ETHNUS -MERN FULL STACK INTERNSHIP

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ASSIGNMENT- 13

1. CODE:

```html
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <title>JavaScript Interactive Exercises</title>
7       <style>
8           body {
9               font-family: Arial, sans-serif;
10              line-height: 1.6;
11              margin: 20px;
12              background-color: #f4f7f6;
13              color: #333;
14          }
15          .exercise-section {
16              background-color: #fff;
17              padding: 25px;
18              margin-bottom: 30px;
19              border-radius: 8px;
20              box-shadow: 0 4px 10px rgba(0, 0, 0, 0.1);
21              max-width: 500px;
22              margin-left: auto;
23              margin-right: auto;
24          }
25          h2 {
26              color: #0056b3;
27              border-bottom: 2px solid #eee;
28              padding-bottom: 10px;
29              margin-bottom: 20px;
30          }
31          .input-group {
32              display: flex;
33              align-items: center;
34              margin-bottom: 15px;
35              gap: 10px;
36          }
37          .input-group label {
```

```css
        .input-group label {
            font-weight: bold;
            flex-shrink: 0;
        }
        .input-group input[type="number"],
        .input-group input[type="text"] {
            flex-grow: 1;
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
            font-size: 16px;
        }
        .input-group button {
            padding: 10px 18px;
            background-color: #28a745;
            color: white;
            border: none;
            border-radius: 5px;
            cursor: pointer;
            font-size: 16px;
            transition: background-color 0.3s ease;
        }
        .input-group button:hover {
            background-color: #218838;
        }
        .result-box {
            background-color: #e9ecef;
            padding: 15px;
            border-radius: 5px;
            border: 1px solid #dee2e6;
            font-size: 18px;
            font-weight: bold;
            color: #333;
            text-align: center;
            margin-top: 20px;
            min-height: 40px;
            display: flex;
            align-items: center;
            justify-content: center;
        }
        .result-box::before {
```

```html
                content: 'Output: ';
                font-weight: normal;
                color: ▢#555;
                margin-right: 5px;
            }
        </style>
    </head>
    <body>
        <div class="exercise-section">
            <h2>Exercise-1: Reverse a Number</h2>
            <p>Write a JavaScript function that reverses a number.</p>
            <div class="input-group">
                <label for="numInput">Input Number:</label>
                <input type="number" id="numInput" value="32243" placeholder="Enter a number">
                <button onclick="reverseNumberAndDisplay()">Reverse</button>
            </div>
            <div class="result-box" id="reverseResult"></div>
        </div>
        <div class="exercise-section">
            <h2>Exercise-2: Alphabetical String Sort</h2>
            <p>Write a JavaScript function that returns a passed string with letters in alphabetical order.</p>
            <div class="input-group">
                <label for="stringInput">Input String:</label>
                <input type="text" id="stringInput" value="webmaster" placeholder="Enter a string">
                <button onclick="sortStringAndDisplay()">Sort</button>
            </div>
            <div class="result-box" id="sortResult"></div>
        </div>
        <script>
            function reverseNumber(num) {
                const numStr = String(Math.abs(num));
                const reversedStr = numStr.split('').reverse().join('');
                return Math.sign(num) * parseInt(reversedStr);
            }
            function reverseNumberAndDisplay() {
                const inputElement = document.getElementById('numInput');
                const resultElement = document.getElementById('reverseResult');
                const num = parseFloat(inputElement.value);
                if (isNaN(num)) {
                    resultElement.textContent = 'Please enter a valid number.';
                    return;
                }
                const reversed = reverseNumber(num);
                resultElement.textContent = reversed;
            }
            function sortStringAlphabetically(str) {
                return str.split('').sort().join('');
            }
            function sortStringAndDisplay() {
                const inputElement = document.getElementById('stringInput');
                const resultElement = document.getElementById('sortResult');
                const str = inputElement.value;
                if (str.trim() === '') {
                    resultElement.textContent = 'Please enter a string.';
                    return;
                }
            }
```

```
134                const sorted = sortStringAlphabetically(str);
135                resultElement.textContent = `${sorted}`;
136            }
137        document.addEventListener('DOMContentLoaded', () => {
138            reverseNumberAndDisplay();
139            sortStringAndDisplay();
140        });
141    </script>
142  </body>
143  </html>
```

OUTPUT:

Exercise-1: Reverse a Number

Write a JavaScript function that reverses a number.

