# Java Coding Solutions

## A. Create an Array with 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[] arr = {1, 2, 3, 4, 5, 6, 7};  
 List<Integer> list = Arrays.asList(arr);  
 Collections.shuffle(list);   
 list.toArray(arr);  
 System.out.println("Shuffled Array: " + Arrays.toString(arr));  
 }  
}

## B. Convert Roman Number to Integer

import java.util.HashMap;  
  
public class RomanToInteger {  
 public static void main(String[] args) {  
 String roman = "IX";   
  
 System.out.println("Roman Number: " + roman);  
 System.out.println("Integer Value: " + romanToInt(roman));  
 }  
  
 public static int romanToInt(String s) {  
 HashMap<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;  
 for (int i = 0; i < s.length(); i++) {  
 int current = romanMap.get(s.charAt(i));  
 int next = (i + 1 < s.length()) ? romanMap.get(s.charAt(i + 1)) : 0;  
  
 if (current < next) {  
 result -= current;   
 } else {  
 result += current;

}  
 }  
 return result;  
 }  
}

## C. Check if Input is a Pangram

import java.util.Scanner;  
  
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 input = scanner.nextLine();  
  
 if (isPangram(input)) {  
 System.out.println("The input is a pangram.");  
 } else {  
 System.out.println("The input is not a pangram.");  
 }  
  
 scanner.close();  
 }  
  
 public static boolean isPangram(String sentence) {   
 sentence = sentence.toLowerCase().replaceAll(" ", "");  
 boolean[] alphabets = new boolean[26];

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

for (boolean present : alphabets) {  
 if (!present) {  
 return false;  
 }  
 }  
 return true;  
 }  
}