

WEB PROGRAMMING ASSIGNMENT – 11

-B VENKATESH (23BCE1012)

1. Write a JavaScript to (i) Create a dynamic table with three rows and three columns (ii) Change the color of the Button from red to green color on Mouse Over. (iii) Change the color of the Textbox from green to yellow color on Focus and display a greeting message on Change Note: Both button and textbox should be created using CreateElement (iv) Create an input field and a button. When the button is double clicked, add the input text as a new item to an unordered list. (v) Create two input fields: one for accepting input and another for counting and displaying the number of times any key is pressed.

CODE:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width,  
initial-scale=1.0">
```

```
  <title>Dynamic Table & Events</title>
```

```
  <style>
```

```
    table {
```

```
      border-collapse: collapse;
```

```
      width: 50%;
```

```
        margin-bottom: 20px;
    }
    th, td {
        border: 1px solid black;
        padding: 10px;
        text-align: center;
    }
    button, input {
        display: block;
        margin: 10px 0;
    }
</style>
</head>
<body>
    <script>
        document.addEventListener("DOMContentLoaded", ()
=> {
            // (i) Create a dynamic table with three rows and
            three columns

            const table = document.createElement("table");
            table.border = "1";
            for (let i = 0; i < 3; i++) {
```

```
let row = table.insertRow();  
for (let j = 0; j < 3; j++) {  
    let cell = row.insertCell();  
    cell.innerText = `Row ${i + 1}, Col ${j + 1}`;  
}  
}  
document.body.appendChild(table);
```

```
// (ii) Button color change on mouse over  
const button = document.createElement("button");  
button.innerText = "Hover Me";  
button.style.backgroundColor = "red";  
button.onmouseover = () =>  
button.style.backgroundColor = "green";  
button.onmouseout = () =>  
button.style.backgroundColor = "red";  
document.body.appendChild(button);
```

```
// (iii) Textbox color change on focus & greeting on  
change  
const textBox = document.createElement("input");  
textBox.type = "text";  
textBox.style.backgroundColor = "green";
```

```
    textBox.onfocus = () =>
textBox.style.backgroundColor = "yellow";

    textBox.onChange = () => alert("Hello! You changed
the text.");

    document.body.appendChild(textBox);
```

// (iv) Input field & button for adding items to a list on double click

```
    const inputField =
document.createElement("input");

    const addButton =
document.createElement("button");

    addButton.innerText = "Add to List";

    const ul = document.createElement("ul");

    addButton.addEventListener("dblclick", () => {
        if (inputField.value.trim() !== "") {
            let li = document.createElement("li");
            li.innerText = inputField.value;
            ul.appendChild(li);
            inputField.value = "";
        }
    });
```

```
document.body.appendChild(inputField);
document.body.appendChild(addButton);
document.body.appendChild(ul);

// (v) Input field with keypress counter
const keyInput = document.createElement("input");
const counterDisplay =
document.createElement("input");
counterDisplay.type = "text";
counterDisplay.readOnly = true;
let keyPressCount = 0;

keyInput.addEventListener("keypress", () => {
    keyPressCount++;
    counterDisplay.value = `Key presses:
${keyPressCount}`;
});

document.body.appendChild(keyInput);
document.body.appendChild(counterDisplay);
});
```

```
</script>
```

```
</body>
```

```
</html>
```

OUTPUT:

| | | |
|--------------|--------------|--------------|
| Row 1, Col 1 | Row 1, Col 2 | Row 1, Col 3 |
| Row 2, Col 1 | Row 2, Col 2 | Row 2, Col 3 |
| Row 3, Col 1 | Row 3, Col 2 | Row 3, Col 3 |

Hover Me

abc

Add to List

- sd
- apple

sajbd

Key presses: 5

File C:/Users/bvenk/OneDrive/Desktop/web_prog_3/index.html

Row 1, Col 1

Row 1, Col 2

Row 2, Col 1

Row 2, Col 2

Row 3, Col 1

Row 3, Col 2

Row 3, Col 3

Hover Me

hello

Add to List

- sd
- apple
- abc

sajbd

Key presses: 5

This page says

Hello! You changed the text.

OK

2) (i) Create a simple stopwatch with "Start", "Stop", and "Reset" buttons using JavaScript event listeners. (ii) Create a text box to accept the Date of Birth and calculate the age on mouseover using an event listener. (iii) Create a textarea with a character counter that updates dynamically as the user types using an event listener.

CODE:

```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width,
initial-scale=1.0">

    <title>Stopwatch, Age Calculator & Character
Counter</title>

    <style>

        button, input, textarea {

            display: block;

            margin: 10px 0;

        }

    </style>

</head>

<body>

    <script>
```

```
document.addEventListener("DOMContentLoaded", ()  
=> {  
    // (i) Stopwatch with Start, Stop, and Reset buttons  
    let timer;  
    let time = 0;  
    const display = document.createElement("div");  
    display.innerText = "0s";  
    document.body.appendChild(display);  
  
    const startBtn = document.createElement("button");  
    startBtn.innerText = "Start";  
    startBtn.onclick = () => {  
        if (!timer) {  
            timer = setInterval(() => {  
                time++;  
                display.innerText = `${time}s`;  
            }, 1000);  
        }  
    };  
  
    const stopBtn = document.createElement("button");  
    stopBtn.innerText = "Stop";
```



```
stopBtn.onclick = () => {  
    clearInterval(timer);  
    timer = null;  
};
```

```
const resetBtn =  
document.createElement("button");  
resetBtn.innerText = "Reset";  
resetBtn.onclick = () => {  
    clearInterval(timer);  
    timer = null;  
    time = 0;  
    display.innerText = "0s";  
};
```

```
document.body.appendChild(startBtn);  
document.body.appendChild(stopBtn);  
document.body.appendChild(resetBtn);
```

// (ii) Date of Birth input with age calculation on
mouseover

```
const dobInput = document.createElement("input");
```

```
dobInput.type = "date";
dobInput.onmouseover = () => {
  if (dobInput.value) {
    const birthDate = new Date(dobInput.value);
    const age = new Date().getFullYear() -
birthDate.getFullYear();
    alert(` You are ${age} years old.` );
  }
};
document.body.appendChild(dobInput);
```

```
// (iii) Textarea with character counter

const textArea =
document.createElement("textarea");

const charCount =
document.createElement("span");

charCount.innerText = "Characters: 0";

textArea.addEventListener("input", () => {
  charCount.innerText = ` Characters:
${textArea.value.length}` ;
});
```

```

        document.body.appendChild(textArea);

        document.body.appendChild(charCount);

    });