Input Number: `20199`   `Reverse`

Output: **99102**

Exercise-2: Alphabetical String Sort

Write a JavaScript function that returns a passed string with letters in alphabetical order.

Input String: khyathi   Sort

Output: **ahhikty**

2. CODE:

```
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <title>Multiplication and Division Calculator</title>
7       <style>
8           body {
9               font-family: Arial, sans-serif;
10              display: flex;
11              justify-content: center;
12              align-items: center;
13              min-height: 100vh;
14              background-color: #f0f0f0;
15              margin: 0;
16          }
```

```css
17        .container {
18            background-color: #fff;
19            padding: 30px;
20            border-radius: 8px;
21            box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
22            width: 300px;
23            text-align: center;
24        }
25        .input-group {
26            display: flex;
27            align-items: center;
28            margin-bottom: 15px;
29        }
30        .input-group label {
31            width: 100px;
32            text-align: left;
33            margin-right: 10px;
34            font-weight: bold;
35            color: #555;
36        }
37        .input-group input[type="number"] {
38            flex-grow: 1;
39            padding: 8px;
40            border: 1px solid #ddd;
41            border-radius: 4px;
42            font-size: 16px;
43        }
44        .buttons {
45            display: flex;
46            justify-content: center;
47            gap: 10px;
48            margin-top: 20px;
49        }
50        .buttons button {
51            padding: 10px 20px;
52            border: none;
53            border-radius: 5px;
54            cursor: pointer;
55            font-size: 16px;
56            transition: background-color 0.3s ease;
57        }
```

```css
58          .buttons button.multiply {
59              background-color: #007bff;
60              color: white;
61          }
62          .buttons button.multiply:hover {
63              background-color: #0056b3;
64          }
65          .buttons button.divide {
66              background-color: #6c757d;
67              color: white;
68          }
69          .buttons button.divide:hover {
70              background-color: #5a6268;
71          }
72          .result {
73              margin-top: 25px;
74              font-size: 20px;
75              font-weight: bold;
76              color: #333;
77          }
78      </style>
79  </head>
80  <body>
81      <div class="container">
82          <div class="input-group">
83              <label for="firstNumber">1st Number:</label>
84              <input type="number" id="firstNumber" value="12">
85          </div>
86          <div class="input-group">
87              <label for="secondNumber">2nd Number:</label>
88              <input type="number" id="secondNumber" value="10">
89          </div>
90          <div class="buttons">
91              <button class="multiply" onclick="calculate('multiply')">Multiply</button>
92              <button class="divide" onclick="calculate('divide')">Divide</button>
93          </div>
94          <div class="result">
95              The Result Is : <span id="resultValue"></span>
96          </div>
97      </div>
98      <script>
99          function calculat   function parseFloat(string: string): number
100             const num1 = parseFloat(document.getElementById('firstNumber').value);
101             const num2 = parseFloat(document.getElementById('secondNumber').value);
102             let result;
103             if (isNaN(num1) || isNaN(num2)) {
104                 document.getElementById('resultValue').textContent = 'Invalid input';
105                 return;
106             }
```
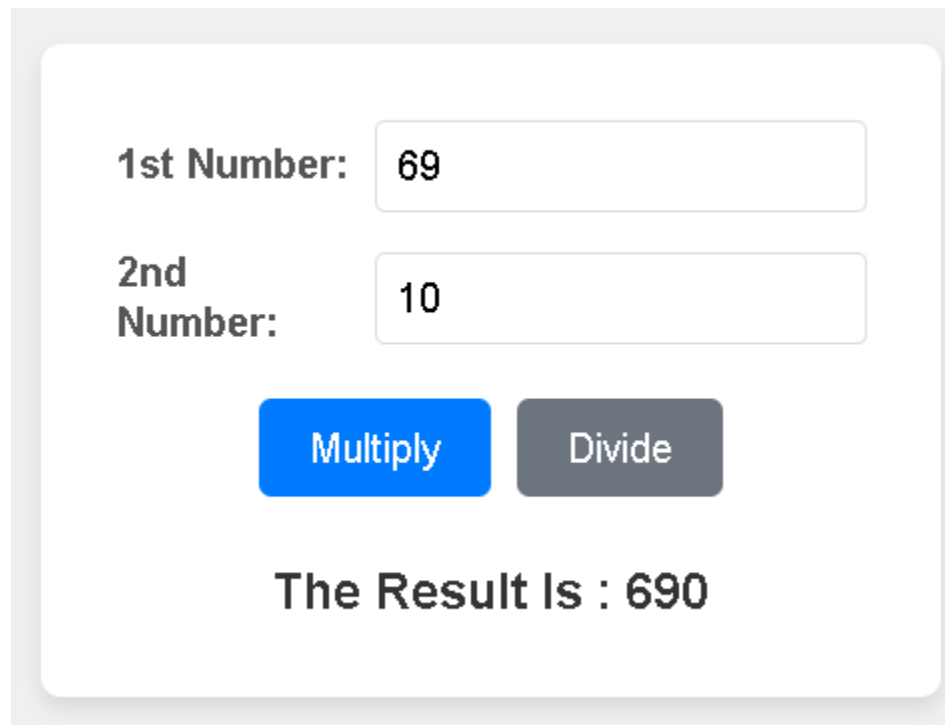
```
107            if (operation === 'multiply') {
108                result = num1 * num2;
109            } else if (operation === 'divide') {
110                if (num2 === 0) {
111                    result = 'Cannot divide by zero!';
112                } else {
113                    result = num1 / num2;
114                }
115            }
116            document.getElementById('resultValue').textContent = result;
117        }
118    </script>
119  </body>
120  </html>
```

