

Update Query I.

n = 10
 arr[] = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

int left = sc.nextInt(); // 2

int right = sc.nextInt(); // 8

int x = sc.nextInt() // 10

(2 to 8)

[1, 2, 0, 0, 0, 0, 0, 0, 10]

i = left; i <= right; i++

1
2
3
4
5
6
7
8

arr[i] = arr[2] = 0
 arr[i] = arr[3] = 0

for (int i = left; i <= right; i++) {
 arr[i] = 0;

```
}  
for (int i=0; i<n; i++) {  
    s.o.p(arr[i] + " ");  
}
```

Add One

$$n = 5$$

$$\text{arr} = [1, 2, 3, 4, 5]$$

$$\begin{array}{r} 12345 \\ + 1 \\ \hline 12346 \end{array}$$

$$n = 1$$

$$\text{arr} = [9]$$

$$\begin{array}{r} 9 \\ + 1 \\ \hline 10 \end{array}$$

$$\boxed{1} \boxed{0}$$

$$\begin{array}{cccccc} 0 & 1 & 2 & 3 & 4 & \\ [1 & 2 & 3 & 4 & 5] & \rightarrow 12345 + 1 = 12346 \end{array}$$

$$\begin{array}{r} + + + + + \\ 0 \quad 0 \quad 0 \quad 0 \quad 1 \\ 1 \quad 2 \quad 3 \quad 4 \quad 6 \end{array}$$

$$\begin{array}{r} 1 \quad 2 \quad 3 \quad 4 \quad 9 \\ + \quad + \quad + \quad + \quad + \\ 0 \quad 0 \quad 0 \quad 1 \quad 1 \\ \hline 1 \quad 2 \quad 3 \quad 5 \quad 0 \end{array}$$

```

6 public static void main(String[] args) {
7     /* Enter your code here. Read input from STDIN. Print output to STDOUT. */
8     Scanner sc = new Scanner(System.in);
9     int n = sc.nextInt();
10    int arr[] = new int[n];
11    for(int i=0; i<n; i++){
12        arr[i] = sc.nextInt();
13    }
14    int carry = 0;
15    for(int i=n-1; i>=0; i--){
16        if(i==n-1){
17            int sum = arr[i]+1;
18            arr[i] = (sum)%10; // (6+1)%10=7
19            carry = (sum)/10; // 7/10=0
20        }
21        else{
22            int sum = arr[i]+carry;
23            arr[i] = (sum)%10;
24            carry = (sum)/10;
25        }
26    }
27    if(carry>0){
28        int newarr[] = new int[n+1];
29        newarr[0] = carry;
30        for(int i=1; i<n+1; i++){
31            newarr[i] = 0;
32        }
33        for(int i=0; i<n+1; i++){
34            System.out.print(newarr[i]+" ");
35        }
36    }
37    else{
38        for(int i=0; i<n; i++){
39            System.out.print(arr[i]+" ");
40        }
41    }
42 }

```

$$\begin{array}{r} 0 \quad 1 \quad 2 \quad 3 \quad 4 \\ 1 \quad 2 \quad 3 \quad 4 \quad 9 \\ + \quad + \quad + \quad + \quad + \\ \hline 1 \quad 2 \quad 3 \quad 5 \quad 0 \end{array}$$

0	0	-	-
1	2	3	5
0			

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

arr

0	1	2	3	4
1	2	3	9	9
+	+	+	+	+
0	0	1	1	1

1	2	3	9	9
			+	1
1	2	4	0	0

arr

1	2	4	0	0
---	---	---	---	---

$i=4; i \geq 0; i--; 9+1=10$

$arr[4] = (arr[4] + 1) \% 10$

$= (6+1) \% 10 = 7 \% 10 = 7$

$i=4; \text{int carry}=0;$
 $\text{for}(i=n-1; i \geq 0; i--)$

$= (9+1) \% 10 = 10 \% 10 = 0$
 $\text{if}(i == n-1) \{ 6+1=7$

$arr[i] = (arr[i] + 1) \% 10 = 7$

$\text{carry} = (arr[i] + 1) / 10 = 10 / 10 = 1$

$i=3$

$\}$ else $\{$

$(9+1) \% 10 = 0$

$arr[i] = (arr[i] + \text{carry}) \% 10$

$\text{carry} = (arr[i] + \text{carry}) / 10 = 10 / 10 = 0$

$\}$

9999 \rightarrow arr 5
 $+1$

10000 \rightarrow (2)

Brute Force Approach (Algorithm)

Easiest Approach

Straight Forward Approach

Example.

10, 15, 20, 5, 30

10, 15 → 25

20, 5 → 25

25 →

Brute Force Approach.

Point Pair

5 1 2 3 4
 0 ① 2 3 4 5

{ 1 2
 { 1 3
 { 1 4
 { 1 5

{ 2 3
 { 2 4
 { 2 5
 { 3 4
 { 3 5

{ 4 5
 ↑
 i

```

for(int i=0; i<n; i++){
  for(int j=i+1; j<n; j++){
    s.o.pln(arr[i]+" "+arr[j]);
  }
}

```

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