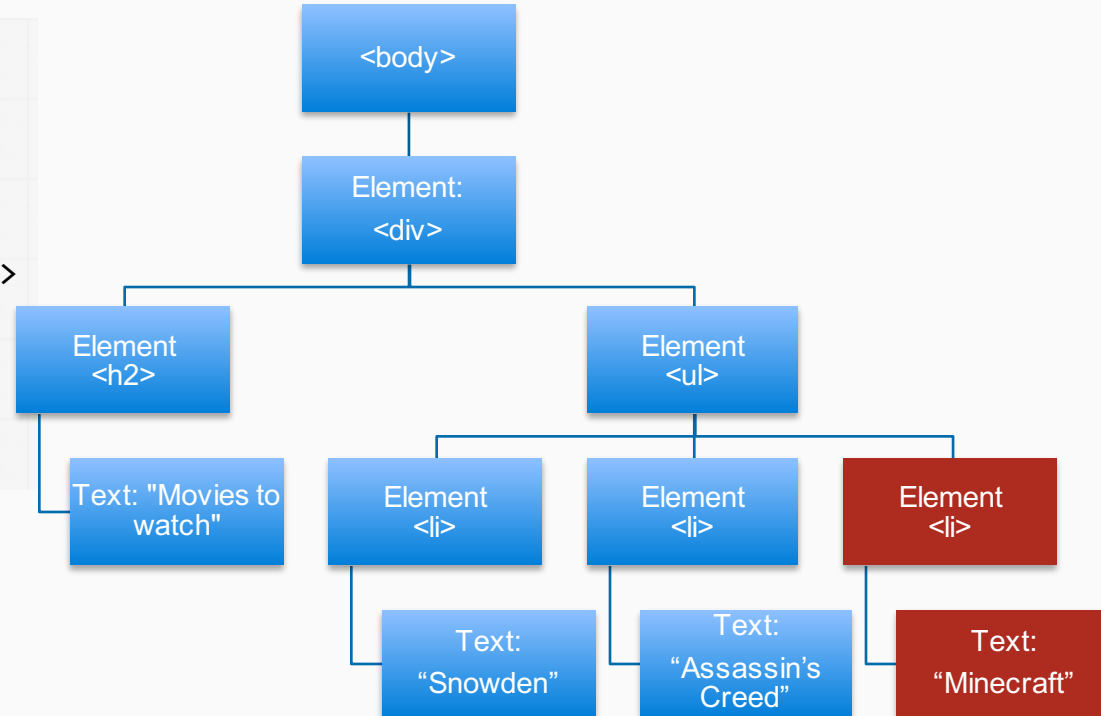
# DOM Tree

We want to add a **new** element in the `<ul>` element

```
<body>
  <div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
      <li>Snowden</li>
      <li>Assassin's Creed</li>
      <li>Minecraft</li>
    </ul>
  </div>
</body>
```

## Movies to watch

- Snowden
- Assassin's Creed
- Minecraft



## Add a new element to DOM

```
<script>  
    var movie = $("<li>Minecraft</li>");  
  
</script>
```

1. First we will create a new **jQuery Element**.

## Add a new element to DOM

```
<script>  
  var movie = $("<li>Minecraft</li>");  
  $('#movieList')  
</script>
```

1. First we will create a new jQuery Element.
2. Find the element in which you want to add that jQuery element.



# Add a new element to DOM

```
<script>
  var movie = $("<li>Minecraft</li>");
  $('#movieList')
</script>
```

1. First we will create a new jQuery Element.
2. Find the element in which you want to add that jQuery element.
3. Use any of the four methods to append
  - after
  - before
  - prepend
  - append

# Add a new element to DOM

```
<script>
  var movie = $("<li>Minecraft</li>");
  $('#movieList').after(movie);
</script>
```

```
<body data-gr-c-s-loaded="true">
  <div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
      <li>Snowden</li>
      <li>Assassin's Creed</li>
    </ul>
    <li>Minecraft</li>
  </div>
</body>
```