OUTPUT:

1st Number: 69

2nd Number: 10

Multiply   **Divide**

The Result Is : 690

3. CODE:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0"/>
    <title>Registration Form</title>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0-beta3/css/all.min.css"/>
    <style>
      body {
        font-family: Arial, sans-serif;
        background-color: #f4f7f6;
        display: flex;
        justify-content: center;
        padding: 40px;
        box-sizing: border-box;
        min-height: 100vh;
      }
      .form-container {
        display: flex;
        gap: 50px;
        align-items: flex-start;
      }
      .form-left, .form-right {
        background-color: #fff;
        padding: 30px;
        border-radius: 8px;
        box-shadow: 0 4px 15px rgba(0, 0, 0, 0.1);
        width: 380px;
        box-sizing: border-box;
      }
      .form-right {
        border: 2px dashed #ccc;
      }
      .form-group {
        margin-bottom: 20px;
        position: relative;
      }
      .form-group label {
        display: block;
        margin-bottom: 5px;
        font-weight: bold;
        color: #555;
      }
      .input-wrapper {
        display: flex;
        align-items: center;
        border: 1px solid #ddd;
        border-radius: 4px;
        padding: 8px 12px;
        background-color: #f9f9f9;
      }
```

```css
52        .input-wrapper i {
53          color: #888;
54          margin-right: 10px;
55        }
56        .input-wrapper input,
57        .input-wrapper select,
58        .input-wrapper textarea {
59          border: none;
60          outline: none;
61          flex-grow: 1;
62          padding: 5px 0;
63          font-size: 16px;
64          background-color: transparent;
65        }
66        .input-wrapper textarea {
67          resize: vertical;
68          min-height: 80px;
69        }
70        .radio-group {
71          display: flex;
72          gap: 20px;
73          margin-top: 10px;
74        }
75        .radio-group input[type="radio"] {
76          margin-right: 5px;
77        }
78        .send-button {
79          background-color: #ffaa33;
80          color: white;
81          border: none;
82          padding: 12px 25px;
83          border-radius: 5px;
84          cursor: pointer;
85          font-size: 16px;
86          display: flex;
87          align-items: center;
88          gap: 8px;
89          justify-content: center;
90          margin-top: 30px;
91          transition: background-color 0.3s ease;
92        }
```

