Web Lab Exercise11

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Subject	Web Programming
Slot	L15+L16+L19+L20
Venue	AB3 – 202

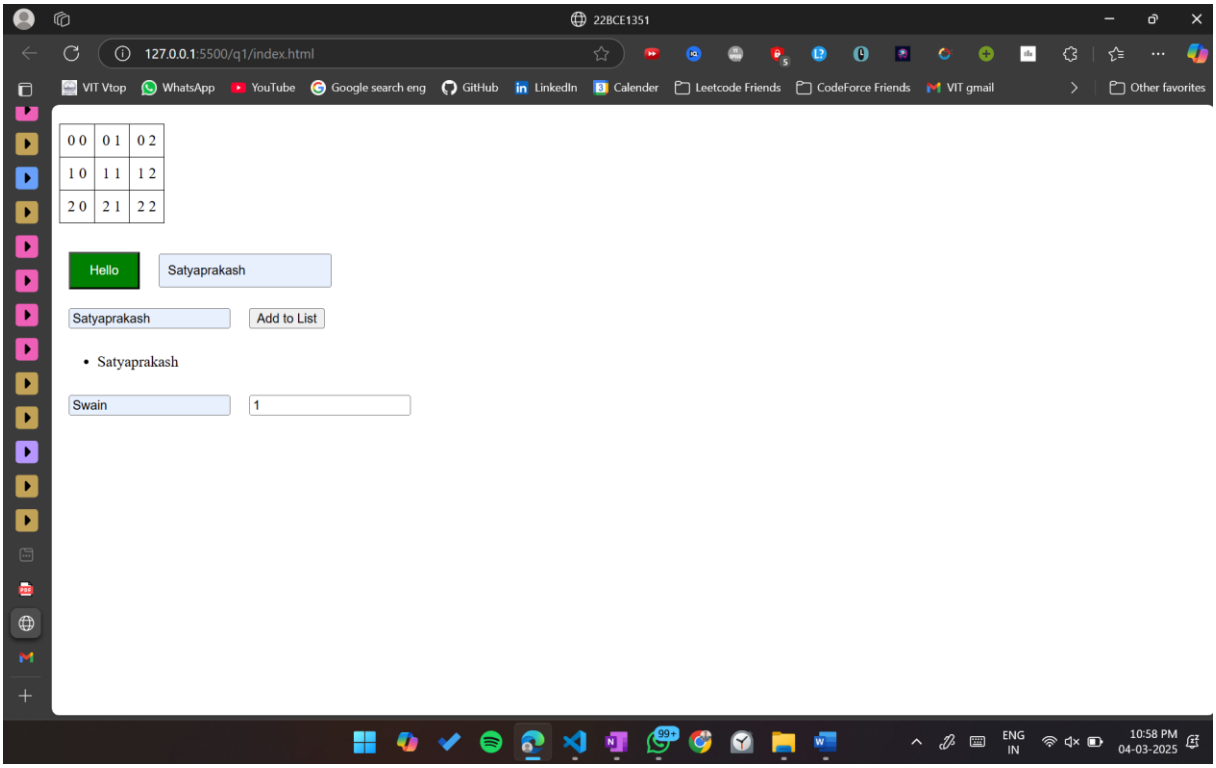
1. Write a JavaScript to
(i) Create a dynamic table with three rows and three columns
(ii) Change the color of the Button from red to green color on Mouse Over.
(iii)Change the color of the Textbox from green to yellow color on Focus and display a greeting message on Change
Note: Both button and textbox 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 <li> 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>22BCE1351</title>
</head>

<body>
   <script>
       const newline = document.createElement('br');
       const table = document.createElement("table");
       table.style.border = "1px solid black";
       table.style.margin = "20px 0";
       table.style.borderCollapse = "collapse";

       for (let i = 0; i < 3; i++) {
           const row = document.createElement("tr");
           for (let j = 0; j < 3; j++) {
               const cell = document.createElement('td');
               cell.textContent = `${i} ${j}`;
               cell.style.border = "1px solid black"
               cell.style.padding = '8px';
               row.appendChild(cell);
           }
           table.appendChild(row);
       }
       document.body.appendChild(table);
```

