1. Write a javascript program to validate HTML form fields in a webpage. i. Design a Registration Webpage for an insurance company. ii. The form must contain a minimum of 10 fields. iii. Implement Java Script with regular expression to validate the following iv. For Last Name field - the last name should be dot(.) followed by single letter combination(Note:. K or .N.L is allowed.kumar or Nakul is not allowed). v. For E-Mail ID accept only the gmail ID. vi. With the Data of Birth input,calculate the age of the person and populate it in the textbox automatically. vii. Validate the form for empty field submissions.

```
<!DOCTYPE html>

<html lang="en">

<head>

    <title>Insurance Registration</title>

    <style>

      label {

        display: block;

        margin-bottom: 5px;

      }

      input {

        margin-bottom: 10px;

      }

      #age {

        width: 50px;

      }

    </style>

</head>

<body>


    <h2>Insurance Registration</h2>

    <form id="registrationForm" onsubmit="return validateForm()">

      <label for="firstName">First Name:</label>

      <input type="text" id="firstName" name="firstName" required>


      <label for="lastName">Last Name:</label>

      <input type="text" id="lastName" name="lastName" pattern="\.[A-Z]\." required>
```

```html
<label for="email">Email:</label>

<input type="email" id="email" name="email" pattern="^[a-zA-Z0-9._%+-]+@gmail\.com$" required>


<label for="dob">Date of Birth:</label>

<input type="date" id="dob" name="dob" onchange="calculateAge()" required>


<label for="age">Age:</label>

<input type="text" id="age" name="age" readonly required>


<button type="submit">Register</button>
</form>


<script>
  function validateForm() {
    var firstName = document.getElementById('firstName').value;
    var lastName = document.getElementById('lastName').value;
    var email = document.getElementById('email').value;
    var dob = document.getElementById('dob').value;

    // Validate First Name
    if (firstName.trim() === "") {
      alert('First Name cannot be empty.');
      return false;
    }

    // Validate Last Name using regular expression
    if (!/\.[A-Z]\./.test(lastName)) {
      alert('Invalid Last Name format. Should be dot(.) followed by a single letter combination.');
      return false;
    }
```

```javascript
    // Validate Email for Gmail
    if (!/^[a-zA-Z0-9._%+-]+@gmail\.com$/.test(email)) {
        alert('Invalid Email. Only Gmail IDs are allowed.');
        return false;
    }

    // Validate Date of Birth
    if (dob === "") {
        alert('Date of Birth cannot be empty.');
        return false;
    }

    // Add other field validations as needed

    return true;
}

function calculateAge() {
    var dob = document.getElementById('dob').value;
    var today = new Date();
    var birthDate = new Date(dob);
    var age = today.getFullYear() - birthDate.getFullYear();
    var monthDiff = today.getMonth() - birthDate.getMonth();

    if (monthDiff < 0 || (monthDiff === 0 && today.getDate() < birthDate.getDate())) {
        age--;
    }

    document.getElementById('age').value = age;
}
</script>
```

```
</body>
</html>
```

Insurance Registration

First Name:

[   ]

Last Name:

[   ]

Email:

[   ]

Date of Birth:

[dd - mm - yyyy 📅]

Age:

[   ] [Register]

2.. Create an html file named as exam.html a. Display four Questions and have four optional answers using radio buttons.

b. Display the result in a alert box.

c. Reset the page into initial condition for next exam.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Exam</title>
</head>
<body>

    <h2>Exam Questions</h2>

    <form id="examForm" onsubmit="return showResult()">
        <div>
```

```html
    <p>1. What is the capital of France?</p>
    <label><input type="radio" id="q1a" value="a"> a) Paris</label>
    <label><input type="radio" id="q1b" value="b"> b) Berlin</label>
    <label><input type="radio" id="q1c" value="c"> c) Rome</label>
    <label><input type="radio" id="q1d" value="d"> d) Madrid</label>
</div>

<div>
    <p>2. Which planet is known as the Red Planet?</p>
    <label><input type="radio" id="q2a" value="a"> a) Venus</label>
    <label><input type="radio" id="q2b" value="b"> b) Mars</label>
    <label><input type="radio" id="q2c" value="c"> c) Jupiter</label>
    <label><input type="radio" id="q2d" value="d"> d) Saturn</label>
</div>

