

Product of Elements Except Itself

ans →

| | | |
|----|---|----|
| 2 | 5 | 3 |
| 0 | 1 | 2 |
| 15 | 6 | 10 |

| | | | | |
|---|---|---|---|---|
| 2 | 0 | 0 | 5 | 3 |
| 0 | 1 | 2 | 3 | 4 |
| 0 | 0 | 0 | 0 | 0 |

↓

| | | | |
|---|----|---|---|
| 2 | 0 | 5 | 3 |
| 2 | 1 | 2 | 3 |
| 0 | 30 | 0 | 0 |

?

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
//input for A
int count = 0;
int [] A = new int[n];
for(int i = 0; i < n; i++){
    A[i] = scn.nextInt();
    if(A[i] == 0)
        count++;
}
```

2 0 5 3
count = 1

```
int prodWithAll = 1;
int prodWithoutZero = 1;
for(int i = 0; i < n; i++){
    if(A[i] != 0){
        prodWithoutZero *= A[i];
    }
    prodWithAll *= A[i];
}

//2. print prod except self
for(int i = 0; i < n; i++){
    if(A[i] == 0){
        if(count == 1)
            System.out.println(prodWithoutZero);
        else
            System.out.println(0);
    }
    else{
        System.out.println(prodWithAll/A[i]);
    }
}
```

$\frac{prodA}{pwt0} = \frac{0}{30}$

2 0 5 3

c=1

2 0 5 3
c=2

| | | | |
|---|---|---|---|
| 2 | 0 | 5 | 3 |
| 0 | 1 | 2 | 3 |
| 0 | 0 | 0 | 0 |

Solve Array.

~~1st~~ ~~2nd~~ ~~3rd~~ 0

at ~~1st~~ ~~2nd~~ index
of our array

val \rightarrow

we have to put index \rightarrow

value ~~7~~ ~~8~~ ~~9~~ 10

11

✓
ans.

| | | | | |
|--------------|----------|----------|--------------|--------------|
| 7 | 8 | 9 | 10 | 11 |
| <u>4</u> | <u>1</u> | <u>2</u> | 3 | 0 |
| <u>0</u> | 1 | 2 | 3 | 4 |

| | | | | |
|----|---|---|----|----------|
| 11 | 8 | 9 | 10 | <u>7</u> |
|----|---|---|----|----------|

$$\underline{\text{ans}}[\underline{\text{index}[i]}] = \text{val}[\underline{i}]$$

Check characteristic.

$$x < 0 \rightarrow -1$$

$$x > 0 \rightarrow 1$$

$$x = 0 \rightarrow \text{do nothing } (0)$$

| | | | | | |
|---------------|--------------|--------------|--------------|---------------|--------------|
| -1 | 0 | 1 | 1 | -1 | 1 |
| -7 | 0 | 1 | 4 | -2 | 6 |

Update query 1

Problem

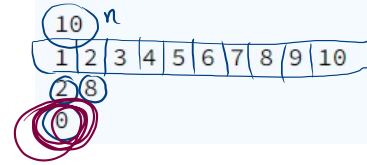
Submissions

Leaderboard

Discussions

Given an array of size n with initial values. Take $left$, $right$ as integer inputs such that $0 \leq left, right < arr.length$ and also take x as an integer input.

Then update the given array from the $index-left$ till the $index-right$ (both left index and right index included) with the element x . In the end print all the elements of the array such that each element is printed in a separate line.



$$x = 0 / 5$$

$n = 10$

| | | | | | | | | | |
|---|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

A green line is drawn under the indices 2 through 8, indicating the update range.

$left$ } valid
 $right$ } index

$L = 2$
 $R = 8$

