JAVA

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

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

public class ShuffleArray {
    public static void main(String[] args) {
        Integer[] array = {1, 2, 3, 4, 5, 6, 7};
        List<Integer> list = Arrays.asList(array);
        Collections.shuffle(list);
        System.out.println("Shuffled Array: " + Arrays.toString(list.toArray()));
    }
}
```

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

```
public class RomanToInteger {
    public static void main(String[] args) {
        String roman = "IX"; // Replace with the Roman numeral you want to convert.
        int result = romanToInteger(roman);
        System.out.println("Integer equivalent of " + roman + " is " + result);
    }

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

```
    public static int romanCharToInt(char c) {
        switch (c) {
            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;
        }
    }
}
```

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

```
 public class PangramChecker {
    public static void main(String[] args) {
        String input = "The quick brown fox jumps over the lazy dog"; // Replace with the input string you want to check.
        boolean isPangram = checkIfPangram(input);
        if (isPangram) {
            System.out.println("The input is a pangram.");
        } else {
            System.out.println("The input is not a pangram.");
        }
    }

    public static boolean checkIfPangram(String str) {
        boolean[] charSet = new boolean[26];
        str = str.toLowerCase();
```

```
        for (int i = 0; i < str.length(); i++) {
            char c = str.charAt(i);
            if ('a' <= c && c <= 'z') {
                charSet[c - 'a'] = true;
            }
        }

        for (boolean value : charSet) {
            if (!value) {
                return false;
            }
        }

        return true;
    }
}
```

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.

JAVASCRIPT-Code

```
function reverseWordsInSentence(sentence) {
    // Split the sentence into words
    const words = sentence.split(' ');

    // Reverse each word and store in an array
    const reversedWords = words.map(word => {
        return word.split('').reverse().join('');
    });

    // Join the reversed words to form the final reversed sentence
    const reversedSentence = reversedWords.join(' ');

    return reversedSentence;
}

const inputSentence = "This is a sunny day";
const reversedSentence = reverseWordsInSentence(inputSentence);
```

```
console.log(reversedSentence);
 function sortArrayDescending(arr) {
    // Use the Array.sort() method to sort the array in descending order
    arr.sort((a, b) => b - a);
    return arr;
}

const inputArray = [3, 1, 4, 1, 5, 9, 2, 6, 5, 3, 5];
const sortedArray = sortArrayDescending(inputArray);
console.log(sortedArray);
```

2. Perform sorting of an array in descending order.

```
const numbers = [5, 2, 9, 1, 5, 6];

numbers.sort((a, b) => b - a);

console.log(numbers);
```

HTML
1. Create a basic calculator using HTML, CSS, and JavaScript with the functionality of add, subtract, multiply and divide. Use the following picture forreference

HTML-Code

(CALCULATOR)

```
 <head>

    <link rel="stylesheet" href="d.css">
<div id="calcContainer">
    <form name="calculator">
      <div class="result-clear">
        <input type="text" class="result" name="answer" readonly />
        <input type="button" class="clear" value=" AC " onclick="calculator.answer.value = "" />
      </div>
      <div class="grid-buttons">
        <input type="button" value="9" onclick="calculator.answer.value += '9'" />
        <input type="button" value="8" onclick="calculator.answer.value += '8'" />
        <input type="button" value="7" onclick="calculator.answer.value += '7'" />
        <input type="button" value="+" onclick="calculator.answer.value += '+'" class="math" />
        <br />
```

```
        <input type="button" value="4" onclick="calculator.answer.value += '4'" />
        <input type="button" value="5" onclick="calculator.answer.value += '5'" />
        <input type="button" value="6" onclick="calculator.answer.value += '6'" />
        <input type="button" value="&minus;" onclick="calculator.answer.value += '-'" class="math"
/>
        <br />
        <input type="button" value="1" onclick="calculator.answer.value += '1'" />
        <input type="button" value="2" onclick="calculator.answer.value += '2'" />
        <input type="button" value="3" onclick="calculator.answer.value += '3'" />
        <input type="button" value="&#247;" onclick="calculator.answer.value += '/'" class="math"
/>
        <br />
        <input type="button" value="." onclick="calculator.answer.value += '.'" />
        <input type="button" value="0" onclick="calculator.answer.value += '0'" />
        <input type="button" value="=" onclick="calculator.answer.value =
eval(calculator.answer.value)" />
        <input type="button" value="&#215;" onclick="calculator.answer.value += '*'" class="math"
/>
      </div>
    </form>
  </div>
 @import url('https://fonts.googleapis.com/css?family=Roboto');

body {
  background: #BDBDBD;
}

#calcContainer {
  position: absolute;
  top: 50%;
  left: 50%;
  transform: translate(-50%,-50%);
  background: #ffffff;
  width: 80%;
  height: auto;
  box-shadow: 0.5em 0.5em 1.2em rgba(0, 0, 0, 0.2);
}

.result-clear {
  display: flex;
  margin: 0;
  padding: 0;
}
```

```
.result-clear input[type=text].result {
  display: block;
  border: 0;
  padding-top: 1%;
  padding-left: 5%;
  width: 72%;
  height: 60px;
  font-size: 1.4em;
  font-family: 'Roboto', sans-serif;
}

.grid-buttons {
  margin: 0;
  display: flex;
  flex-wrap: wrap;
  justify-content: space-between;
  align-items: center;
  background: #212121;
}

input[type=button] {
  flex-grow: 1;
  width: 25%;
  height: auto;
  padding: 4%;
  border: 0;
  align-items: center;
  text-align: center;
  font-family: 'Roboto', sans-serif;
  font-size: 1.2em;
  font-weight: 500;
  color: #ffffff;
  background: #212121;
  border: 2px solid #212121;
}

input[type=button]:focus {
  outline: 0;
}

input[type=button].clear {
  width: 25.5%;
  font-size: 20px;
  background: #009688;
```

```
  border: 2px solid #009688;
}

.grid-buttons input[type=button].math {
  background: #757575;
  border: 2px solid #757575;
}

.grid-buttons input[type=button]:hover,
input[type=button].clear:hover {
  background: #00BCD4;
  border: 2px solid #00BCD4;
  transition: 0.3s ease;
}
```