```
const button = document.createElement("button");
button.textContent = 'Hello';
button.style.backgroundColor = "red";
button.style.color = "white";
button.style.padding = '10px 20px';
button.style.margin = '10px';

button.addEventListener('mouseover', () => {
    button.style.backgroundColor = 'green';
})

document.body.appendChild(button);

const textBox = document.createElement("input");
textBox.style.backgroundColor = 'green';
textBox.style.color = 'black';
textBox.style.padding = '8px';
textBox.style.margin = '10px';

textBox.addEventListener('focus', () => {
    textBox.style.backgroundColor = "yellow";
})
textBox.addEventListener('change', () => {
    alert(`Hello ${textBox.value}`);
})
document.body.appendChild(textBox);

const inputField = document.createElement('input');
inputField.type = 'text';
inputField.style.margin = '10px';

const addButton = document.createElement('button');
addButton.textContent = 'Add to List';
addButton.style.margin = '10px';

const list = document.createElement('ul');

addButton.addEventListener('dblclick', () => {
    const item = document.createElement('li');
    item.textContent = `${inputField.value}`;
    list.appendChild(item);
})
```

```
        document.body.appendChild(newline);
        document.body.appendChild(inputField);
        document.body.appendChild(addButton);
        document.body.appendChild(list);

        const inputfield = document.createElement('input');
        inputfield.type = 'text';
        inputfield.style.margin = '10px';

        const outputfield = document.createElement('input');
        outputfield.type = 'text';
        outputfield.readOnly = true;
        outputfield.style.margin = '10px';

        let count = 0;
        inputfield.addEventListener('keydown', () => {
            count++;
            outputfield.value = count;
        })

        document.body.appendChild(inputfield);
        document.body.appendChild(outputfield);

