**1. Given an array . Create two arrays one for Odd Elements and other for Even Elements.**

**Input: [10,3,5,12,17,22]**

**Output:**

**[10,12,22]**

**[3,5,7]**

import java.util.Arrays;

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter the size of an array: ");

int n = scanner.nextInt();

int[] originalArray = new int[n];

System.out.println("Enter elements of array:");

for (int i = 0; i < n; i++) {

originalArray[i] = scanner.nextInt();

}

int[] oddArray = new int[n];

int[] evenArray = new int[n];

int oddIndex = 0;

int evenIndex = 0;

for (int num : originalArray) {

if (num % 2 == 0) {

evenArray[evenIndex++] = num;

} else {

oddArray[oddIndex++] = num;

}

}

oddArray = Arrays.copyOf(oddArray, oddIndex);

evenArray = Arrays.copyOf(evenArray, evenIndex);

System.out.println("Odd elements in array: " + Arrays.toString(oddArray));

System.out.println("Even elements in array: " + Arrays.toString(evenArray));

}

}

**2.Compression of String**

**Input: AAABBC**

**Output: A3B2C**

**Input: AAABBCCCDE**

**Output: A3B2C3DE**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter string: ");

String str = scanner.nextLine();

scanner.close();

String compressedString = compressString(str);

System.out.println("Compressed String: " + compressedString);

}

private static String compressString(String input) {

if (input == null || input.isEmpty()) {

return input;

}

StringBuilder compressed = new StringBuilder();

int count = 1;

for (int i = 1; i < input.length(); i++) {

if (input.charAt(i) == input.charAt(i - 1)) {

count++;

} else {

compressed.append(input.charAt(i - 1));

if (count > 1) {

compressed.append(count);

}

count = 1;

}

}

compressed.append(input.charAt(input.length() - 1));

if (count > 1) {

compressed.append(count);

}

return compressed.toString();

}

}

**3.**

**Input : zohocorporationteam**

**Output :**

**z o h o c o r**

**p**

**o**

**r**

**a**

**t**

**i o n t e a m**

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter string: ");

String inputString = scanner.nextLine();

scanner.close();

printZShape(inputString);

}

private static void printZShape(String input) {

int length = input.length();

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

for (int j = 0; j < length; j++) {

if (i == 0 || i == length - 1 || i + j == length - 1) {

System.out.print(input.charAt(j) + " ");

} else {

System.out.print(" ");

}

}

System.out.println();

}

}

}