1. First we will create a new jQuery Element.
2. Find the element in which you want to add that jQuery element.
3. Use any of the four methods to append
  - **after**
  - before
  - prepend
  - append

## Movies to watch

- Snowden
- Assassin's Creed
- Minecraft

# Add a new element to DOM

```
<script>
  var movie = $("<li>Minecraft</li>");
  $('#movieList').before(movie);
</script>
```

```
<body data-gr-c-s-loaded="true">
  <div>
    <h2>Movies to watch</h2>
    <li>Minecraft</li>
    <ul id="movieList">
      <li>Snowden</li>
      <li>Assassin's Creed</li>
    </ul>
  </div>
</body>
```

1. First we will create a new jQuery Element.
2. Find the element in which you want to add that jQuery element.
3. Use any of the four methods to append
  - after
  - **before**
  - prepend
  - append

## Movies to watch

- Minecraft
  - Snowden
  - Assassin's Creed

# Add a new element to DOM

```
<script>
  var movie = $("<li>Minecraft</li>");
  $('#movieList').prepend(movie);
</script>
```

```
<body data-gr-c-s-loaded="true">
  <div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
      <li>Minecraft</li>
      <li>Snowden</li>
      <li>Assassin's Creed</li>
    </ul>
  </div>
</body>
```

1. First we will create a new jQuery Element.
2. Find the element in which you want to add that jQuery element.
3. Use any of the four methods to append
  - after
  - before
  - **prepend**
  - append

## Movies to watch

- Minecraft
- Snowden
- Assassin's Creed

# Add a new element to DOM

```
<script>
  var movie = $("<li>Minecraft</li>");
  $('#movieList').append(movie);
</script>
```

```
<body data-gr-c-s-loaded="true">
  <div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
      <li>Snowden</li>
      <li>Assassin's Creed</li>
      <li>Minecraft</li>
    </ul>
  </div>
</body>
```

1. First we will create a new jQuery Element.
2. Find the element in which you want to add that jQuery element.
3. Use any of the four methods to append
  - after
  - before
  - prepend
  - **append**

## Movies to watch

- Snowden
- Assassin's Creed
- Minecraft

# What we will do in DOM Manipulation ?

- Add a new element to DOM
- **Remove existing element from DOM**
- Manipulating existing element

# Add a new element to DOM

```
<script>
    $('#movie2').remove();
</script>
```

```
<div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
        <li id="movie1">Snowden</li>
        <li id="movie2">Assassin's Creed</li>
        <li id="movie3">Minecraft</li>
    </ul>
</div>
```

1. Find the element in which you want to remove.
2. Use **remove()** method.

## Movies to watch

- Snowden
- Minecraft

# What we will do in DOM Manipulation ?

- Add a new element to DOM
- Remove existing element from DOM
- **Manipulating existing element**



# What we will manipulate ?

- Change text content of an HTML Element.
- Add/Remove a css property.
- Add/Remove a particular class.
- Add/Remove a particular attribute.

# Read Text Content text content of an HTML Element.

```
<script>
    $(document).ready(function() {
        var movieName = $("#movie2").text();
        alert(movieName);
    });
</script>
```

```
<div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
        <li id="movie1">Snowden</li>
        <li id="movie2">Assassin's Creed</li>
        <li id="movie3">Minecraft</li>
    </ul>
</div>
```

## Movies to watch

- Snowden
- Assassin's Creed
- Minecraft

**127.0.0.1 says:**

Assassin's Creed

☐ Prevent this page from creating additional dialogs.

OK

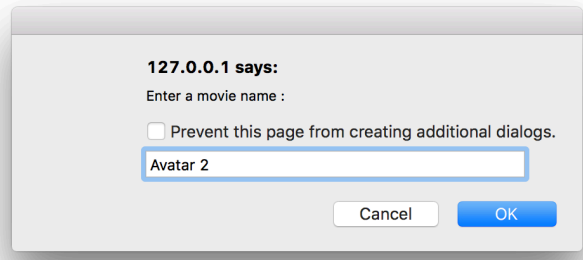
# Change Text Content text content of an HTML Element.

```
<script>
    $(document).ready(function() {
        var userChoice = prompt("Enter a
movie name : ");
        $("#movie2").text(userChoice);
    });
</script>
```

```
<div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
        <li id="movie1">Snowden</li>
        <li id="movie2">Assassin's Creed</li>
        <li id="movie3">Minecraft</li>
    </ul>
</div>
```