```
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0; i < n; i++){
            A[i] = scn.nextInt();
        }

        int left = scn.nextInt();
        int right = scn.nextInt();

        int x = scn.nextInt();

        for(int i = left; i <= right; i++){
            A[i] = x;
        }

        for(int i = 0; i < n; i++){
            System.out.print(A[i] + " ");
        }
    }
}
```

Print Pair

Problem

Submissions

Leaderboard

Discussions

Take the array of size n and their values from user. And Print all the pairs in the array.

Sample Input 0

5
1 2 3 4 5

Sample Output 0

✓
1 2
1 3
1 4 ✓
1 5 ✓
2 3
2 4 ✓
2 5 ✓
3 4 ✓
3 5 ✓
4 5

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int[] A = new int[n];
    for(int i = 0; i < n; i++){
        A[i] = scn.nextInt();
    }

    //logic
    for(int i = 0; i <= n-2; i++){
        for(int j = i + 1; j <= n-1; j++){
            System.out.println(A[i] + " " + A[j]);
        }
    }
}
```

1 2

1 3

1 4

1 5

2 3

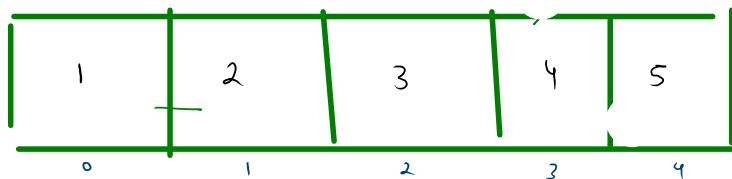
2 4

2 5

3 4

3 5

4 5



$n=5$

i j

$j = n-1$
when update $i \rightarrow$ make $j = i+1$

$[0, n-2]$

$[i+1, n-1]$

$n=5$

| i | j |
|-----|---------|
| 0, | 1 2 3 4 |
| 1 | 2 3 4 |
| 2 | 3 4 |
| 3 | 4 |

$n=4$

$\frac{1}{6}$

2

1

3

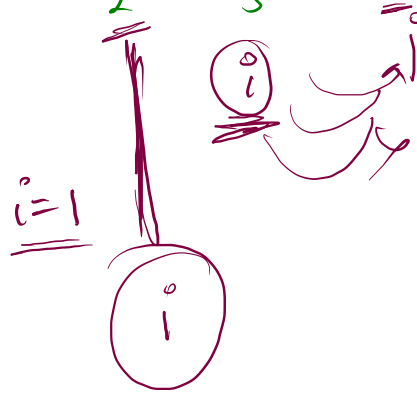
2

4

3

$i=0$

$0 \leq 2$ ✓



$i=2$

$2 \leq 2$ ✓

$j=3, 4$

$3 \leq 3$ ✓

$4 \leq 3$ ✗

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int [] A = new int[n];
    for(int i = 0; i < n; i++){
        A[i] = scn.nextInt();
    }

    //logic
    for(int i = 0; i <= n-2; i++){
        for(int j = i + 1; j <= n-1; j++){
            System.out.println(A[i] + " " + A[j]);
        }
    }
}
```

1 2 1 4 2 4 3 4
1 3 2 3

$i+1, n-1$

$[0, n-2]$

$[0, n-1]$

$n=5$

$[0, n-1]$

$[0, n-2]$

$[i+1, n-1]$

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
```

```
    int A [] = new int[n];
    for(int i = 0; i < n; i++){
        A[i] = scn.nextInt();
    }
```

```
    for(int i = 0; i < n; i++){
        for(int j = i+1; j < n; j++){
            System.out.println(A[i] + " " + A[j]);
        }
    }
```

$j=5$ $j=n$
 $scn.nextInt()$

| | | | | |
|------|---|---|---|---|
| i= 0 | 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 | |
| 2 | 3 | 4 | | |
| 3 | 4 | | | |
| 4 | | | | |

not reqd.

