

## Unit 2: HTML5, jQuery and Ajax

### PROBLEM STATEMENT1

#### **I. Create a Sign-up form that takes the following inputs:**

**First name, Last name, Email address, Phone number and Address.**

- a) All inputs except Last Name are mandatory fields. Validate email id for correct format and phone number should be 10 digits.
- b) Use `addEventListener()` for adding events. When you press submit button, use capturing phase.
- c) If mandatory fields are not filled, then display the following
  - a. Alert message should display names of fields with incorrect values
  - b. Followed by drawing the Emoji in canvas.

#### **II. Write jQuery code to accomplish the following:**

1. Add a header and paragraph your own way using CSS
2. Remove the header and paragraph styles applied in step 1 using jQuery
3. To toggle between fading in and fading out a header element on a Button click
4. Using Ajax create a video element and display the video on the webpage.

Note: the sample screenshot of output is just for your reference. You have to design your own template.

### OBJECTIVE

The objective of this exercise is to test the student on HTML and JavaScript. It evaluates the student's knowledge on HTML5 and jQuery/JavaScript for DOM, events, event handling CSS Styles, AJAX

### PREREQUISITE

In order to complete this exercise, the student needs to understand the fundamentals of HTML5, JavaScript and jQuery.

### SAMPLE SCREENSHOT OF OUTPUT (Just for your reference)

#### SAMPLE1:

#### Sign Up Form Example

First, Last Name\*:

Organization:

Email address\*:

Work Phone:

Home Phone:

Cell Phone:

Fax:

Address 1\*:

Address 2:

City\*:

State/Province:

Zip/Postal Code:

Country\*:

\* - required fields



### PROGRAM

#### 1. Create a Sign-up form

##### HTML AND SCRIPT CODE

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>ODD SRN SIGNUP FORM</title>
<link rel="stylesheet" href="first2.css" />
</head>
<h2>PES UNIVERSITY SIGNUP FORM</h2>
<body style="background-color:powderblue;">

<div class="flex">
<form action="#" class="form">
<label for="firstname">
```

```

*Firstname :
<input type="text" name="firstname" id="firstname" class="form_fn" placeholder="Enter FirstName" required/>
</label>
<label for="lastname">
  Lastname :
  <input type="text" name="lastname" id="lastname" class="form_ln" placeholder="Enter LastName" />
</label>
<label for="email">
  *Email Address :
  <input type="email" name="email" id="email" class="form_em" placeholder="Enter email id" required/>
</label>
<label for="phone">
  *Phone Number :
  <input type="tel" pattern="[6789][0-9]{9}" id="phone" class="form_ph" placeholder="Enter phone number"required>
</label>
<label for="address">
  *Address :
  <input type="text" name="address" id="address" class="form_ad" placeholder="Enter address" required/>
</label>
<button type="reset">Reset Form</button>
<button type="submit">Submit</button>
<b>" please fill (*) these fields they are mandatory "</b>
</form>

<canvas class="canvas" width="400px" height="400px"></canvas>
</div>
<hr />
</body>
<script src="https://code.jquery.com/jquery-3.6.0.min.js"/>
<script>
const form = document.querySelector('.form');
const canvas = document.querySelector('.canvas');
const ctx = canvas.getContext('2d');
const re = /^[^<>()\[\]\.\,\;\s@"]+(\.[^<>()\[\]\.\,\;\s@"]+)*|("\.[^"]+")|(\[[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\]|([a-zA-Z0-9]+\.[a-zA-Z]{2,}))$/;
function drawEmoji() {
  ctx.drawImage(img, 10, 10, 100, 100);
}
function clearCanvas() {
  ctx.clearRect(0, 0, canvas.width, canvas.height);
}

```

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```
form.addEventListener( 'submit',(e) => {
  e.preventDefault();
  const firstname = $('#firstname').val();
  const lastname = $('#lastname').val();
  const email = $('#email').val();
  const phone = $('#phone').val();
  const address = $('#address').val();
  if(firstname=="" || email="" || phone="" || address="") {
    drawEmoji();
  }
  if(phone.length < 10) {
    alert("ERROR: Enter a valid Phone number");
    $('#phone').css('border', '1px solid red');
    drawEmoji();
  }
  if(!re.test(email)){
    alert("ERROR: Enter a valid email-id");
  }
  else {
    $('#phone').css('border', 'none');
    clearCanvas();
    alert("FORM SUBMITTED SUCCESSFULLY");
    console.log(firstname, lastname, email, phone, address);
  }
},
{ capture: true }
);

</script>
</html>
```

### CSS CODE

```
body {
display: grid;
place-items: center;
min-height: 120vh;
padding: 5rem 0;
}
.form {
display: grid;
flex-direction: column;
gap: 1rem;
padding: 2rem;
border-radius: 10px;
border: 1px solid;
background-color: moccasin;
```