```
 93          .send-button:hover {
 94            background-color: ■#e69500;
 95          }
 96          .form-right .input-wrapper {
 97            border-color: ■#dc3545;
 98          }
 99          .form-right .input-wrapper input,
100          .form-right .input-wrapper select,
101          .form-right .input-wrapper textarea {
102            color: ■#dc3545;
103          }
104          .form-right .input-wrapper .error-icon {
105            color: ■#dc3545;
106            margin-left: 10px;
107            cursor: pointer;
108          }
109          .form-right .error-message {
110            color: ■#dc3545;
111            font-size: 13px;
112            margin-top: 5px;
113            text-align: left;
114          }
115      </style>
116    </head>
117    <body>
118      <div class="form-container">
119        <div class="form-left">
120          <div class="form-group">
121            <label for="firstName">First Name</label>
122            <div class="input-wrapper">
123              <i class="fas fa-user"></i>
124              <input type="text" placeholder="First Name" id="firstName"/>
125            </div>
126          </div>
127          <div class="form-group">
128            <label for="lastName">Last Name</label>
129            <div class="input-wrapper">
130              <i class="fas fa-user"></i>
131              <input type="text" placeholder="Last Name" id="lastName"/>
132            </div>
133          </div>
134          <div class="form-group">
135            <label for="email">E-Mail Address</label>
136            <div class="input-wrapper">
```

```html
              <i class="fas fa-envelope"></i>
              <input type="email" placeholder="E-Mail Address" id="email"/>
            </div>
          </div>
          <div class="form-group">
            <label for="phone">Phone</label>
            <div class="input-wrapper">
              <i class="fas fa-phone"></i>
              <input type="tel" placeholder="(845)555-1212" id="phone"/>
            </div>
          </div>
          <div class="form-group">
            <label for="address">Address</label>
            <div class="input-wrapper">
              <i class="fas fa-home"></i>
              <input type="text" placeholder="Address" id="address"/>
            </div>
          </div>
          <div class="form-group">
            <label for="city">City</label>
            <div class="input-wrapper">
              <i class="fas fa-city"></i>
              <input type="text" placeholder="City" id="city"/>
            </div>
          </div>
          <div class="form-group">
            <label for="state">State</label>
            <div class="input-wrapper">
              <i class="fas fa-list"></i>
              <select id="state">
                <option value="">Please select your state</option>
                <option value="NY">New York</option>
                <option value="CA">California</option>
                <option value="TX">Texas</option>
              </select>
            </div>
          </div>
          <div class="form-group">
            <label>Do you have hosting?</label>
            <div class="radio-group">
              <label><input type="radio" name="hosting" value="yes"/> Yes</label>
              <label><input type="radio" name="hosting" value="no"/> No</label>
            </div>
          </div>
```

