**JAVA**

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

import java.util.ArrayList;

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 = new ArrayList<>(Arrays.asList(array));

Collections.shuffle(list);

Integer[] shuffledArray = list.toArray(new Integer[0]);

System.out.println("Shuffled Array: " + Arrays.toString(shuffledArray));

}

}

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

import java.util.HashMap;

import java.util.Map;

public class RomanToInteger {

public static void main(String[] args) {

String romanNumeral = "IX";

int result = romanToInt(romanNumeral);

System.out.println("Integer equivalent of " + romanNumeral + " is: " + result);

}

public static int romanToInt(String s) {

Map<Character, Integer> romanValues = new HashMap<>();

romanValues.put('I', 1);

romanValues.put('V', 5);

romanValues.put('X', 10);

romanValues.put('L', 50);

romanValues.put('C', 100);

romanValues.put('D', 500);

romanValues.put('M', 1000);

int result = 0;

for (int i = 0; i < s.length(); i++) {

int currentValue = romanValues.get(s.charAt(i));

if (i < s.length() - 1 && romanValues.get(s.charAt(i + 1)) > currentValue) {

result -= currentValue;

} else {

result += currentValue;

}

}

return result;

}

}

3. Check if the input is pangram or not. (A pangram is a sentence that contains all the

alphabets from A to Z)

import java.util.HashSet;

import java.util.Scanner;

import java.util.Set;

public class PangramChecker {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Enter a sentence to check if it's a pangram:");

String sentence = scanner.nextLine();

boolean isPangram = checkIfPangram(sentence);

if (isPangram) {

System.out.println("The given sentence is a pangram.");

} else {

System.out.println("The given sentence is not a pangram.");

}

}

public static boolean checkIfPangram(String sentence) {

sentence = sentence.toLowerCase();

Set<Character> alphabetSet = new HashSet<>();

for (char c : sentence.toCharArray()) {

if (Character.isLetter(c)) {

// Add the lowercase version of the letter to the set

alphabetSet.add(c);

}

}

return alphabetSet.size() == 26;

}

}

**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.

function reverseWords(sentence) {

const words = sentence.split(' ');

const reversedWords = words.map(word => reverseString(word));

const reversedSentence = reversedWords.join(' ');

return reversedSentence;

}

function reverseString(str) {

return str.split('').reverse().join('');

const inputSentence = "This is a sunny day";

const reversedResult = reverseWords(inputSentence);

console.log("Original Sentence:", inputSentence);

console.log("Reversed Words:", reversedResult);

1. Perform sorting of an array in descending order.

function descendingOrderSort(a, b) {

return b - a; // Compare in descending order

}

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

numbers.sort(descendingOrderSort);

console.log("Sorted Array in Descending Order:", 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 for reference

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<style>

body {

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

margin: 0;

}

#calculator {

text-align: center;

}

input {

width: 50px;

margin: 5px;

}

</style>

<title>Basic Calculator</title>

</head>

<body>

<div id="calculator">

<input type="text" id="result" disabled>

<br>

<button onclick="appendValue('1')">1</button>

<button onclick="appendValue('2')">2</button>

<button onclick="appendValue('3')">3</button>

<button onclick="appendOperator('+')">+</button>

<br>

<button onclick="appendValue('4')">4</button>

<button onclick="appendValue('5')">5</button>

<button onclick="appendValue('6')">6</button>

<button onclick="appendOperator('-')">-</button>

<br>

<button onclick="appendValue('7')">7</button>

<button onclick="appendValue('8')">8</button>

<button onclick="appendValue('9')">9</button>

<button onclick="appendOperator('\*')">\*</button>

<br>

<button onclick="appendValue('0')">0</button>

<button onclick="clearResult()">C</button>

<button onclick="calculateResult()">=</button>

<button onclick="appendOperator('/')">/</button>

</div>

</body>

</html>

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

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<style>

body {

font-family: Arial, sans-serif;

display: flex;

justify-content: center;

align-items: center;

height: 100vh;

margin: 0;

}

#survey-form {

width: 400px;

padding: 20px;

border: 1px solid #ccc;

border-radius: 8px;

box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

}

label {

display: block;

margin-bottom: 8px;

}

input, select {

width: 100%;

padding: 8px;

margin-bottom: 12px;

box-sizing: border-box;

}

input[type="checkbox"] {

width: auto;

}

button {

background-color: #4CAF50;

color: white;

padding: 10px 15px;

border: none;

border-radius: 4px;

cursor: pointer;

}

</style>

<title>Survey Form</title>

</head>

<body>

<div id="survey-form">

<form onsubmit="submitForm(); return false;">

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

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

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

<input type="text" id="lastName" required>

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

<input type="date" id="dob" required>

<label for="country">Country:</label>

<select id="country" required>

<option value="" disabled selected>Select Country</option>

<option value="usa">USA</option>

<option value="canada">Canada</option>

<!-- Add more countries as needed -->

</select>

<label>Gender:</label>

<label><input type="checkbox" name="gender" value="male"> Male</label>

<label><input type="checkbox" name="gender" value="female"> Female</label>

<label for="profession">Profession:</label>

<input type="text" id="profession" required>

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

<input type="email" id="email" required>

<label for="mobile">Mobile Number:</label>

<input type="tel" id="mobile" required>

<button type="submit">Submit</button>

<button type="button" onclick="resetForm()">Reset</button>

</form>

</div>

</body>

</html>