1
0

2
1

3
2

4
3

5
4

$n=5$

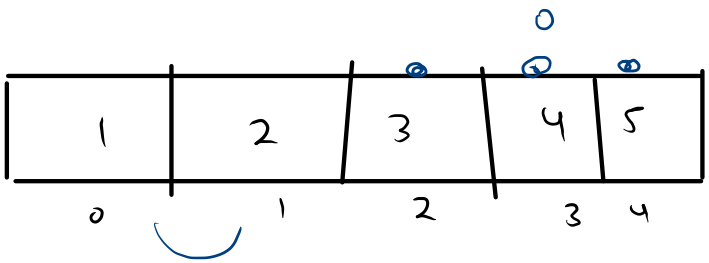
| | | | | |
|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 | |
| 2 | 3 | 4 | | |
| 3 | 4 | | | |

Find all Combination

$n=5$

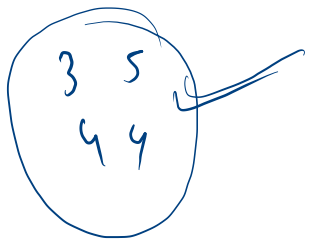
5
1 2 3 4 5
8

target = 8



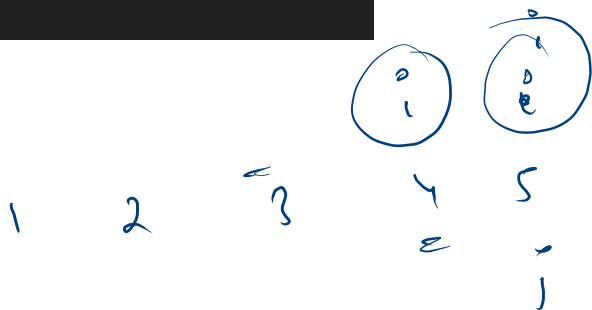
Sample Output 0

3 5
4 4



```
//logic
for(int i = 0; i <= n-2; i++){
    for(int j = i+1; j <= n-1; j++){
        System.out.println(A[i] + " " + A[j]);
    }
}
```

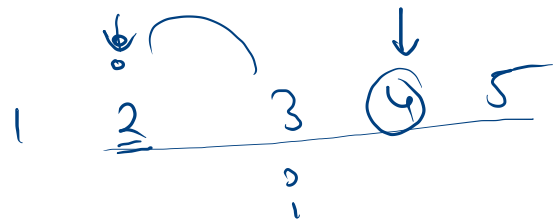
3 3
3 4
3 5
5 5
3 3



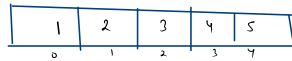

```
//logic
for(int i = 0; i <= n-1; i++){
    for(int j = i; j <= n-1; j++){
        if(A[i] + A[j] == tar){
            System.out.println(A[i] + " " + A[j]);
        }
    }
}
```

3 3
3 4
3 5

3 2
3 1

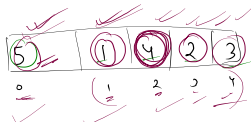


5
1 2 3 4 5



?

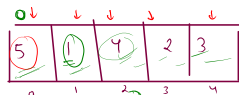
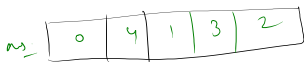
→ 4 3 2 1 0



Que!

0 → n-1
0 → n-1

[0, n-1)



count = 0

j = 0
1 > 1
2 > 5
3 > 5

A[0] > A[0]

1 > 5
4 > 5

count = 4/5

5 1 4 3 2
= 4 1

```
//logic
for(int i = 0; i < n; i++){
    int count = 0;
    for(int j = 0; j < n; j++){
        if(A[j] > A[i]){
            count++;
        }
    }
    System.out.print(count + " ");
}
```

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    int [] A = new int[n];
    for(int i = 0; i < n; i++){
        A[i] = scn.nextInt();
    }

    //logic
    for(int i = 0; i < n; i++){
        int count = 0;
        for(int j = 0; j < n; j++){
            if(A[j] > A[i]){
                count++;
            }
        }
        System.out.print(count + " ");
    }
}
```