## Movies to watch

- Snowden
- Assassin's Creed
- Minecraft



## Movies to watch

- Snowden
- Avatar 2
- Minecraft

## Add a CSS Style to HTML Element.

```
<script>
  $(document).ready(function() {
    $("#movie2").css("color", "red");
  });
</script>
```

```
<div>
  <h2>Movies to watch</h2>
  <ul id="movieList">
    <li id="movie1">Snowden</li>
    <li id="movie2">Assassin's Creed</li>
    <li id="movie3">Minecraft</li>
  </ul>
</div>
```

### Movies to watch

- Snowden
- Assassin's Creed
- Minecraft

## Add/Removing a class from HTML Element.

```
<script>
```

```
</script>
```

```
<div>
  <h2>Movies to watch</h2>
  <ul id="movieList">
    <li id="movie1">Snowden</li>
    <li id="movie2"
class="highlight">Assassin's Creed</li>
    <li id="movie3">Minecraft</li>
  </ul>
</div>
```

```
<style>
  .highlight {
    color: blue;
    font-size: 20px;
  }
</style>
```

### Movies to watch

- Snowden
- **Assassin's Creed**
- Minecraft

## Add/Removing a class from HTML Element.

```
<script>
    $("#movie3").addClass("highlight");
</script>
```

```
<style>
    .highlight {
        color: blue;
        font-size: 20px;
    }
</style>
```

```
<div>
    <h2>Movies to watch</h2>
    <ul id="movieList">
        <li id="movie1">Snowden</li>
        <li id="movie2"
class="highlight">Assassin's Creed</li>
        <li id="movie3">Minecraft</li>
    </ul>
</div>
```

### Movies to watch

- Snowden
- Assassin's Creed
- Minecraft

## Add/Removing a class from HTML Element.

```
<script>
  $("#movie3").addClass("highlight");
  $("#movie2").removeClass("highlight");
</script>
```

```
<style>
  .highlight {
    color: blue;
    font-size: 20px;
  }
</style>
```

```
<div>
  <h2>Movies to watch</h2>
  <ul id="movieList">
    <li id="movie1">Snowden</li>
    <li id="movie2"
class="highlight">Assassin's Creed</li>
    <li id="movie3">Minecraft</li>
  </ul>
</div>
```

### Movies to watch

- Snowden
- Assassin's Creed
- **Minecraft**

# Basic jQuery Events



# Basic jQuery Events

We have the ability to create dynamic web pages by using events. Events are actions that can be detected by your Web Application.

- A mouse click
- A web page loading
- Taking mouse over an element
- Submitting an HTML form
- A keystroke on your keyboard

# Basic jQuery Events

Common Event Handlers that we will use today

Event	Description
<code>.click()</code>	Bind an event handler to the “click” JavaScript event, or trigger that event on an element.
<code>.change()</code>	Bind an event handler to the “change” JavaScript event, or trigger that event on an element.
<code>.focus()</code>	Bind an event handler to the “focus” JavaScript event, or trigger that event on an element.
<code>.hover()</code>	Bind one or two handlers to the matched elements, to be executed when the mouse pointer enters and leaves the elements.
<code>.submit()</code>	Bind an event handler to the “submit” JavaScript event, or trigger that event on an element.