## Unit 2: HTML5, jQuery and Ajax

```
}  
#firstname {  
background-color:linen;  
}  
#lastname {  
background-color:linen;  
}  
#email {  
background-color:linen;  
}  
#phone {  
background-color:linen;  
}  
#address {  
background-color:linen;  
}  
button {  
width: 100px;  
border: 4px solid burlywood;  
border-radius: 70px;  
padding: 10px 20px;  
background: turquoise;  
}  
button:hover {  
cursor: pointer;  
}  
  
.sad-emoji {  
display: none;  
}  
hr {  
width: 100%;  
}
```

### 2. jQuery code

```
<!DOCTYPE HTML>  
<html>  
  
<head>  
  <title>  
    JQUERY  
  </title>  
  <style>  
    #btn1{  
      padding: 14px 28px;  
      outline: none;  
      border-radius: 3px;
```

## Unit 2: HTML5, jQuery and Ajax

```
        background: rgb(216, 153, 179);
        color: #fff;
        border: none;
        cursor: pointer;
        font-size: 16px;
    }
    #btn2{
        padding: 14px 48px;
        outline: none;
        border-radius: 3px;
        background: rgb(216, 153, 179);
        color: #fff;
        border: none;
        cursor: pointer;
        font-size: 16px;
    }
    #btn3{
        padding: 14px 28px;
        outline: none;
        border-radius: 3px;
        background: rgb(216, 153, 179);
        color: #fff;
        border: none;
        cursor: pointer;
        font-size: 16px;
    }
    #btn4{
        padding: 12px 30px;
        outline: none;
        border-radius: 3px;
        background: rgb(109, 113, 116);
        color: #fff;
        border: none;
        cursor: pointer;
        font-size: 16px;
    }
}
</style>
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.4.1/jquery.min.js">
</script>
</head>
<body style="text-align:center;background-color:rgb(208, 197, 193);">
    <h1 id="Head" style="color:rgb(216, 156, 46);font-family:cursive; text-decoration:underline">
        WHAT IS JQUERY ?
    </h1>

    <p id="WebTech" style="font-size: 25px; font-weight: bold; color: maroon; align:center; font-family: sans-serif;">
        jQuery is a JavaScript library designed to simplify HTML DOM tree traversal and manipulation, as well as event
```

## Unit 2: HTML5, jQuery and Ajax

handling, CSS animation, and Ajax. It is free, open-source software using the permissive MIT License. As of May 2019, jQuery is used by 73% of the 10 million most popular websites. Web analysis indicates that it is the most widely deployed JavaScript library by a large margin, having at least 3 to 4 times more usage than any other JavaScript library.

jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and Web applications.

```
</p>
<br>
<button id="btn1" onclick="Fun1()">
    click here to remove header style
</button>
<br>
<br>
<button id="btn2" onclick="Fun3()">
    Toggle b/w fading in and fading out
</button>
<br>
<br>
<button id="btn3" onclick="Fun2()">
    click here to remove paragraph style
</button>
<br>
<br>
<button id="btn4" onclick="myFunction()">
    video play
</button>
<br>
<br>
<script>
    function Fun1() {
        $('h1').removeAttr('style');
    }
    function Fun2() {
        $('p').removeAttr('style');
    }
    function Fun3() {
        $('h1').fadeToggle();
    }
    function myFunction() {
        var x = document.createElement("VIDEO");
        if (x.canPlayType("video/mp4")) {
            x.setAttribute("src", "https://www.w3schools.com/jsref/movie.mp4");
        }
    }
</script>
```

## Unit 2: HTML5, jQuery and Ajax

```
else {  
    x.setAttribute("src","https://www.w3schools.com/jsref/movie.mp4");  
}  
x.setAttribute("width", "350");  
x.setAttribute("height", "250");  
x.setAttribute("controls", "controls");  
document.body.appendChild(x);  
}  
</script>  
</body>  
</html>
```

### SCREENSHOT OF YOUR OUTPUT

1.

#### PES UNIVERSITY SIGNUP FORM

\*Firstname :

Lastname :

\*Email Address :

\*Phone Number :

\*Address :

" please fill (\*) these fields they are mandatory "

#### PES UNIVERSITY SIGNUP FORM

\*Firstname :

Lastname :

\*Email Address :

\*Phone Number :

\*Address :

" please fill (\*) these fields they are mandatory "



## Unit 2: HTML5, jQuery and Ajax

### IF YOU PRESS SUBMIT WITHOUT DETAILS

#### PES UNIVERSITY SIGNUP FORM

\*Firstname :

Lastname :  ! Please fill out this field.

\*Email Address :

\*Phone Number :

\*Address :

" please fill (\*) these fields they are mandatory "

### IF SUBMIT BUTTON IS PRESSED WITHOUT EMAIL ID

#### PES UNIVERSITY SIGNUP FORM

\*Firstname :

Lastname :

\*Email Address :

\*Phone Number :  ! Please fill out this field.