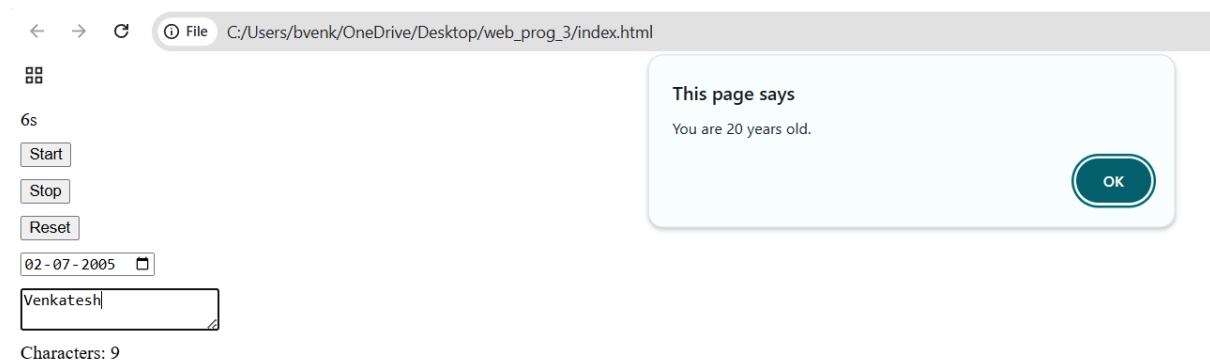
</script>

</body>

</html>

```

OUTPUT:



3) 3. Design the below form and do the following (i) Set the timer to display the current time (ii) Print the form content. Use `getElementsByName` to display Gender, Country and Preferences (iii) Validate (a) All Mandatory Fields (represented by *). If empty focus on the same field. (b) Name should not exceed 15 characters (c) Address – to be specified in Text Area (d) Zip code should be numeric and validated the maximum digits (e) Phone numbers should be numeric and validated the maximum digits 10 (f) e-mail syntax should be validated (g) Password should contain a

number, character & a special character and length should not exceed 15 and recede 8 (h) PAN card number – Textbox (validate such that the PAN number is 10 digits and follows the pattern).

Test JavaScript Form Validataion

Time:11:30:55

Name*

Please enter your name!

Address

Zip Code*

Country*

Please select... ▾

Gender*

☐ Male ☐ Female

Pan No:

Preferences*

☐ Red ☐ Green ☐ Blue

Phone*

Email*

password (6-8 characters)*

Verify password*

SEND

CLEAR

CODE:

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
  <meta charset="UTF-8">
```

```
  <meta name="viewport" content="width=device-width,  
initial-scale=1.0">
```

```
  <title>Form Validation</title>
```

```
  <style>
```

```
    label { display: inline-block; width: 150px; }
```

```
.error { color: red; }

#timer { float: right; border: 1px solid black; padding:
5px; }

.txt{
    margin-left: 400px;
}

#timer {
float: right;
border: 1px solid black;
padding: 5px;
display: inline-block;
margin-left: 60px;
font-weight: bold;
background-color: #f8f9fa;
}

fieldset {
    width: 50%; /* Adjust the width as needed */
    margin: auto; /* Center the fieldset */
    padding: 20px;
    border-radius: 10px; /* Optional: rounded corners */
}
```

```
</style>
</head>
<body>
  <form name="myForm" onsubmit="return validate()">
    <fieldset>
      <div id="timer"></div>
      <h3>Test JavaScript Form Validation</h3>
      <label>Name<span style="color:
red">*</span></label><input type="text"
name="name"/><span id="nameError"
class="error"></span><br/><br/>
      <label>Address</label><textarea
name="address"></textarea><span id="addressError"
class="error"></span><br/><br/>
      <label>Zip Code<span style="color:
red">*</span></label><input type="text"
name="zip"/><span id="zipError"
class="error"></span><br/><br/>
      <label>Country<span style="color:
red">*</span></label>
      <select name="country">
        <option value="">--Select--</option>
        <option value="India">India</option>
        <option value="USA">USA</option>
```

```
<option value="Others">Others</option>

</select><span id="countryError"
class="error"></span><br/><br/>

<label>Gender<span style="color:
red">*</span></label>

<input type="radio" name="gender"
value="Male"/>Male

<input type="radio" name="gender"
value="Female"/>Female

<div class="txt">

<label>PAN No</label><input type="text"
name="pan"/><span id="panError" class="error"></span>

</div>

<span id="genderError"
class="error"></span><br/><br/>

<label>Preferences<span style="color:
red">*</span></label>

<input type="checkbox" name="preferences"
value="Red"/>Red

<input type="checkbox" name="preferences"
value="Green"/>Green

<input type="checkbox" name="preferences"
value="Blue"/>Blue

<span id="preferencesError"
class="error"></span><br/><br/>
```

```
<label>Phone<span style="color:
red">*</span></label><input type="text"
name="phone"/><span id="phoneError"
class="error"></span><br/><br/>
```

```
<label>Email<span style="color:
red">*</span></label><input type="text"
name="email"/><span id="emailError"
class="error"></span><br/><br/>
```

```
<label>Password<span style="color:
red">*</span></label><input type="password"
name="password"/><span id="passwordError"
class="error"></span><br/><br/>
```

```
<label>Verify Password<span style="color:
red">*</span></label><input type="password"
name="verifypassword"/><span id="verifyError"
class="error"></span><br/><br/>
```

```
<button type="submit">SUBMIT</button>
```

```
<button type="reset">CLEAR</button>
```

```
</fieldset>
```

```
</form>
```

```
<script>
```

```
function updateTime() {
```

```
    document.getElementById("timer").innerHTML =
    "Time: " + new Date().toLocaleTimeString();
```



```
}  
  
setInterval(updateTime, 1000);  
  
function validate() {  
    var form = document.forms["myForm"];  
    var errors = false;  
    function setError(id, message) {  
        document.getElementById(id).innerHTML =  
message;  
        errors = true;  
    }  
    document.querySelectorAll(".error").forEach(el =>  
el.innerHTML = "");  
  
    if (!/^[A-Za-z]{1,15}$/.test(form.name.value))  
setError("nameError", "Enter valid name (max 15 letters)");  
  
    if (!/^[0-9]{6}$/.test(form.zip.value))  
setError("zipError", "Zip code must be 6 digits");  
    if (form.country.value === "") setError("countryError",  
"Select a country");  
    if (!form.gender.value) setError("genderError", "Select  
gender");
```

```
        if
(!document.querySelector("input[name='preferences']:checked")) setError("preferencesError", "Select at least one preference");

        if (!/^[0-9]{10}$/.test(form.phone.value))
setError("phoneError", "Phone must be 10 digits");

        if (!/^[\\w-\\.]+@([\\w-]+\\.)+[\\w-]{2,4}$/.test(form.email.value)) setError("emailError",
"Invalid email format");

        if (!/^(?=.*\\d)(?=.*[A-Za-z])(?=.*[?!*%$@])[A-Za-z\\d?!*%$@]{8,15}$/.test(form.password.value))
setError("passwordError", "Password must be 8-15
characters, including a number and special character");

        if (form.password.value !==
form.verifypassword.value) setError("verifyError",
"Passwords do not match");

        if (!/^[A-Z]{5}[0-9]{4}[A-Z]{1}$/.test(form.pan.value))
setError("panError", "Invalid PAN format");

        return !errors;
    }
</script>
</body>
</html>
```

