

Print Alternate Array Elements Linewise (1 july)

ZIP \rightarrow $n \rightarrow$ user
but arr \rightarrow n implicit in arr

Sample $n = 10$

↓		↓		↓		↓		↓	
0	1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9	10

grp 1 3 5 7 9

$10 / 2 = 5$
 \rightarrow even

↓ 0	1	↓ 2	3	↓ 4	5	↓ 6	7	↓ 8	9
1	2	3	4	5	6	7	8	9	10

grp 1 3 5 7 9

if (i % 2 == 0) {
 sout (arr[i])
}

$i \% 2 == 0$
↳ even

```
1 usage Eshan-Agarwal *
public static void alternatePrint(int[] arr) {

    int n = arr.length;
    for (int i = 0; i < n; i++) {
        if (i % 2 == 0) {
            System.out.println(arr[i]);
        }
    }
}
```

Rotation of Arr

0 1 2 3 4

1	2	3	4	5
---	---	---	---	---

arr →

↓
x = 1

5 1 2 3 4 ←

x = 2

4 5 1 2 3

x = 3

3 4 5 1 2

x = 4 2 3 4 5 1

x = 5

1 2 3 4 5

x = 6

5 1 2 3 4

x = -1 2 3 4 5 1

→ $x = x \% n$
if (x < 0) {
→ $x = x + n$
}

$$-1 \% 5 = -1 + 5 = 4$$

$$N = 256$$

1 to N

for ($i = 1$ to 256) (

update me an

)

basic \Rightarrow

smart \Rightarrow

$$N = N - 1$$

if ($N < 0$) (

$$N = N + 1$$

)

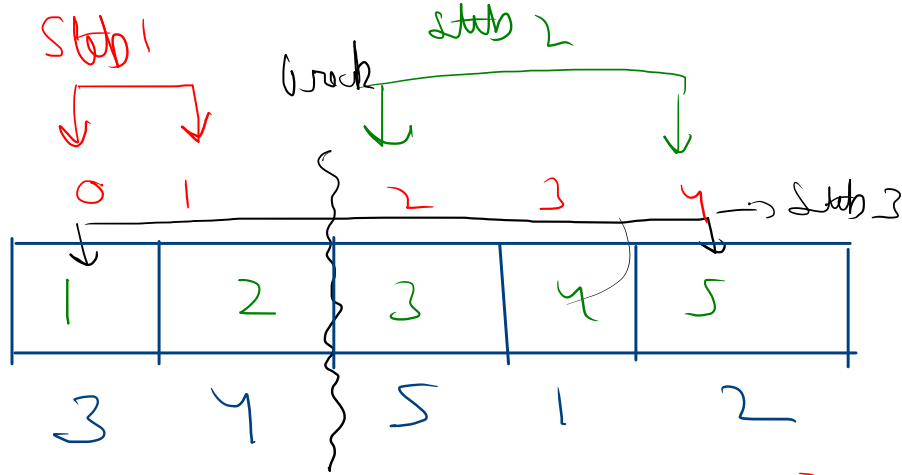
}

\rightarrow

1 to n

arr →

pr →



logic → step 1 reverse (arr, 0, n-1-j)

step 2 reverse (arr, n-j, n-1)

step 3 reverse (arr, 0, n-1)

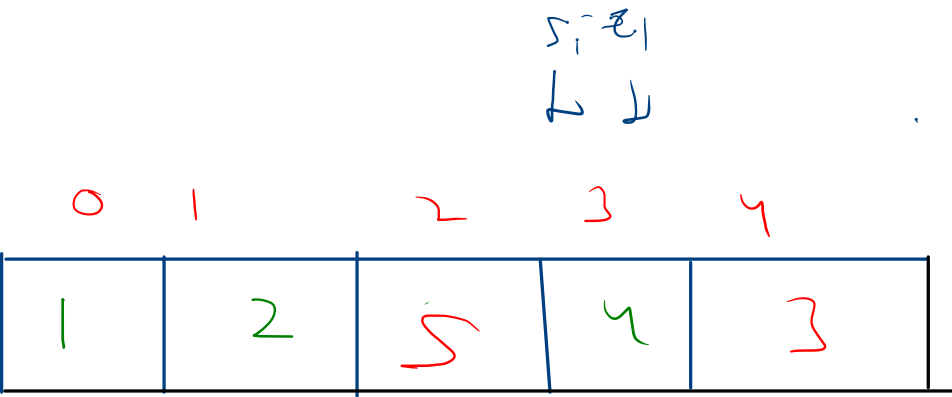
$$n-1-j =$$

$$5-1-3$$

$$= 4-3$$

$$= 1$$

$$n-j = 5-3 = 2$$



1 usage new *

```
public static void rotateArr(int[] arr, int r) {
    int n = arr.length;
    // code here
    r = r % n;
    if (r < 0) {
        r += n;
    }
    reverse(arr, si: 0, ei: n - 1 - r);
    reverse(arr, si: n - r, ei: n - 1);
    reverse(arr, si: 0, ei: n - 1);
    printArr(arr);
}
```

Count Odd Pair (2 July)

```

1 usage: new
public static void countOddPair(int[] arr) {
    int n = arr.length;
    for (int i = 0; i < n; i++) {
        for (int j = i + 1; j < n; j++) {
            int sum = arr[i] + arr[j];
            if (sum % 2 == 1) { // odd
                System.out.println(arr[i] + " " + arr[j]);
                System.out.println(arr[j] + " " + arr[i]);
            }
        }
    }
}

```

for (i to n-1) {
 for (j = i+1 to n-1)

Pairs \Rightarrow

arr =

0	1	2
1	2	3

$$\text{Sum} = 1 + 2 = 3$$

$$2 + 3 = 5$$

$$\text{Sum} = \text{arr}(i) + \text{arr}(j)$$

$$\text{if} (\text{sum} \% 2 == 1) \{$$

$$\text{Sum} = \text{arr}(i) + \text{arr}(j)$$

$$\text{Sum} = \text{arr}(j) + \text{arr}(i)$$

1	2
2	1
2	3
3	2

arr = -1 -2 1 2 3 8 4 7

target = 6

Print Pair whose sum == target

-1 7

-2 8

2 4

7 -1

8 -2

4 2