Checkout <https://api.jquery.com/category/events/> for complete list of events supported by jQuery

```
<script>
  $(document).ready(function() {
    $("button").click();
  });
</script>
```

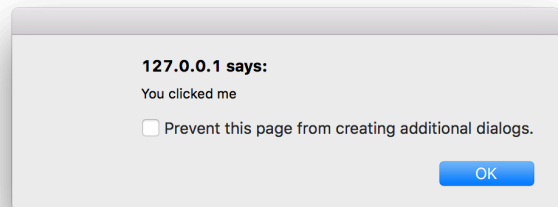


```
<script>
  $(document).ready(function() {
    $("button").click(function() {
      alert("You clicked me");
    });
  });
</script>
```

```
<script>
  $(document).ready(function() {
    $("button").click(function() {
      alert("You clicked me");
    });
  });
</script>
```

```
<div>
  <button type="button">Click me</button>
</div>
```

Click me



```
<script>
  $(document).ready(function() {
    $("button").hover();
  });
</script>
```



```
<script>
  $(document).ready(function() {
    $("button").hover(function() {
      $(this).css("background-color", "green");
    });
  });
</script>
```

```
<script>
  $(document).ready(function() {
    $("button").hover(function() {
      $(this).css("background-color", "green");
    });
  });
</script>
```

```
<div>
  <h2>Movies to watch</h2>
  <ul id="movieList">
    <li id="movie1">Snowden</li>
    <li id="movie2">Assassin's Creed</li>
    <li id="movie3">Minecraft</li>
  </ul>
</div>
```

## Movies to watch

- Snowden
- Assassin's Creed
- Minecraft

## Movies to watch

- Snowden
- Assassin's Creed
- **Minecraft**

## HTML Code

```
<div>
  <form>
    First name:
    <input type="text" id="firstName" name="firstName"><br>
    Last name:
    <input type="text" id="lastName" name="lastName"><br>
    <button type="submit">Submit</button>
  </form>

  <div>
    <p id="firstNameDisplay"></p>
    <p id="lastNameDisplay"></p>
  </div>
</div>
```

## JS Code

```
<script>
    $(document).ready(function() {
        $("#firstName").change();
    });
</script>
```



```
<script>
    $(document).ready(function() {
        $('#firstName').change(function() {
            var firstName = $("#firstName").val();
            $("#firstNameDisplay").text(firstName);
        });
    });
</script>
```



### Output

First name:

Last name:

First name:

Last name:

Rahul

## JS Code

```
<script>
  $(document).ready(function() {
    $('#firstName').change(function() {
      var firstName = $("#firstName").val();
      $("#firstNameDisplay").text(firstName);
    });
    $('#lastName').change(function() {
      var firstName = $("#lastName").val();
      $("#lastNameDisplay").text(firstName);
    });
  });
</script>
```

## HTML Code

```
<div>
  <form>
    First name:
    <input type="text" id="firstName" name="firstName"><br>
    Last name:
    <input type="text" id="lastName" name="lastName"><br>
    <button type="submit">Submit</button>
  </form>

  <div>
    <p id="firstNameDisplay"></p>
    <p id="lastNameDisplay"></p>
  </div>
</div>
```

## JS Code

```
<script>
  $(document).ready(function() {
    $('button').submit();
  });
</script>
```



```
<script>
  $(document).ready(function() {
    $('button').submit(function() {
      var firstName = $("#firstName").val();
      $("#firstNameDisplay").text(firstName);
      var firstName = $("#lastName").val();
      $("#lastNameDisplay").text(firstName);
    });
  });
</script>
```

### Output

First name:

Last name:

## Output

First name:

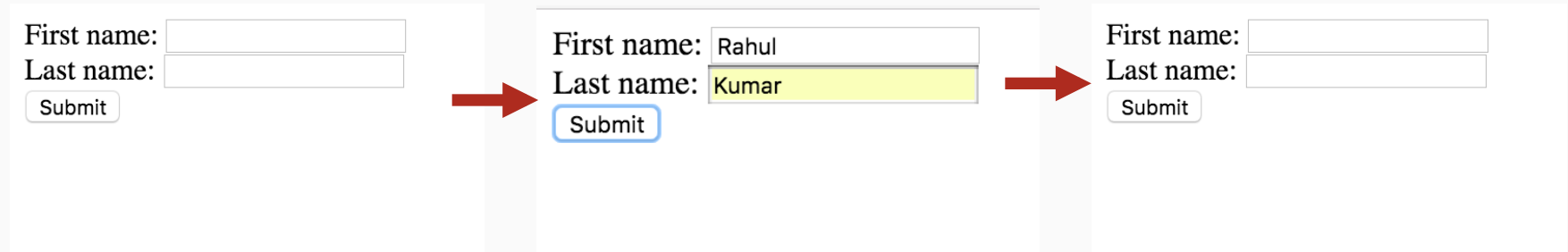
Last name:



First name:

Last name:

## Output



Not getting output

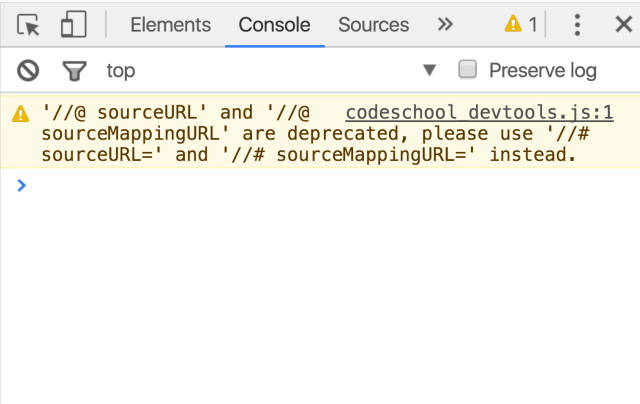


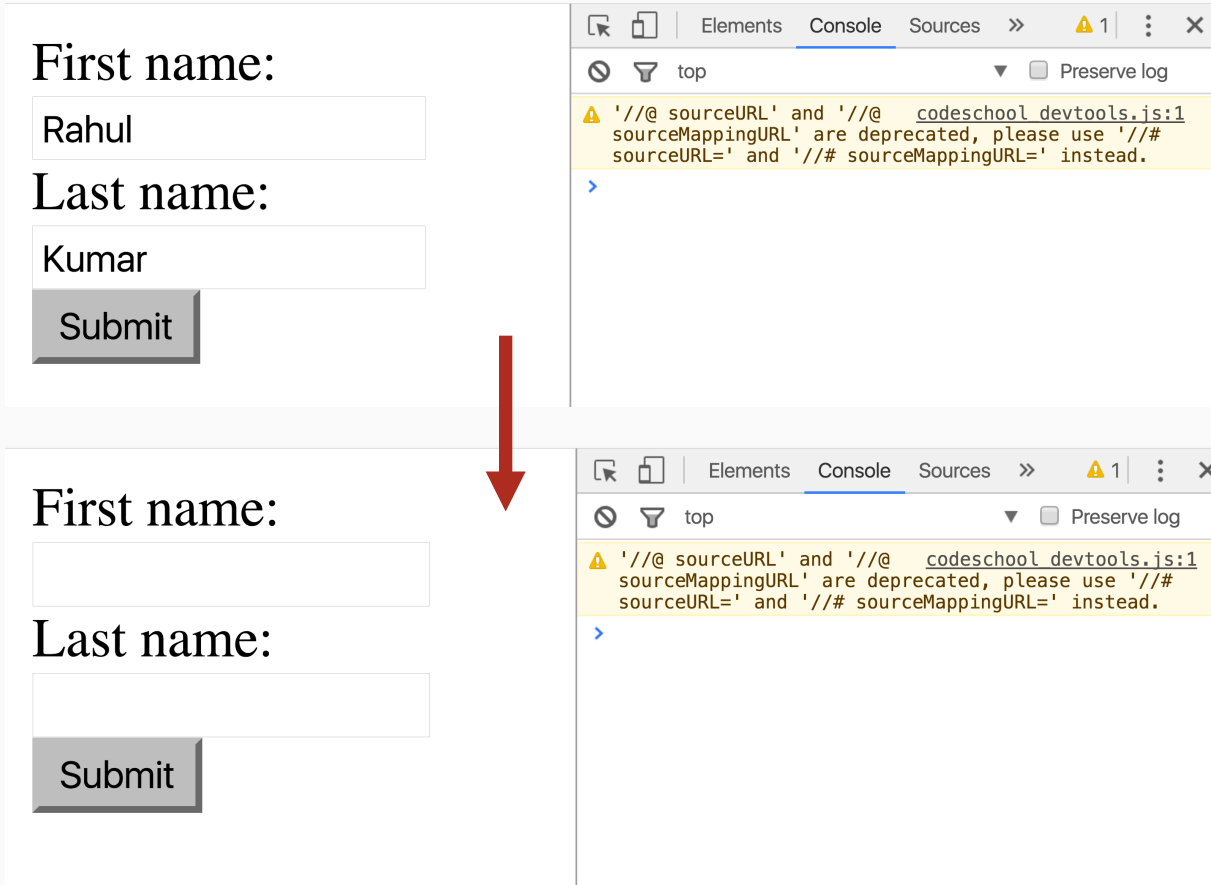
Lets use console to debug



First name:

Last name:





The image illustrates the state of a web form before and after a submit event. A red arrow points from the initial state (top) to the state after submission (bottom).

**Top State (Before Submit):**

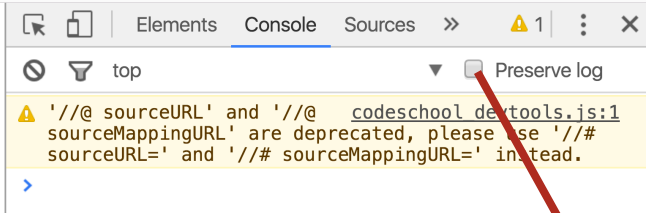
- Form labels: First name: Last name:
- Form inputs: Rahul Kumar
- Submit button: Submit
- Browser Console: Shows a deprecation warning: `'//@ sourceMappingURL' and '//@ sourceMappingURL' are deprecated, please use '//# sourceMappingURL=' and '//# sourceMappingURL=' instead.`

**Bottom State (After Submit):**

- Form labels: First name: Last name:
- Form inputs: (Empty)
- Submit button: Submit
- Browser Console: Shows the same deprecation warning as the top state.

First name:

Last name:



Enable Preserve  
Logs

**Top State (Before Submission):**

First name:

Last name:

**Browser Console (Top):**

```
Warning: '//@ sourceMappingURL' and '//@_codeschool_devtools.js:1  