    </script>
</body>

</html>
```


22BCE1351
127.0.0.1:5500/q1/index.html
VIT Vtop
WhatsApp
YouTube
Google search eng
GitHub
LinkedIn
Calender
Leetcode Friends
CodeForce Friends
VIT gmail
Other favorites
0 0 0 1 0 2
1 0 1 1 1 2
2 0 2 1 2 2
Hello
Satyaprakash
Satyaprakash
Add to List
Satyaprakash
Swain
1
ENG
IN
10:58 PM
04-03-2025

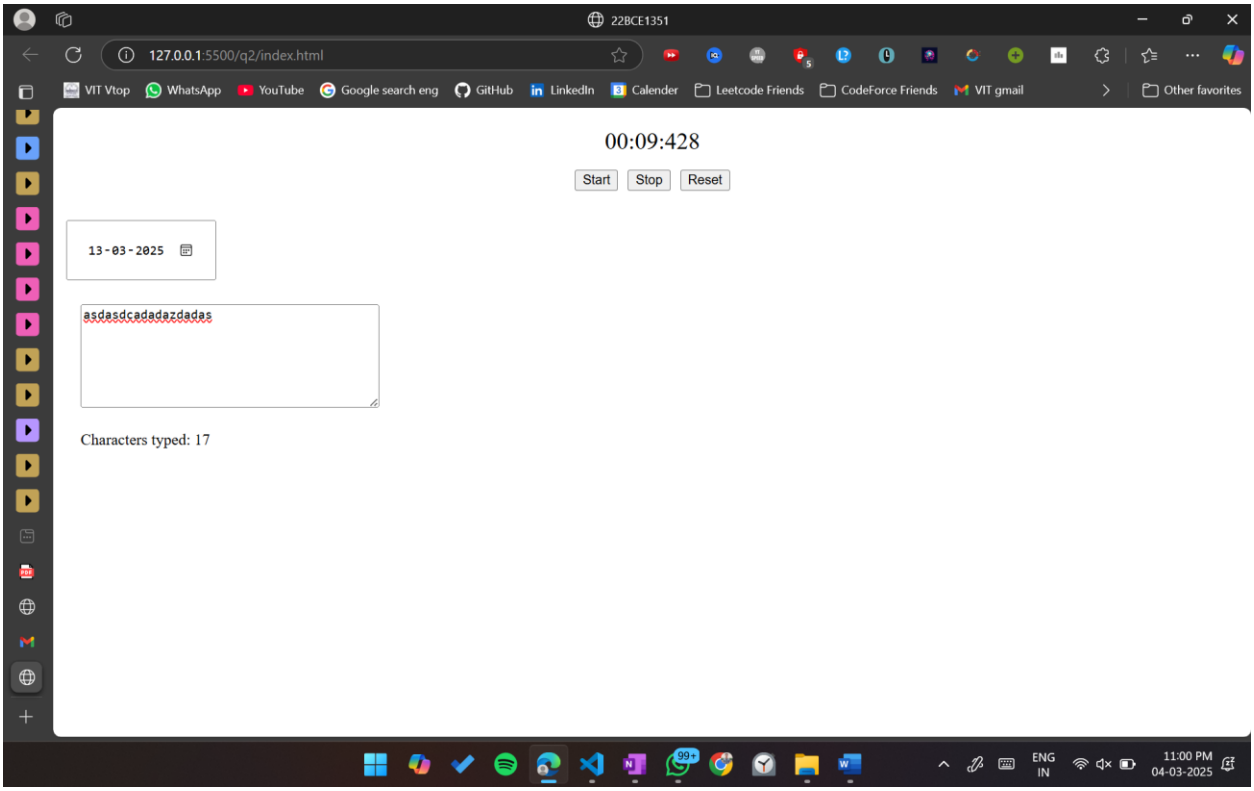
2. (i) Create a simple stopwatch with "Start", "Stop", and "Reset" buttons using JavaScript event listeners.
(ii) Create a text box to accept the Date of Birth and calculate the age on mouseover using an event listener.
(iii) Create a textarea with a character counter that updates dynamically as the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

CODE:

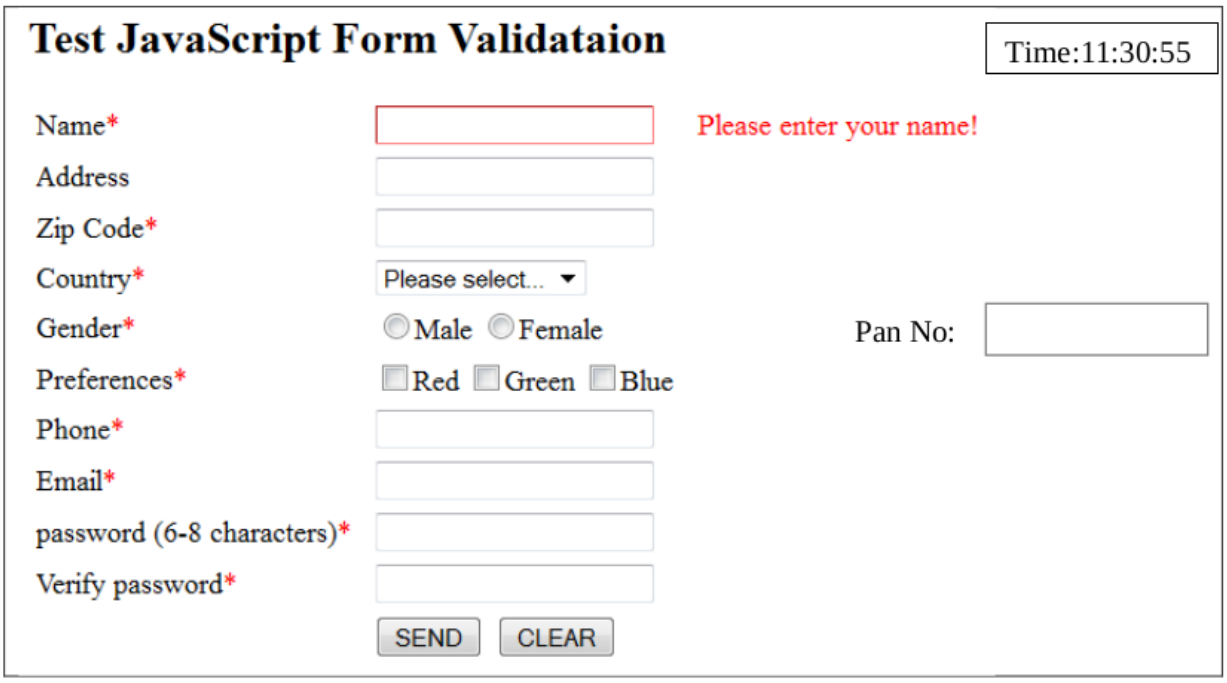
```
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="UTF-8">
   <meta name="viewport" content="width=device-width, initial-scale=1.0">
   <title>22BCE1351</title>
</head>