OUTPUT:

When empty form is submitted:

Test JavaScript Form Validation

Time: 9:43:50 PM

Name*

Enter valid name (max 15 letters)

Address

Zip Code*

Zip code must be 6 digits

Country*

--Select--

Select a country

Gender*

☐ Male ☐ Female

PAN No

Invalid PAN format

Select gender

Preferences*

☐ Red ☐ Green ☐ Blue

Select at least one preference

Phone*

Phone must be 10 digits

Email*

Invalid email format

Password*

Password must be 8-15 characters, including a number and special character

Verify Password*

SUBMIT

CLEAR

When form with wrong values is submitted:

Test JavaScript Form Validation

Time: 9:46:46 PM

Name*

Address

Zip Code*

Country*

Gender*

☒ Male ☐ Female

PAN No

Invalid PAN format

Preferences*

☐ Red ☒ Green ☒ Blue

Phone*

Phone must be 10 digits

Email*

Invalid email format

Password*

Password must be 8-15 characters, including a number and special character

Verify Password*

SUBMIT

CLEAR

Time: 9:47:55 PM

Test JavaScript Form Validation

Name*

Venkatesh

Address

123 Maple Street,
Springfield, IL 62704

Zip Code*

600037

Country*

India

Gender*

☒ Male

☐ Female

PAN No

hjsxjwddbakbnk

Invalid PAN format

Preferences*

☐ Red

☒ Green

☒ Blue

Phone*

9854123

Phone must be 10 digits

Email*

venkatesh.b2023@vitstude

Password*

Verify Password*

SUBMIT

CLEAR

After submitting the form with correct values:

Time: 9:48:51 PM

Test JavaScript Form Validation

Name*

Address

Zip Code*

Country*

--Select--

Gender*

☐ Male

☐ Female

PAN No

Preferences*

☐ Red

☐ Green

☐ Blue

Phone*

Email*

Password*

Verify Password*

SUBMIT

CLEAR

When clear button is pressed:

Test JavaScript Form Validation

Time: 9:49:40 PM

Name*

Address

Zip Code*

Country*

Gender* ☐ Male ☐ Female

PAN No

Preferences* ☐ Red ☐ Green ☐ Blue

Phone*

Email*

Password*

Verify Password*