```html
181          <div class="form-group">
182            <label for="projectDescription">Project Description</label>
183            <div class="input-wrapper">
184              <i class="fas fa-pencil-alt"></i>
185              <textarea placeholder="Project Description" id="projectDescription"></textarea>
186            </div>
187          </div>
188          <button type="submit" class="send-button">Send <i class="fas fa-paper-plane"></i></button>
189        </div>
190
191        <div class="form-right">
192          <div class="form-group">
193            <label for="firstNameError">First Name</label>
194            <div class="input-wrapper">
195              <i class="fas fa-user"></i>
196              <input type="text" placeholder="First Name" id="firstNameError" class="error-input"/>
197              <i class="fas fa-times-circle error-icon"></i>
198            </div>
199            <div class="error-message">Please supply your first name</div>
200          </div>
201          <div class="form-group">
202            <label for="lastNameError">Last Name</label>
203            <div class="input-wrapper">
204              <i class="fas fa-user"></i>
205              <input type="text" placeholder="Last Name" id="lastNameError" class="error-input"/>
206              <i class="fas fa-times-circle error-icon"></i>
207            </div>
208            <div class="error-message">Please supply your last name</div>
209          </div>
210          <div class="form-group">
211            <label for="emailError">E-Mail Address</label>
212            <div class="input-wrapper">
213              <i class="fas fa-envelope"></i>
214              <input type="email" placeholder="E-Mail Address" id="emailError" class="error-input"/>
215              <i class="fas fa-times-circle error-icon"></i>
216            </div>
217            <div class="error-message">Please supply your email address</div>
218          </div>
219          <div class="form-group">
220            <label for="phoneError">Phone</label>
221            <div class="input-wrapper">
222              <i class="fas fa-phone"></i>
223              <input type="tel" placeholder="(845)555-1212" id="phoneError" class="error-input"/>
224              <i class="fas fa-times-circle error-icon"></i>
225            </div>
226            <div class="error-message">Please supply your phone number</div>
227          </div>
228          <div class="form-group">
229            <label for="addressError">Address</label>
230            <div class="input-wrapper">
231              <i class="fas fa-home"></i>
232              <input type="text" placeholder="Address" id="addressError" class="error-input"/>
233              <i class="fas fa-times-circle error-icon"></i>
234            </div>
235            <div class="error-message">Please supply your street address</div>
236          </div>
237          <div class="form-group">
238            <label for="cityError">City</label>
239            <div class="input-wrapper">
240              <i class="fas fa-city"></i>
241              <input type="text" placeholder="City" id="cityError" class="error-input"/>
242              <i class="
```

OUTPUT:

First Name

First Name

Last Name

Last Name

E-Mail Address

E-Mail Address

Phone

(845)555-1212

Address

Address

City

City

State

Please select your state ⌄

Do you have hosting?
○ Yes   ○ No

Project Description

Project Description

Send

First Name

First Name

Please supply your first name

Last Name

Last Name

Please supply your last name

E-Mail Address

E-Mail Address

Please supply your email address

Phone

(845)555-1212

Please supply your phone number

Address

Address

Please supply your street address

City

City

4. CODE:

```html
1    <!DOCTYPE html>
2  ∨ <html lang="en">
3  ∨ <head>
4      <meta charset="UTF-8" />
5      <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6      <title>Password Generator</title>
7  ∨   <style>
8  ∨     body {
9          margin: 0;
10         padding: 0;
11         background-color: ☐#2f2b2d;
12         font-family: Arial, sans-serif;
13         display: flex;
14         justify-content: center;
15         align-items: center;
16         height: 100vh;
17         color: ■white;
18       }
19 ∨     .container {
20         background-color: ☐#0f0f0f;
21         border-radius: 20px;
22         padding: 30px;
23         text-align: center;
24         width: 400px;
25       }
26 ∨     .container h2 {
27         background-color: ■#e5e5e5;
28         color: ☐black;
29         border-radius: 20px;
30         padding: 10px;
31         margin-bottom: 30px;
32         font-weight: bold;
33       }
34 ∨     .password-box {
35         display: flex;
36         justify-content: center;
37         align-items: center;
38         margin-bottom: 20px;
39         gap: 10px;
40       }
41       .password-box input {
42         padding: 10px;
43         width: 60%;
44         border-radius: 10px;
```

