Cloud Vandana Assignment

1.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.Random;

public class ShuffleArray {
	public static void main(String[] args) {
	// initial array
	int[] initialArray = {1, 2, 3, 4, 5, 6, 7};

	Random random = new Random();
	for (int i = initialArray.length - 1; i > 0; i--) {
	    int index = random.nextInt(i + 1);
	    // Swaping elements at i and index
	    int temp = initialArray[index];
	    initialArray[index] = initialArray[i];
	    initialArray[i] = temp;
	}

	// Printing the shuffled array
	System.out.println(Arrays.toString(initialArray));
    }
}
```

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

```
import java.util.HashMap;
import java.util.Map;
import java.util.Scanner;

public class RomanToInteger {
	public static int romanToInt(String s) {
	Map<Character, Integer> romanMap = new HashMap<>();
	romanMap.put('I', 1);
	romanMap.put('V', 5);
	romanMap.put('X', 10);
	romanMap.put('L', 50);
	romanMap.put('C', 100);
	romanMap.put('D', 500);
	romanMap.put('M', 1000);

	int result = 0;
	int prevValue = 0;
	for (int i = s.length() - 1; i >= 0; i--) {
	    int temp = romanMap.get(s.charAt(i));
	    if (temp < prevValue) {
	        result -= temp;
	    } else {
	        result += temp;
	    }
	    prevValue = temp;
	}
	return result;
    }
```

```
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a Roman numeral: ");
        String input = scanner.nextLine();
        int result = romanToInt(input);
        System.out.println("Integer value: " + result);
    }
}
```

3) Check if the input is pangram or not. (Pangram is a sentence that contains all the alphabet from a-z)

```
import java.util.Scanner;

public class PangramCheck {
        public static boolean checkPangram(String str) {
        boolean[] mark = new boolean[26];
        int index;

        for (int i = 0; i < str.length(); i++) {
            if ('A' <= str.charAt(i) && str.charAt(i) <= 'Z') {
                index = str.charAt(i) - 'A';
            } else if ('a' <= str.charAt(i) && str.charAt(i) <= 'z') {
                index = str.charAt(i) - 'a';
            } else {
                continue;
            }
            mark[index] = true;
        }

        for (int i = 0; i < 26; i++) {
            if (!mark[i]) {
                return false;
            }
        }
        return true;
    }

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter a sentence: ");
        String input = scanner.nextLine();
        if (checkPangram(input.toLowerCase())) {
            System.out.println("The input is a pangram.");
        } else {
            System.out.println("The input is not a pangram.");
        }
    }
}
```

2.Javascript:

A. Take a sentence as an input and reverse every word in that sentence. a. Example - This is a sunny day > shiT si a ynnus yad.

```
function reverseWords(sentence) {
    return sentence.split(' ').map(function(word) {
        return word.split('').reverse().join('');
```

```
    }).join(' ');
}

// Example usage
var inputSentence = "This is a sunny day";
var reversedSentence = reverseWords(inputSentence);
console.log(reversedSentence);
```

B. Perform sorting of an array in descending order.

```
var arr = [5, 2, 8, 1, 4];
arr.sort(function(a, b) {
    return b - a;
});

console.log(arr);
```

3.HTML:

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

```
<!DOCTYPE html>
<html>
<head>
    <style>
        /* CSS styling */
        .calculator {
            width: 280px;
            border: 2px solid #ccc;
            padding: 10px;
        }

        input[type="text"] {
            width: 100%;
            margin-bottom: 10px;
        }

        input[type="button"] {
            width: 50px;
            height: 30px;
            margin: 5px;
        }
    </style>
</head>
<body>
<div class="calculator">
        <input type="text" id="display" readonly style="width: 180px; height: 20px;">
        <input type="button" value="AC" onclick="clearDisplay()" style="background-
color:mediumturquoise; color: white;">
        <br>
```

