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1. Create an array with the values (1, 2, 3, 4, 5, 6, 7) and shuffle it.

2. Enter a Roman Number as input and convert it to an integer. (Example: IX = 9)

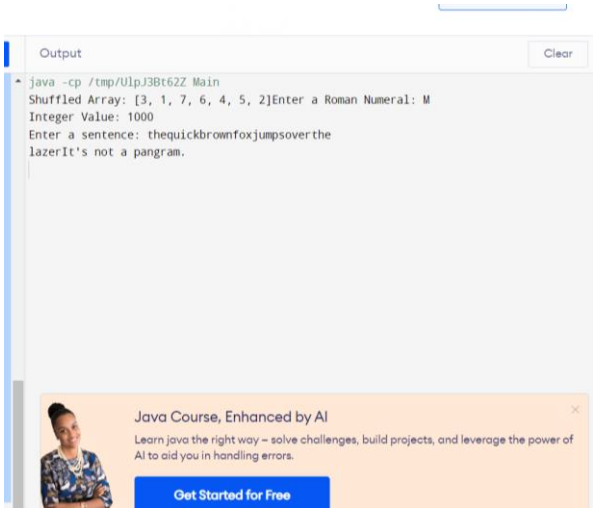
3. Check if the input is pangram or not. (A pangram is a sentence that contains all the alphabets from A to Z)

code:

```
import java.util.Arrays;
import java.util.Collections;
import java.util.List;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        Integer[] numbers = {1, 2, 3, 4, 5, 6, 7};
        List<Integer> numberList = Arrays.asList(numbers);
        Collections.shuffle(numberList);
        System.out.println("Shuffled Array: " + numberList);
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a Roman Numeral: ");
        String romanNumeral = scanner.next();
        int integer = romanToInteger(romanNumeral);
        System.out.println("Integer Value: " + integer);
        System.out.print("Enter a sentence: ");
        scanner.nextLine();
        String sentence = scanner.nextLine().toLowerCase();
        boolean isPangram = isPangram(sentence);
        if (isPangram) {
            System.out.println("It's a pangram.");
        } else {
            System.out.println("It's not a pangram.");
        }
```

```
  }
  public static int romanToInteger(String s) {
     int result = 0;
     for (int i = 0; i < s.length(); i++)
{
        if (i < s.length() - 1 && romanValue(s.charAt(i)) < romanValue(s.charAt(i + 1))) {
           result -= romanValue(s.charAt(i));
        } else {
           result += romanValue(s.charAt(i));
        }
     }
     return result;
  }

  public static int romanValue(char roman) {
     switch (roman) {
        case 'I':
           return 1;
        case 'V':
           return 5;
        case 'X':
           return 10;
        case 'L':
           return 50;
        case 'C':
           return 100;
        case 'D':
           return 500;
        case 'M':
           return 1000;
        default:
           return 0;
     }
  }

  public static boolean isPangram(String sentence) {
```

```
    boolean[] alphabetPresent = new boolean[26];


    for (char letter : sentence.toCharArray()) {
      if ('a' <= letter && letter <= 'z') {
        alphabetPresent[letter - 'a'] = true;
      }
    }


     for (boolean letterPresent : alphabetPresent) {
        if (!letterPresent) {
            return false;
        }
     }
 return true;
   }
}
```



2.

JavaScript

1. Take a sentence as an input and reverse every word in that sentence.

Example - This is a sunny day > shiT si a ynnus yad.

2. Perform sorting of an array in descending order.

Code:

```
function reverseWordsInSentence(sentence) {
```

```
    const words = sentence.split(' ');
    const reversedWords = words.map(word => {
        const reversed = word.split('').reverse().join('');
        return reversed;
    });
    return reversedWords.join(' ');
}
function sortArrayDescending(arr) {
    return arr.sort((a, b) => b - a);
}
const inputSentence = "Raju is my favourite";
const reversedSentence = reverseWordsInSentence(inputSentence);
console.log("Reversed Sentence:", reversedSentence);
const inputArray = [6, 3, 8, 2, 6, 7];
const sortedArray = sortArrayDescending(inputArray);
console.log("Sorted Array in Descending Order:", sortedArray);
```

3

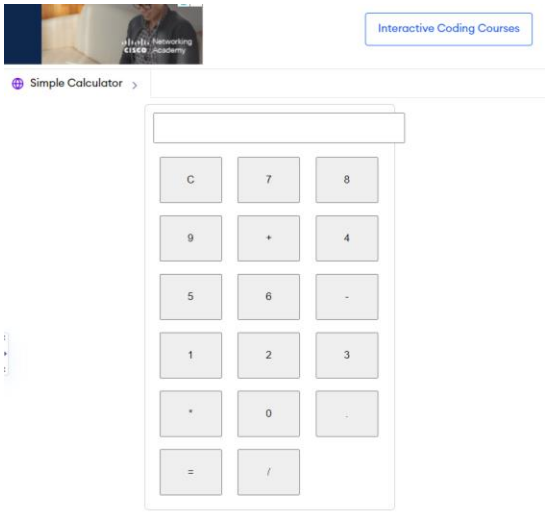
Create a basic calculator using HTML, CSS, and JavaScript with the functionality of add, subtract, multiply and divide.