```css
45        border: none;
46        font-size: 16px;
47      }
48    .password-box .label {
49      color: ■white;
50      font-size: 14px;
51    }
52    .password-box button {
53      padding: 10px 20px;
54      border-radius: 10px;
55      background-color: ■#e5e5e5;
56      border: none;
57      cursor: pointer;
58    }
59    .settings {
60      display: flex;
61      justify-content: center;
62      align-items: center;
63      gap: 15px;
64      flex-wrap: wrap;
65    }
66    .settings label {
67      font-size: 14px;
68      color: ■white;
69    }
70    .settings input[type="range"] {
71      width: 100px;
72    }
73    .checkbox-group {
74      display: flex;
75      align-items: center;
76      gap: 10px;
77    }
78        .checkbox-group input {
79          cursor: pointer;
80        }
81        .checkbox-group label {
82          color: ■white;
83        }
84    </style>
85  </head>
86  <body>
87    <div class="container">
```
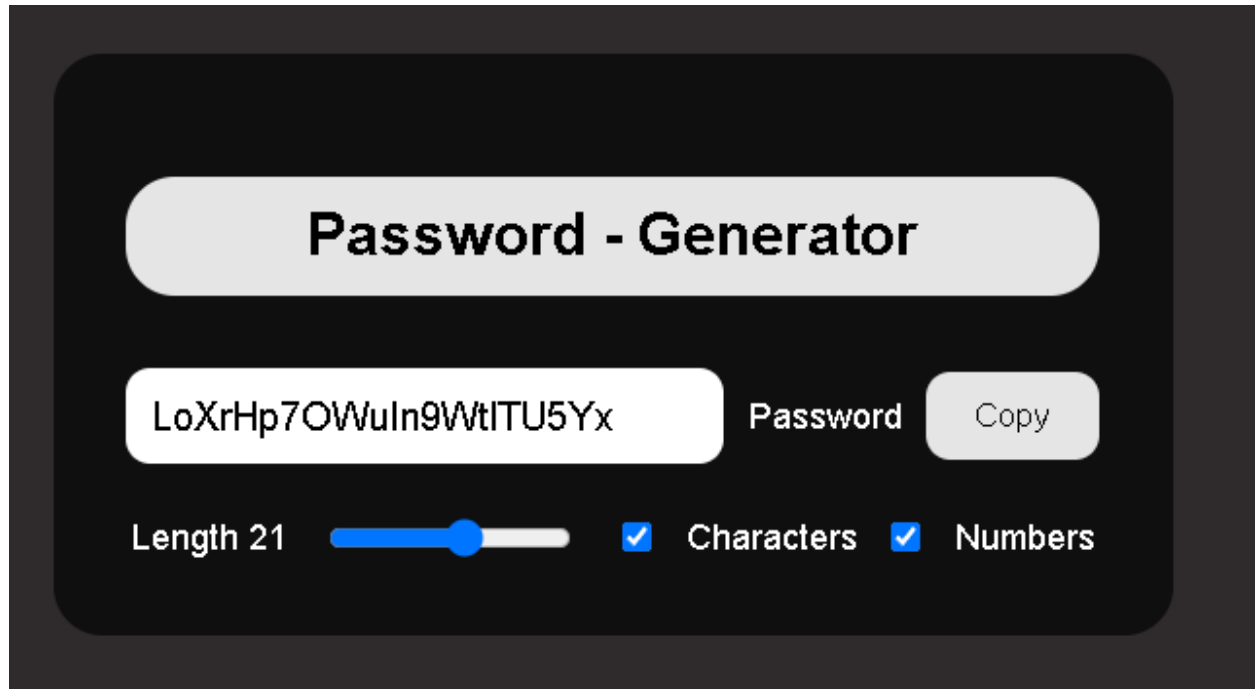
```html
    <h2>Password - Generator</h2>
    <div class="password-box">
      <input type="text" id="password" readonly />
      <span class="label">Password</span>
      <button onclick="copyPassword()">Copy</button>
    </div>
    <div class="settings">
      <label>Length <span id="lengthValue">17</span></label>
      <input type="range" id="length" min="6" max="32" value="17" />
      <div class="checkbox-group">
        <input type="checkbox" id="chars" checked />
        <label for="chars">Characters</label>
        <input type="checkbox" id="nums" />
        <label for="nums">Numbers</label>
      </div>
    </div>
  </div>
  <script>
    const passwordField = document.getElementById('password');
    const lengthSlider = document.getElementById('length');
    const charsCheck = document.getElementById('chars');
    const numsCheck = document.getElementById('nums');
    const lengthValue = document.getElementById('lengthValue');
    function generatePassword() {
      const length = parseInt(lengthSlider.value);
      const useChars = charsCheck.checked;
      const useNums = numsCheck.checked;
      let charset = '';
      if (useChars) charset += 'abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ';
      if (useNums) charset += '0123456789';
      let password = '';
      for (let i = 0; i < length; i++) {
        password += charset.charAt(Math.floor(Math.random() * charset.length));
      }
      passwordField.value = password || 'Please select a character set';
    }
    function copyPassword() {
      passwordField.select();
      document.execCommand('copy');
      alert('Password copied to clipboard!');
    }
    lengthSlider.addEventListener('input', () => {
      lengthValue.textContent = lengthSlider.value;
      generatePassword();
    });
```

```
133          charsCheck.addEventListener('change', generatePassword);
134          numsCheck.addEventListener('change', generatePassword);
135          generatePassword();
136      </script>
137    </body>
138  </html>
```

OUTPUT: