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;

public class SeparateOddEven {

public static void main(String[] args) {

int[] originalArray = {10, 3, 5, 12, 17, 22};

// Count the number of even and odd elements

int evenCount = 0, oddCount = 0;

for (int num : originalArray) {

if (num % 2 == 0) {

evenCount++;

} else {

oddCount++;

}

}

// Create separate arrays with appropriate sizes

int[] evenArray = new int[evenCount];

int[] oddArray = new int[oddCount];

// Fill the separate arrays

int evenIndex = 0, oddIndex = 0;

for (int num : originalArray) {

if (num % 2 == 0) {

evenArray[evenIndex++] = num;

} else {

oddArray[oddIndex++] = num;

}

}

// Print the results

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

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

}

}

2.Compression of String

Input: AAABBC

Output: A3B2C

Input: AAABBCCCDE

Output: A3B2C3DE

public class StringCompression {

public static String compressString(String text) {

StringBuilder compressed = new StringBuilder();

int count = 1;

char currentChar = text.charAt(0);

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

char nextChar = text.charAt(i);

if (nextChar == currentChar) {

count++;

} else {

compressed.append(currentChar).append(count);

currentChar = nextChar;

count = 1;

}

}

// Append the last character and its count

compressed.**append**(currentChar).append(count);

return compressed.toString().length() < text.length() ? compressed.toString() : text;

}

public static void main(String[] args) {

String text1 = "AAABBC";

String text2 = "AAABBCCCDE";

String compressedText1 = compressString(text1);

String compressedText2 = compressString(text2);

System.out.println("Original: " + text1 + ", Compressed: " + compressedText1);

System.out.println("Original: " + text2 + ", Compressed: " + compressedText2);

}

}

3.

Input : zohocorporationteam

Output :

z o h o c o r

               p

          o

      r

   a

 t

i o n t e a m

public class PatternPrinter {

public static void main(String[] args) {

String input = "zohocorporationteam";

int maxChars = 7; // Maximum characters per line

StringBuilder builder = new StringBuilder();

int lineLength = 0;

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

char currentChar = input.charAt(i);

if (lineLength == maxChars) {

builder.append('\n');

lineLength = 0;

}

if (currentChar == 'p') {

builder.append('\n');

builder.append("        "); // Add spaces for 'p'

} else if (currentChar == 'o') {

builder.append('\n');

builder.append("     "); // Add spaces for 'o'

} else if (currentChar == 'r') {

builder.append('\n');

builder.append("   "); // Add spaces for 'r'

} else if (currentChar == 'a') {

builder.append('\n');

builder.append(" "); // Add spaces for 'a'

} else if (currentChar == 't') {

builder.append('\n');

}

builder.append(currentChar);

lineLength++;

}

System.out.println(builder.toString());

}

}