<body>
   <script>
       const container = document.createElement('div');
       container.style.margin = "20px";
       container.style.textAlign = 'center'



       const timer = document.createElement('div');
       timer.textContent = "00:00:00";
       timer.style.fontSize = '24px';
       timer.style.marginBottom = '10px';
       container.appendChild(timer);


       const startBtn = document.createElement('button');
       startBtn.textContent = 'Start';
       startBtn.style.margin = '5px';

       const stopBtn = document.createElement('button');
       stopBtn.textContent = "Stop";
       stopBtn.style.margin = '5px';
```

```
        const resetBtn = document.createElement('button');
        resetBtn.textContent = "Reset";
        resetBtn.style.margin = '5px'


        let start = 0;
        let curr = 0;
        let timeInterval = 0;

        function formatTime(ms) {
            const minutes = Math.floor(ms / 60000);
            const seconds = Math.floor((ms % 60000) / 1000);
            const millis = Math.floor(ms % 1000);
            return `${String(minutes).padStart(2,
'0')}:${String(seconds).padStart(2, '0')}:${String(millis).padStart(3,
'0')}`;
        }

        startBtn.addEventListener('click', () => {
            start = Date.now() - curr;
            timeInterval = setInterval(() => {
                curr = Date.now() - start;
                timer.textContent = formatTime(curr);
            }, 10)
        })

        stopBtn.addEventListener('click', () => {
            clearInterval(timeInterval);
        })

        resetBtn.addEventListener('click', () => {
            clearInterval(timeInterval);
            timer.textContent = "00:00:00";
        })

        container.append(startBtn, stopBtn, resetBtn);
        document.body.appendChild(container);

        const dobInp = document.createElement('input');
        dobInp.type = 'date';
        dobInp.style.margin = '5px';
```

```
        dobInp.style.padding = '20px';

        const ageDisplay = document.createElement('div');
        ageDisplay.style.fontSize = '18px';
        ageDisplay.style.marginLeft = '20px';

        dobInp.addEventListener('mouseover', () => {
            const d = new Date();
            let inp = dobInp.valueAsDate;
            let value = d.getFullYear() - inp.getFullYear();
            if (d.getMonth() < inp.getMonth() || (d.getMonth() ===
inp.getMonth() && d.getDate() < inp.getDate())) {
                value--;
            }
            ageDisplay.textContent = `Age: ${value}`;
        })

        document.body.appendChild(dobInp);
        document.body.appendChild(ageDisplay);

        const textArea = document.createElement('textarea');
        textArea.style.width = '300px';
        textArea.style.height = '100px';
        textArea.style.margin = '20px';