sourceMappingURL' are deprecated, please use '//#  
sourceURL=' and '//# sourceMappingURL=' instead.
```

**Bottom State (After Submission):**

First name:

Last name:

**Browser Console (Bottom):**

```
Warning: '//@ sourceMappingURL' and '//@_codeschool_devtools.js:1  
sourceMappingURL' are deprecated, please use '//#  
sourceURL=' and '//# sourceMappingURL=' instead.  
Navigated to http://127.0.0.1/~raahulcomp24/jquery-  
and-Advance-JavaScript-Workshop/Demo/jqueryEvents/submit.html?  
firstName=Rahul&lastName=Kumar  
Warning: '//@ sourceMappingURL' and '//@_codeschool_devtools.js:1  
sourceMappingURL' are deprecated, please use '//#  
sourceURL=' and '//# sourceMappingURL=' instead.
```

# Problem

We got navigated to some other page.

Whenever we submit the form it will navigate to other page.

Here we are getting navigated to same page and sending data using GET method.

How to solve it ? Lets google it.

```
event.preventDefault();
```

```
event.preventDefault();
```

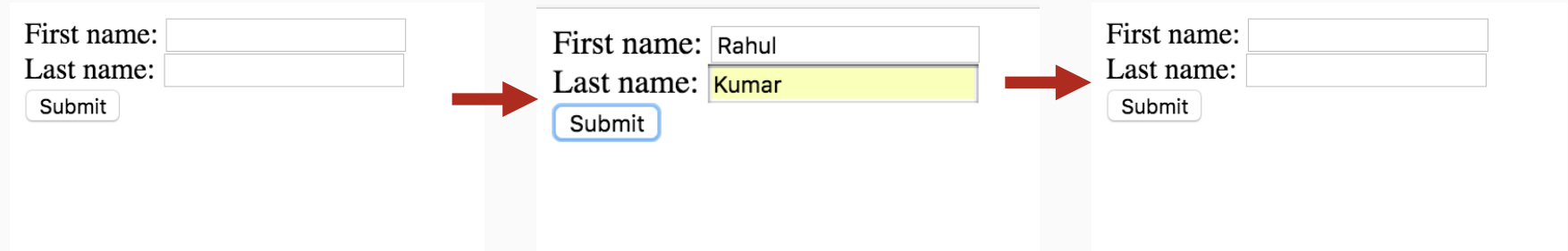
It will stop the default behavior of HTML DOM.