```
        <input type="button" value="9" onclick="appendToDisplay('9')" style="background-
color: black; color: white;">
        <input type="button" value="8" onclick="appendToDisplay('8')" style="background-
color: black; color: white;">
        <input type="button" value="7" onclick="appendToDisplay('7')" style="background-
color: black; color: white;">
        <input type="button" value="+" onclick="appendToDisplay('+')" style="background-
color: gray; color: white;">
        <br>
        <input type="button" value="4" onclick="appendToDisplay('4')" style="background-
color: black; color: white;">
        <input type="button" value="5" onclick="appendToDisplay('5')" style="background-
color: black; color: white;">
        <input type="button" value="6" onclick="appendToDisplay('6')" style="background-
color: black; color: white;">
        <input type="button" value="-" onclick="appendToDisplay('-')" style="background-
color: gray; color: white;">
        <br>
        <input type="button" value="1" onclick="appendToDisplay('1')" style="background-
color: black; color: white;">
        <input type="button" value="2" onclick="appendToDisplay('2')" style="background-
color: black; color: white;">
        <input type="button" value="3" onclick="appendToDisplay('3')" style="background-
color: black; color: white;">
        <input type="button" value="/" onclick="appendToDisplay('/')" style="background-
color: gray; color: white;">
        <br>
        <input type="button" value="." onclick="appendToDisplay('.')" style="background-
color: black; color: white;">
        <input type="button" value="0" onclick="appendToDisplay('0')" style="background-
color: black; color: white;">
        <input type="button" value="=" onclick="calculate('=')" style="background-color:
black; color: white;">
        <input type="button" value="*" onclick="appendToDisplay('*')" style="background-
color: gray; color: white;">
    </div>

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

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

        function calculate() {
            var input = document.getElementById('display').value;
            var result = eval(input);
            document.getElementById('display').value = result;
        }
    </script>
```

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

B. 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 the label in front of it. On closing the popup, the form should reset all the values. Use the following for reference

```
<!DOCTYPE html>
<html>

<head>
    <style>
        .form-group {
            margin-bottom: 15px;
        }

        input[type="text"],
        input[type="email"],
        input[type="date"],
        select {
            width: 100%;
            padding: 10px;
            margin-top: 5px;
            margin-bottom: 10px;
            border-radius: 5px;
            border: 1px solid #ccc;
        }

        button {
            padding: 10px 20px;
            margin-right: 10px;
            border-radius: 5px;
        }

        #popup {
            display: none;
            position: fixed;
            top: 50%;
            left: 50%;
            transform: translate(-50%, -50%);
            background: #f9f9f9;
            padding: 20px;
            border: 1px solid #ccc;
            border-radius: 5px;
            z-index: 1;
```

```
        }
    </style>
</head>

<body style="background-color: skyblue; color: white;">
    <center><h1>Customer Survey Form</h1> </center>
    <div class="survey-form">
        <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>
                <!-- Add your country options here -->
                <option value="USA">USA</option>
                <option value="UK">UK</option>
                <option value="Canada">Canada</option>
            </select>
        </div>

        <div class="form-group">
            <label>Gender:</label><br>
            <input type="checkbox" id="male" value="male">
            <label for="male">Male</label><br>
            <input type="checkbox" id="female" value="female">
            <label for="female">Female</label><br>
        </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="text" id="mobile" required>
        </div>

        <button onclick="submitForm()">Submit</button>
        <button onclick="resetForm()">Reset</button>
    </div>

    <div id="popup">
        <h3>Survey Form Submission</h3>
        <div id="popup-content"></div>
        <button onclick="closePopup()">Close</button>
    </div>

    <script>
        function submitForm() {
            var firstName = document.getElementById('firstName').value;
            var lastName = document.getElementById('lastName').value;
            var dob = document.getElementById('dob').value;
            var country = document.getElementById('country').value;
            var gender = document.querySelector('input[name="gender"]:checked');
            var profession = document.getElementById('profession').value;
            var email = document.getElementById('email').value;
            var mobile = document.getElementById('mobile').value;

            if (firstName && lastName && dob && country && gender && profession && email
&& mobile) {
                var popupContent = "<p><strong>First Name:</strong> " + firstName + "</p>"
+
                    "<p><strong>Last Name:</strong> " + lastName + "</p>" +
                    "<p><strong>Date of Birth:</strong> " + dob + "</p>" +
                    "<p><strong>Country:</strong> " + country + "</p>" +
                    "<p><strong>Gender:</strong> " + gender.value + "</p>" +
                    "<p><strong>Profession:</strong> " + profession + "</p>" +
                    "<p><strong>Email:</strong> " + email + "</p>" +
                    "<p><strong>Mobile Number:</strong> " + mobile + "</p>";

                document.getElementById('popup-content').innerHTML = popupContent;
                document.getElementById('popup').style.display = 'block';
            } else {
                alert("Please fill all the required fields.");
            }
        }

        function resetForm() {
            document.getElementById('firstName').value = "";
            document.getElementById('lastName').value = "";
            document.getElementById('dob').value = "";
            document.getElementById('country').value = "";
            document.getElementById('male').checked = false;
            document.getElementById('female').checked = false;
            document.getElementById('profession').value = "";
```

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

        function closePopup() {
            document.getElementById('popup').style.display = 'none';
            resetForm();
        }
    </script>

</body>

</html>
```