        const counter = document.createElement('div');
        counter.style.marginLeft = '20px';
        counter.textContent = 'Characters typed: 0';


        textArea.addEventListener('keydown', () => {
            const val = textArea.value.length;
            counter.textContent = `Characters typed: ${val}`;
        });

        document.body.appendChild(textArea);
        document.body.appendChild(counter);
    </script>
</body>
</html>
```


22BCE1351
127.0.0.1:5500/q2/index.html
VIT Vtop
WhatsApp
YouTube
Google search eng
GitHub
LinkedIn
Calender
Leetcode Friends
CodeForce Friends
VIT gmail
Other favorites
00:09:428
Start
Stop
Reset
13-03-2025
asdasdcadadazdadas
Characters typed: 17
ENG
IN
11:00 PM
04-03-2025

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)



CODE:

a. **index.html**

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

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>22BCE1351</title>

    <style>
        form {
            border-color: black;
            border-style: solid;
            border-width: 1px;
        }

        label {
            /* display: block; */
            margin-top: 10px;
        }
        .header {
            display: flex;
            justify-content: space-between;
            align-items: center;
        }
        .error {
            color: red;
            font-size: 0.9em;
        }
    </style>
</head>

<body>
    <form id="myform" onsubmit="validateForm(event)">
        <div class="header">
            <h2>Test JavaScript Form Validation</h2>
            <div id="timer">00:00</div>
        </div>
```

```
        <label>Name*</label>
        <input type="text" name="name" id="name" maxlength="15">
        <span id="nameError" class="error"></span>

        <br><br>
        <label for="address">Address</label>
        <textarea id="address" name="address"></textarea>

        <br><br>
        <label for="zipCode">Zip Code*</label>
        <input type="text" id="zipCode" name="zipCode">

        <br><br>
        <label for="country">Country*</label>
        <select name="country" id="country">
            <option value="">Please Select</option>
            <option value="USA">USA</option>
            <option value="India">India</option>
        </select>

        <br><br>
        <label for="gender">Gender*</label>
        <input type="radio" id="male" name="gender" value="Male">
        <label for="male">Male</label>
        <input type="radio" id="female" name="gender" value="Female">
        <label for="female">Female</label>

        <br><br>
        <label for="preferences">Preferences*</label>
        <input type="checkbox" id="red" name="preferences" value="Red">
        <label for="red">Red</label>
        <input type="checkbox" id="green" name="preferences" value="Green">
        <label for="green">Green</label>
        <input type="checkbox" id="blue" name="preferences" value="Blue">
        <label for="blue">Blue</label>

        <br><br>
        <label for="phone">Phone*</label>
        <input type="text" id="phone" name="phone" maxlength="10">

        <br><br>
```

```
        <label for="email">Email*</label>
        <input type="text" id="email" name="email">

        <br><br>
        <label for="password">Password (6-8 characters)*</label>
        <input type="password" id="password" name="password" minlength="8">

        <br><br>
        <label for="verifyPassword">Verify Password*</label>
        <input type="password" id="verifyPassword" name="verifyPassword"
minlength="8">

        <br><br>
        <label for="panNo">PAN No:</label>
        <input type="text" id="panNo" name="panNo">

        <br><br>
        <button type="submit">SEND</button>
        <button type="button" onclick="clearForm()">CLEAR</button>
    </form>



    <script src="script.js"></script>
</body>
</html>
```