\*Address :

" please fill (\*) these fields they are mandatory "

### IF INVALID EMAIL ID IS ENTERED

#### PES UNIVERSITY SIGNUP FORM

\*Firstname :

Lastname :

\*Email Address :

Please include an '@' in the email address. 'ABC' is missing an '@'.

\*Address :

Reset  
Form

Submit

" please fill (\*) these fields they are mandatory "



#### PES UNIVERSITY SIGNUP FORM

\*Firstname :

Lastname :

\*Email Address :

\*Phone Number :  '1' is used at a wrong position in '1234567890'.

\*Address :

Reset  
Form

Submit

" please fill (\*) these fields they are mandatory "



## Unit 2: HTML5, jQuery and Ajax

IF SUBMIT BUTTON IS PRESSED WITHOUT ENTERING PHONE NUMBER

**PES UNIVERSITY SIGNUP FORM**

\*Firstname :

Lastname :

\*Email Address :

\*Phone Number :

\*Address :  ! Please fill out this field.

" please fill (\*) these fields they are mandatory "

IF INVALID PHONE NUMBER IS ENTERED

**PES UNIVERSITY SIGNUP FORM**

\*Firstname :


Lastname :

\*Email Address :

\*Phone Number :

\*Address :  ! Please match the requested format.

" please fill (\*) these fields they are mandatory "



### PES UNIVERSITY SIGNUP FORM

\*Firstname :   
\*Lastname :   
\*Email Address :   
\*Phone Number :   
\*Address :

Reset  
Form

Submit

" please fill (\*) these fields they are mandatory "



IF SUBMIT BUTTON IS PRESSED WITHOUT ENTERING ADDRESS

### PES UNIVERSITY SIGNUP FORM

\*Firstname :   
\*Lastname :   
\*Email Address :   
\*Phone Number :   
\*Address :

Reset  
Form

Submit

" please fill (\*) these fields they are mandatory "

## Unit 2: HTML5, jQuery and Ajax

### WHEN SUBMIT BUTTON IS PRESSED AFTER ENTERING ALL CREDENTIALS

This page says

FORM SUBMITTED SUCCESSFULLY

OK

\*Firstname : AISHWARYA

Lastname : Enter LastName

\*Email Address : ABC@zz.com

\*Phone Number : 9965432124

\*Address : pes university

Reset  
Form

Submit

" please fill (\*) these fields they are mandatory "

### IF RESET BUTTON IS PRESSED

#### PES UNIVERSITY SIGNUP FORM

\*Firstname : Enter FirstName

Lastname : Enter LastName

\*Email Address : Enter email id

\*Phone Number : Enter phone number

\*Address : Enter address

Reset  
Form

Submit

" please fill (\*) these fields they are mandatory "

## Unit 2: HTML5, jQuery and Ajax

2.

### WHAT IS JQUERY ?

jQuery is a JavaScript library designed to simplify HTML DOM tree traversal and manipulation, as well as event handling, CSS animation, and Ajax. It is free, open-source software using the permissive MIT License. As of May 2019, jQuery is used by 73% of the 10 million most popular websites. Web analysis indicates that it is the most widely deployed JavaScript library by a large margin, having at least 3 to 4 times more usage than any other JavaScript library. jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and Web applications.

click here to remove header style

Toggle b/w fading in and fading out

click here to remove paragraph style

video play

### IF WE CLICK TO REMOVE HEADER STYLE

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click here to remove header style

Toggle b/w fading in and fading out

click here to remove paragraph style

video play



## Unit 2: HTML5, jQuery and Ajax

### IF TOGGLE BETWEEN FADING AND FADING OUT BUTTON IS PRESSED

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click here to remove header style

Toggle b/w fading in and fading out

click here to remove paragraph style

video play

### IF CLICK TO REMOVE PARAGRAPH STYLE IS PRESSED

jQuery is a JavaScript library designed to simplify HTML DOM tree traversal and manipulation, as well as event handling, CSS animation, and Ajax. It is free, open-source software using the permissive MIT License. As of May 2019, jQuery is used by 73% of the 10 million most popular websites. Web analysis indicates that it is the most widely deployed JavaScript library by a large margin, having at least 3 to 4 times more usage than any other JavaScript library. jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and Web applications.

click here to remove header style

Toggle b/w fading in and fading out

click here to remove paragraph style

video play

## Unit 2: HTML5, jQuery and Ajax

### IF PLAY VIDEO BUTTON IS PRESSED

jQuery is a JavaScript library designed to simplify HTML DOM tree traversal and manipulation, as well as event handling, CSS animation, and Ajax. It is free, open-source software using the permissive MIT License. As of May 2019, jQuery is used by 73% of the 10 million most popular websites. Web analysis indicates that it is the most widely deployed JavaScript library by a large margin, having at least 3 to 4 times more usage than any other JavaScript library. jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and Web applications.

click here to remove header style

Toggle b/w fading in and fading out

click here to remove paragraph style

video play



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