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DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)
DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE CODE: DJS22ITL307   **DATE: 13/09/2023**

COURSE NAME: Web Programming Laboratory   **CLASS:SY. BTech**

EXPERIMENT NO. 05

NAME: Anish Ashok Sharma   **SAP ID: 60003220045**

DIV: I-1   **BATCH:1**   **ROLL_NO: I011**

CO/LO: Develop web applications.

AIM / OBJECTIVE: Java Script: Form Validation using JavaScript.

DESCRIPTION OF EXPERIMENT:

Explain all the tags used in the experiment.

1. <form>: This tag is used to create an HTML form for user input. The name attribute is used to give the form a name for identification purposes.

2. onsubmit="return validateForm()": This attribute of the form tag specifies a JavaScript function to be executed when the form is submitted. In this case, the validateForm function is called to perform form validation.

3. method="post": This attribute specifies the HTTP method to be used when submitting the form data to the server. In this case, it's set to "post".

4. <input>: This tag is used to create various form elements like text fields, checkboxes, and radio buttons. The type attribute is used to specify the type of input. In this case, the type is set to "text" for both the name and email fields. The name attribute is used to identify the form input in the backend.

5. type="submit": This attribute specifies that the input element is a submit button. When this button is clicked, the form is submitted.

6. value="Submit": This attribute sets the value of the submit button.

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7. The JavaScript function validateForm() is used to check whether the name and email fields are empty. If either of them is empty, an alert message is displayed, and the form submission is prevented using return false.

SOURCE CODE:

```html
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Form Validation</title>
    <link rel="preconnect" href="https://fonts.googleapis.com">
    <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;700&display=swap"
rel="stylesheet">
    <link rel="stylesheet" href="./style.css">
    <script defer src="./index.js"></script>
</head>
<body>
    <div class="container">
        <form id="form" action="/">
            <h1>Registration</h1>
            <div class="input-control">
                <label for="username">Username</label>
                <input id="username" name="username" type="text">
                <div class="error"></div>
            </div>
            <div class="input-control">
                <label for="email">Email</label>
                <input id="email" name="email" type="text">
                <div class="error"></div>
            </div>
            <div class="input-control">
                <label for="password">Password</label>
```

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```html
                <input id="password"name="password" type="password">
                <div class="error"></div>
            </div>
            <div class="input-control">
                <label for="password2">Password again</label>
                <input id="password2"name="password2" type="password">
                <div class="error"></div>
            </div>
            <button type="submit">Sign Up</button>
        </form>
    </div>
</body>
</html>
```

```css
body {
    background: linear-gradient(to right, #0f2027, #203a43, #2c5364);
    font-family: 'Poppins', sans-serif;
}

#form {
    width: 300px;
    margin: 20vh auto 0 auto;
    padding: 20px;
    background-color: whitesmoke;
    border-radius: 4px;
    font-size: 12px;
}

#form h1 {
    color: #0f2027;
    text-align: center;
}

#form button {
    padding: 10px;
    margin-top: 10px;
    width: 100%;
```

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```css
    color: white;
    background-color: rgb(41, 57, 194);
    border: none;
    border-radius: 4px;
}

.input-control {
    display: flex;
    flex-direction: column;
}

.input-control input {
    border: 2px solid #f0f0f0;
    border-radius: 4px;
    display: block;
    font-size: 12px;
    padding: 10px;
    width: 100%;
}

.input-control input:focus {
    outline: 0;
}

.input-control.success input {
    border-color: #09c372;
}

.input-control.error input {
    border-color: #ff3860;
}

.input-control .error {
    color: #ff3860;
    font-size: 9px;
    height: 13px;
}
```

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```javascript
const form = document.getElementById('form');
const username = document.getElementById('username');
const email = document.getElementById('email');
const password = document.getElementById('password');
const password2 = document.getElementById('password2');

form.addEventListener('submit', e => {
    e.preventDefault();

    validateInputs();
});

const setError = (element, message) => {
    const inputControl = element.parentElement;
    const errorDisplay = inputControl.querySelector('.error');

    errorDisplay.innerText = message;
    inputControl.classList.add('error');
    inputControl.classList.remove('success')
}

const setSuccess = element => {
    const inputControl = element.parentElement;
    const errorDisplay = inputControl.querySelector('.error');

    errorDisplay.innerText = '';
    inputControl.classList.add('success');
    inputControl.classList.remove('error');
};

const isValidEmail = email => {
    const re =
/^(([^<>()[\]\\.,;:\s@"]+(\.[^<>()[\]\\.,;:\s@"]+)*)|(".+"))@((\[[0-9]{1,3}\.[0-
9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\])|(([a-zA-Z\-0-9]+\.)+[a-zA-Z]{2,}))$/;
    return re.test(String(email).toLowerCase());
}

const validateInputs = () => {
```

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```javascript
    const usernameValue = username.value.trim();
    const emailValue = email.value.trim();
    const passwordValue = password.value.trim();
    const password2Value = password2.value.trim();

    if(usernameValue === '') {
        setError(username, 'Username is required');
    } else {
        setSuccess(username);
    }

    if(emailValue === '') {
        setError(email, 'Email is required');
    } else if (!isValidEmail(emailValue)) {
        setError(email, 'Provide a valid email address');
    } else {
        setSuccess(email);
    }

    if(passwordValue === '') {
        setError(password, 'Password is required');
    } else if (passwordValue.length < 8 ) {
        setError(password, 'Password must be at least 8 character.')
    } else {
        setSuccess(password);
    }

    if(password2Value === '') {
        setError(password2, 'Please confirm your password');
    } else if (password2Value !== passwordValue) {
        setError(password2, "Passwords doesn't match");
    } else {
        setSuccess(password2);
    }

};
```

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OUTPUT:

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CONCLUSION:

In conclusion, the HTML tags used in the form validation example are essential elements for creating a simple web form and implementing client-side form validation using JavaScript. The <form>, <input>, and <script> tags are fundamental to building an interactive form and validating user input.

REFERENCES:

Website References: W3Schools