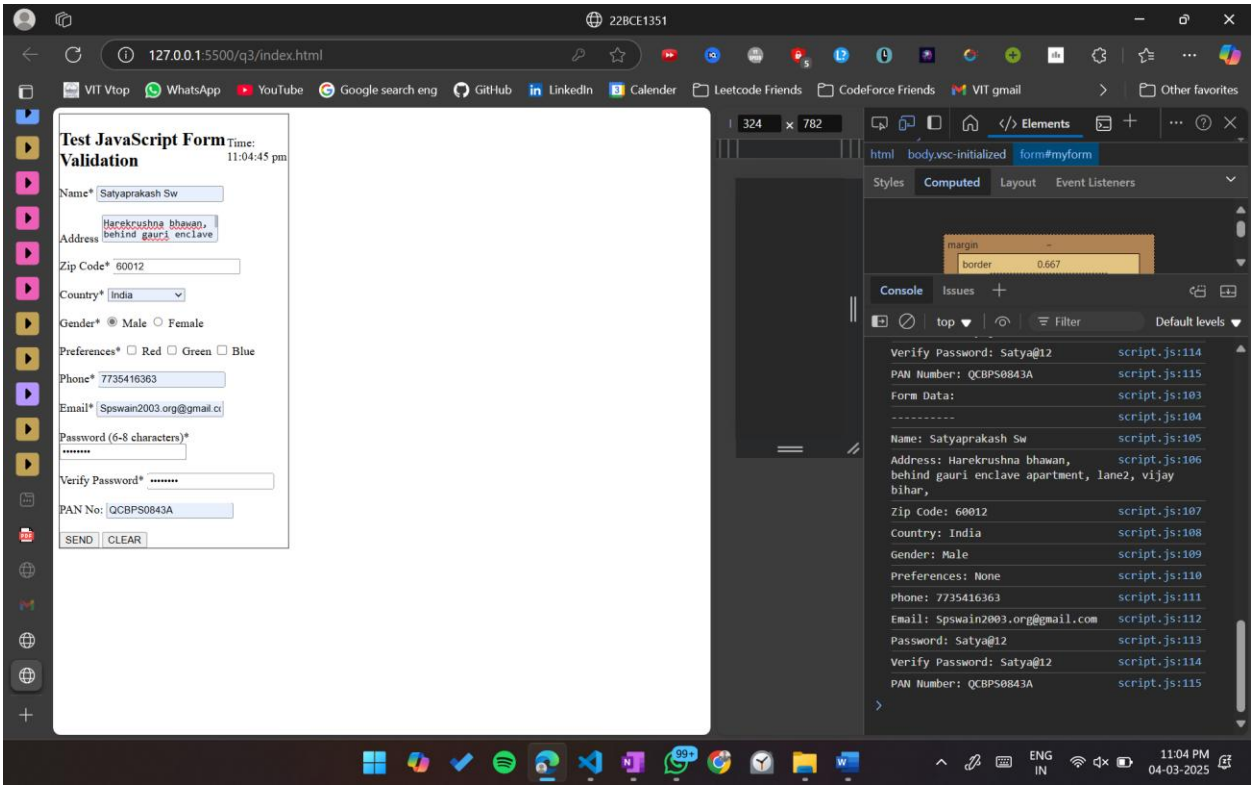
b. script.js

```
function updateTimer() {
    const now = new Date();
    const timeString = now.toLocaleTimeString();
    document.getElementById('timer').innerText = `Time: ${timeString}`;
}

setInterval(updateTimer, 1000);

function clearForm() {
    document.getElementById('testForm').reset();
}
```

```
function validateForm(event) {
    event.preventDefault();
    let isValid = true;


    const name = document.getElementsByName('name')[0];
    if (!name.value) {
        document.getElementById('nameError').innerText = 'Please enter your
name!';
        name.focus();
        isValid = false;
    } else {
        document.getElementById('nameError').innerText = '';
    }


    const zipCode = document.getElementsByName('zipCode')[0];
    if (!zipCode.value || isNaN(zipCode.value) || zipCode.value.length > 5)
{
        alert('Invalid Zip Code!');
        zipCode.focus();
        isValid = false;
    }


    const phone = document.getElementsByName('phone')[0];
    if (!phone.value || isNaN(phone.value) || phone.value.length !== 10) {
        alert('Invalid Phone Number!');
        phone.focus();
        isValid = false;
    }


    const email = document.getElementsByName('email')[0];
    const emailRegex = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
    if (!email.value || !emailRegex.test(email.value)) {
        alert('Invalid Email!');
        email.focus();
        isValid = false;
    }
```

```
    const password = document.getElementsByName('password')[0];
    const verifyPassword = document.getElementsByName('verifyPassword')[0];
    const passwordRegex = /^(?=.*[0-9])(?=.*[a-zA-Z])(?=.*[!@#$%^&*])[a-zA-
Z0-9!@#$%^&*]{8,15}$/;
    if (!password.value || !passwordRegex.test(password.value) ||
password.value !== verifyPassword.value) {
        alert('Invalid Password!');
        password.focus();
        isValid = false;
    }


    const panNo = document.getElementsByName('panNo')[0];
    const panRegex = /^[A-Z]{5}[0-9]{4}[A-Z]$/;
    if (panNo.value && !panRegex.test(panNo.value)) {
        alert('Invalid PAN Number!');
        panNo.focus();
        isValid = false;
    }
    if(isValid)printFormContent();
}

function printFormContent() {
    const name = document.getElementById('name').value;
    const address = document.getElementById('address').value;
    const zipCode = document.getElementById('zipCode').value;
    const country = document.getElementById('country').value;