## JS Code

```
<script>
    $(document).ready(function() {
        $('button').submit(function(event) {
            event.preventDefault();
            var firstName = $("#firstName").val();
            $("#firstNameDisplay").text(firstName);
            var firstName = $("#lastName").val();
            $("#lastNameDisplay").text(firstName);
        });
    });
</script>
```



## Output



Still not getting output !!  
Also we are getting navigated to some other page.



```
event.preventDefault();
```

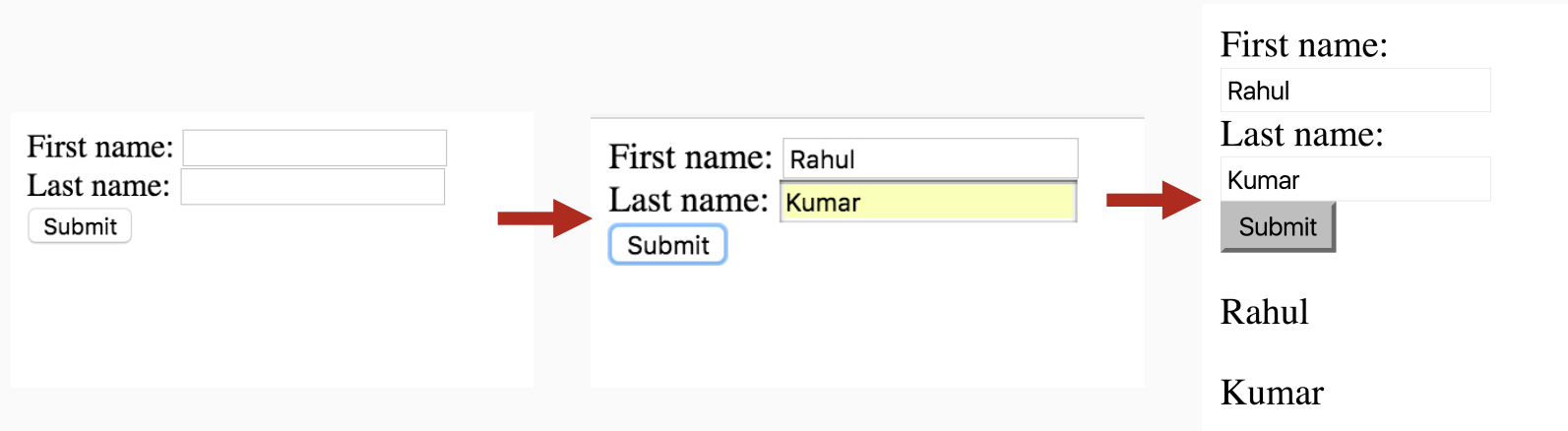
We were applying **submit** on **button**.

When we are submitting form, we have to apply it on form

## JS Code

```
<script>
  $(document).ready(function() {
    $('#myForm').submit(function(event) {
      event.preventDefault();
      var firstName = $("#firstName").val();
      $("#firstNameDisplay").text(firstName);
      var firstName = $("#lastName").val();
      $("#lastNameDisplay").text(firstName);
    });
  });
</script>
```

## Output



It worked



# Thanks!

Contact me:

Rahul Kumar

Webmaster | BMSCE IEEE

Chairman | BMSCE IEEE

+91 9431908524

chairman@bmsceieee.com

[www.bmsceieee.com](http://www.bmsceieee.com)



<https://github.com/rahulcomp24/jQuery-and-Advance-JavaScript-Workshop>