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]

```java
package practice;

import java.util.*;

public class Practice {

    public static void main(String[] args) {
        int n, i, evenCount = 0, oddCount = 0;
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter n:");
        n = scan.nextInt();
        int[] arr = new int[n];

        System.out.println("Enter array elements :");
        for (i = 0; i < n; i++)
        {
            arr[i] = scan.nextInt();
        }


        for (i = 0; i < n; i++)
        {
            if (arr[i] % 2 == 0)
            {
                evenCount++;
            }
            else
            {
                oddCount++;
            }
        }

        int[] even = new int[evenCount];
        int[] odd = new int[oddCount];


        int evenIndex = 0, oddIndex = 0;
        for (i = 0; i < n; i++)
        {
            if (arr[i] % 2 == 0)
            {
                even[evenIndex++] = arr[i];
            }
            else
            {
                odd[oddIndex++] = arr[i];
            }
```
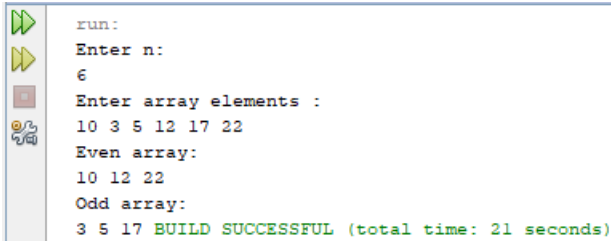
```java
        }

        System.out.println("Even array:");
        for (i = 0; i < even.length; i++) {
            System.out.print(even[i] + " ");
        }

        System.out.println("\nOdd array:");
        for (i = 0; i < odd.length; i++) {
            System.out.print(odd[i] + " ");
        }
    }
}
```

```
run:
Enter n:
6
Enter array elements :
10 3 5 12 17 22
Even array:
10 12 22
Odd array:
3 5 17 BUILD SUCCESSFUL (total time: 21 seconds)
```

2.Compression of String

Input: AAABBC
Output: A3B2C

Input: AAABBCCCDE
Output: A3B2C3DE

```java
package practice;

import java.util.Scanner;

public class Practice {

    public static String compressString(String str) {
        StringBuilder compressed = new StringBuilder();
        int count = 1;

        char current = str.charAt(0);

        for (int i = 1; i < str.length(); i++)
        {
            if (str.charAt(i) == current)
            {
                count++;
            }
```

```java
            else
            {
                compressed.append(current);
                if (count > 1)
                {
                    compressed.append(count);
                }
                current = str.charAt(i);
                count = 1;
            }
        }

        compressed.append(current);
        if (count > 1)
        {
            compressed.append(count);
        }

        return compressed.toString();
    }

    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        System.out.println("Enter a string:");
        String inputString = in.next();

        String compressedString = compressString(inputString);
        System.out.println("The compressed string is: " + compressedString);
    }
}
```
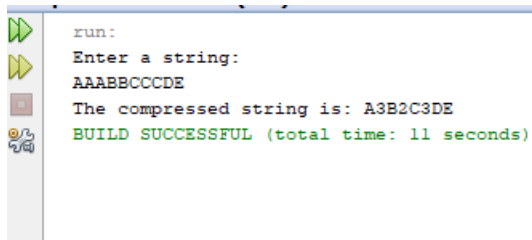
```
run:
Enter a string:
AAABBCCCDE
The compressed string is: A3B2C3DE
BUILD SUCCESSFUL (total time: 11 seconds)
```

3.
Input : zohocorporationteam
Output :
z o h o c o r
**   p**
**   o**
**   r**
** a**
t
i o n t e a m

```java
package placement1;

import java.util.Scanner;

public class Placement1 {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter String : ");
        String s = scanner.next();
        int n = s.length();
        int a, b;
        boolean f = n % 3 == 1;

        if (f) {
            for (a = 0; a <= n / 3; a++) {
                for (b = 0; b <= n / 3; b++) {
                    System.out.print((a == 0 || a == n / 3 || (a + b == n / 3) ? s.charAt(a + a + b) : ' '));
                }
                System.out.println();
            }
        } else {
            System.out.println("no");
        }

    }
}
```
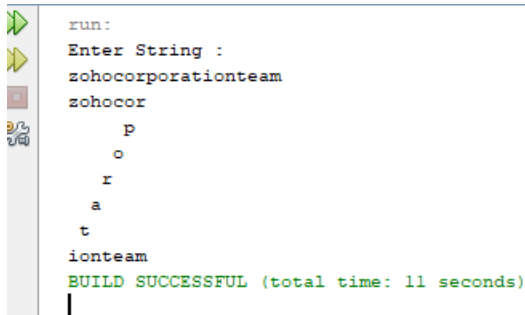
```
run:
Enter String :
zohocorporationteam
zohocor
      p
       o
      r
     a
    t
ionteam
BUILD SUCCESSFUL (total time: 11 seconds)
```