    const phone = document.getElementById('phone').value;
    const email = document.getElementById('email').value;
    const password = document.getElementById('password').value;
    const verifyPassword = document.getElementById('verifyPassword').value;
    const panNo = document.getElementById('panNo').value;

    const gender = Array.from(document.getElementsByName('gender'))
        .find(radio => radio.checked)?.value || 'Not selected';

    const preferences =
Array.from(document.getElementsByName('preferences'))
        .filter(checkbox => checkbox.checked)
        .map(checkbox => checkbox.value)
```

```
      .join(', ') || 'None';


  console.log('Form Data:');
  console.log('----------');
  console.log(`Name: ${name}`);
  console.log(`Address: ${address}`);
  console.log(`Zip Code: ${zipCode}`);
  console.log(`Country: ${country}`);
  console.log(`Gender: ${gender}`);
  console.log(`Preferences: ${preferences}`);
  console.log(`Phone: ${phone}`);
  console.log(`Email: ${email}`);
  console.log(`Password: ${password}`);
  console.log(`Verify Password: ${verifyPassword}`);
  console.log(`PAN Number: ${panNo}`);
}
```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127.0.0.1:5500/q3/index.html
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LinkedIn
Calender
Leetcode Friends
CodeForce Friends
VIT gmail
Other favorites
Test JavaScript Form Validation
Time: 11:04:45 pm
Name* Satyaprakash Sw
Address Harekrushna bhawan, behind gauri enclave
Zip Code* 60012
Country* India
Gender* Male Female
Preferences* Red Green Blue
Phone* 7735416363
Email* Spswain2003.org@gmail.cc
Password (6-8 characters)*
Verify Password*
PAN No: QCBPS0843A
SEND CLEAR
324 x 782
Elements
html body.vsc-initialized form#myform
Styles Computed Layout Event Listeners
margin
border 0.667
Console Issues
top Filter Default levels
Verify Password: Satya@12 script.js:114
PAN Number: QCBPS0843A script.js:115
Form Data: script.js:103
---------- script.js:104
Name: Satyaprakash Sw script.js:105
Address: Harekrushna bhawan, behind gauri enclave apartment, lane2, vijay bihar, script.js:106
Zip Code: 60012 script.js:107
Country: India script.js:108
Gender: Male script.js:109
Preferences: None script.js:110
Phone: 7735416363 script.js:111
Email: Spswain2003.org@gmail.com script.js:112
Password: Satya@12 script.js:113
Verify Password: Satya@12 script.js:114
PAN Number: QCBPS0843A script.js:115
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