2. Create a survey form with Fields; First Name, Last Name, Date of Birth, Country (dropdown), Gender (checkbox), Profession, email, and mobile number. All the input fields are necessary to submit the form. Create two buttons Submit and Reset. Reset will reset the form while clicking on submit, first, it will check all the fields and necessary validations and then a popup will appear displaying all the selected values with labels in front of it. On closing the popup, the form should reset all the values. Use the following image for reference

(CUSTOM SURVEY FORM-Code)

```
<!DOCTYPE html>
<html>
<head>
   <title>Customer Survey Form</title>
   <link rel="stylesheet" href="d.css">
</head>
<body>
   <div class="container">
      <h1>Customer Survey Form</h1>
      <form>
         <div class="form-group">
            <label for="name">Name</label>
            <input type="text" id="name" name="name" required>
         </div>
```

```
        <div class="form-group">
            <label for="email">Email</label>
            <input type="email" id="email" name="email" required>
        </div>

        <div class="form-group">
            <label>Is this your first time using our products & service?</label>
            <div class="radio-group">
                <input type="radio" id="first-time-yes" name="first-time" value="yes">
                <label for="first-time-yes">Yes</label>
                <input type="radio" id="first-time-no" name="first-time" value="no">
                <label for="first-time-no">No</label>
            </div>
        </div>

        <div class="form-group">
            <label>Would you recommend us to your friends and colleagues?</label>
            <div class="radio-group">
                <input type="radio" id="recommend-yes" name="recommend" value="yes">
                <label for="recommend-yes">Yes</label>
                <input type="radio" id="recommend-no" name="recommend" value="no">
                <label for="recommend-no">No</label>
            </div>
        </div><br>

        <div class="form-group">
            <label>How satisfied are you with our company overall?</label>
            <div class="radio-group">
                <input type="radio" id="satisfied" name="recommend" value="satisfied">
                <label for="recommend">satisfied</label>
                <input type="radio" id="undecided" name="recommend" value="undecided">
                <label for="recommend">undecided</label>
                <input type="radio" id="unsatisfied" name="recommend" value="unsatisfied">
                <label for="recommend-no">unsatisfied</label>

        </div><br>


        <div class="form-group">
            <label for="suggestions">Do you have any suggestions to improve our
service?</label>
            <textarea id="suggestions" name="suggestions" rows="4"></textarea>
        </div>
```

```
            <div class="form-group">
                <input type="submit" value="SUBMIT">
            </div>
        </form>
    </div>
</body>
</html>
body {
    font-family: Arial, sans-serif;
    background-color: #f0f0f0;
}

.container {
    max-width: 400px;
    margin: 0 auto;
    padding: 20px;
    background-color: #ffffff;
    border-radius: 5px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.2);
}

h1 {
    text-align: center;
}

.form-group {
    margin-bottom: 5px;
}

input[type="text"],
input[type="email"],
select {
    width: 100%;
    padding: 10px;
    border: 1px solid #ccc;
    border-radius: 4px;
}

.radio-group {
    display: flex;
    align-items: center;
}
```

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

textarea {
    width: 100%;
    padding: 10px;
    border: 1px solid #ccc;
    border-radius: 4px;
}

input[type="submit"] {
    background-color: #4caf50;
    color: white;
    padding: 10px 20px;
    border: none;
    border-radius: 4px;
    cursor: pointer;
}

input[type="submit"]:hover {
    background-color: #45a049;
}
```