<div>
    <p>3. What is the largest mammal in the world?</p>
    <label><input type="radio" id="q3a" value="a"> a) Elephant</label>
    <label><input type="radio" id="q3b" value="b"> b) Blue Whale</label>
    <label><input type="radio" id="q3c" value="c"> c) Giraffe</label>
    <label><input type="radio" id="q3d" value="d"> d) Gorilla</label>
</div>

<div>
    <p>4. Who wrote "Romeo and Juliet"?</p>
    <label><input type="radio" id="q4a" value="a"> a) William Shakespeare</label>
    <label><input type="radio" id="q4b" value="b"> b) Jane Austen</label>
    <label><input type="radio" id="q4c" value="c"> c) Charles Dickens</label>
    <label><input type="radio" id="q4d" value="d"> d) Mark Twain</label>
</div>

<button type="submit" onclick="showResult()">Submit</button>
```

```html
      <button type="button" onclick="resetExam()">Reset</button>
   </form>

   <script>
      function showResult() {
         var score = 0;

         // Check answers
         if (document.getElementById('q1a').checked) score++;
         if (document.getElementById('q2b').checked) score++;
         if (document.getElementById('q3b').checked) score++;
         if (document.getElementById('q4a').checked) score++;

         // Display result in an alert box
         alert('Your score: ' + score + '/4');
                  return false;

      }

      function resetExam() {
         // Reset form to initial condition
         document.getElementById('examForm').reset();
      }
   </script>

</body>
</html>
```

3. To create an html page with 2 combo box populated with month & year, to display the calendar for the selected month & year from combo box using javascript.

```html
<!DOCTYPE html>

<html lang="en">

<head>

    <title>Calendar Display</title>

    <style>

        table {

            border-collapse: collapse;

            width: 100%;

        }

        th, td {

            border: 1px solid #dddddd;

            text-align: center;

            padding: 8px;

        }

        th {

            background-color: #f2f2f2;

        }

    </style>

</head>
```

```html
<body>

    <h2>Calendar Display</h2>

    <label for="month">Select Month:</label>
    <select id="month" onchange="displayCalendar()">
        <option value="0">January</option>
        <option value="1">February</option>
        <option value="2">March</option>
        <option value="3">April</option>
        <option value="4">May</option>
        <option value="5">June</option>
        <option value="6">July</option>
        <option value="7">August</option>
        <option value="8">September</option>
        <option value="9">October</option>
        <option value="10">November</option>
        <option value="11">December</option>
    </select>

    <label for="year">Select Year:</label>
    <select id="year" onchange="displayCalendar()">
        <!-- You can dynamically populate the years based on your requirements -->
        <option value="2022">2022</option>
        <option value="2023">2023</option>
        <option value="2024">2024</option>
        <!-- Add more years as needed -->
    </select>

    <div id="calendarContainer"></div>

    <script>
```

```javascript
function displayCalendar() {

    var monthIndex = document.getElementById('month').value;

    var year = document.getElementById('year').value;


    var daysInMonth = new Date(year, parseInt(monthIndex) + 1, 0).getDate();

    var firstDayIndex = new Date(year, monthIndex, 1).getDay();


    var calendarHTML = '<table>';

    calendarHTML +=
'<tr><th>Sun</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th></tr>';


    var dayCounter = 1;

    for (var i = 0; i < 6; i++) {

        calendarHTML += '<tr>';

        for (var j = 0; j < 7; j++) {

            if ((i === 0 && j < firstDayIndex) || dayCounter > daysInMonth) {

                calendarHTML += '<td></td>';

            } else {

                calendarHTML += '<td>' + dayCounter + '</td>';

                dayCounter++;

            }

        }

        calendarHTML += '</tr>';

        if (dayCounter > daysInMonth) {

            break;

        }

    }


    calendarHTML += '</table>';


    document.getElementById('calendarContainer').innerHTML = calendarHTML;

}
```

```
    // Initial display on page load

    displayCalendar();

  </script>


</body>

</html>
```

Calendar Display

Select Month: February ∨ Select Year: 2023 ∨

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				