code:

```
<!DOCTYPE html>
<html>

<head>
    <title>Simple Calculator</title>
    <style>
```

```
        body {
            font-family: Arial, sans-serif;
        }

        .calculator {
            width: 300px;
            margin: 0 auto;
            padding: 10px;
            border: 1px solid #ccc;
            border-radius: 5px;
        }

        .calculator input {
            width: 100%;
            padding: 10px;
            margin-bottom: 10px;
        }

        .calculator button {
            width: 80px;
            padding: 20px;
            margin: 8px;
        }
    </style>
</head>

<body>
    <div class="calculator">
        <input id="display" type="text" readonly>
        <button onclick="clearDisplay()">C</button>
        <button onclick="appendToDisplay('7')">7</button>
        <button onclick="appendToDisplay('8')">8</button>
        <button onclick="appendToDisplay('9')">9</button>
        <button onclick="appendToDisplay('+')">+</button>
        <button onclick="appendToDisplay('4')">4</button>
        <button onclick="appendToDisplay('5')">5</button>
        <button onclick="appendToDisplay('6')">6</button>
        <button onclick="appendToDisplay('-')">-</button>
```

```
    <button onclick="appendToDisplay('1')">1</button>
    <button onclick="appendToDisplay('2')">2</button>
    <button onclick="appendToDisplay('3')">3</button>
    <button onclick="appendToDisplay('*')">*</button>
    <button onclick="appendToDisplay('0')">0</button>
    <button onclick="appendToDisplay('.')">.</button>
    <button onclick="calculateResult()">=</button>
    <button onclick="appendToDisplay('/')">/</button>
  </div>

  <script>
    function appendToDisplay(value) {
      document.getElementById('display').value += value;
    }

    function clearDisplay() {
      document.getElementById('display').value = '';
    }

    function calculateResult() {
      const expression = document.getElementById('display').value;
      const result = eval(expression);
      document.getElementById('display').value = result;
    }
  </script>
</body>

</html>
```



4.

```
<!DOCTYPE html>
<html>
<head>
  <title>Survey Form</title>
  <style>
    body {
      font-family: Arial, sans-serif;
    }

    .container {
      width: 400px;
      margin: 0 auto;
    }

    .form-group {
      margin-bottom: 10px;
    }

    label {
      display: block;
      font-weight: bold;
    }

    select, input[type="text"], input[type="email"], input[type="tel"] {
```

```
            width: 100%;
            padding: 5px;
        }

        input[type="checkbox"] {
            margin-right: 5px;
        }

        .buttons {
            text-align: center;
        }
    </style>
</head>
<body>
    <div class="container">
        <h2>Survey Form</h2>
        <form id="surveyForm">
            <div class="form-group">
                <label for="firstName">First Name:</label>
                <input type="text" id="firstName" required>
            </div>
            <div class="form-group">
                <label for="lastName">Last Name:</label>
                <input type="text" id="lastName" required>
            </div>
            <div class="form-group">
                <label for="dob">Date of Birth:</label>
                <input type="date" id="dob" required>
            </div>
            <div class="form-group">
                <label for="country">Country:</label>
                <select id="country" required>
                    <option value="">Select Country</option>
                    <option value="usa">USA</option>
                    <option value="canada">Canada</option>
                    <option value="uk">UK</option>
                </select>
            </div>
```

```
      <div class="form-group">
        <label>Gender:</label>
        <input type="checkbox" id="male" name="gender" value="Male"> Male
        <input type="checkbox" id="female" name="gender" value="Female"> Female
      </div>
      <div class="form-group">
        <label for="profession">Profession:</label>
        <input type="text" id="profession" required>
      </div>
      <div class="form-group">
        <label for="email">Email:</label>
        <input type="email" id="email" required>
      </div>
      <div class="form-group">
        <label for="mobile">Mobile Number:</label>
        <input type="tel" id="mobile" required>
      </div>
      <div class="buttons">
        <button type="button" id="resetButton" onclick="resetForm()">Reset</button>
        <button type="button" id="submitButton" onclick="submitForm()">Submit</button>
      </div>
    </form>
  </div>

  <script>
    function resetForm() {
      document.getElementById("surveyForm").reset();
    }

    function submitForm() {
      const firstName = document.getElementById("firstName").value;
      const lastName = document.getElementById("lastName").value;
      const dob = document.getElementById("dob").value;
      const country = document.getElementById("country").value;
      const gender = Array.from(document.getElementsByName("gender"))
        .filter(input => input.checked)
        .map(input => input.value);
      const profession = document.getElementById("profession").value;
```

```
        const email = document.getElementById("email").value;
        const mobile = document.getElementById("mobile").value;

        if (firstName && lastName && dob && country && gender.length > 0 && profession && email && mobile) {
            const surveyData = `
                First Name: ${firstName}
                Last Name: ${lastName}
                Date of Birth: ${dob}
                Country: ${country}
                Gender: ${gender.join(", ")}
                Profession: ${profession}
                Email: ${email}
                Mobile Number: ${mobile}
            `;

            alert(surveyData);
            document.getElementById("surveyForm").reset();
        } else {
            alert("Please fill in all the required fields.");
        }
    }
  </script>
</body>
</html>
```