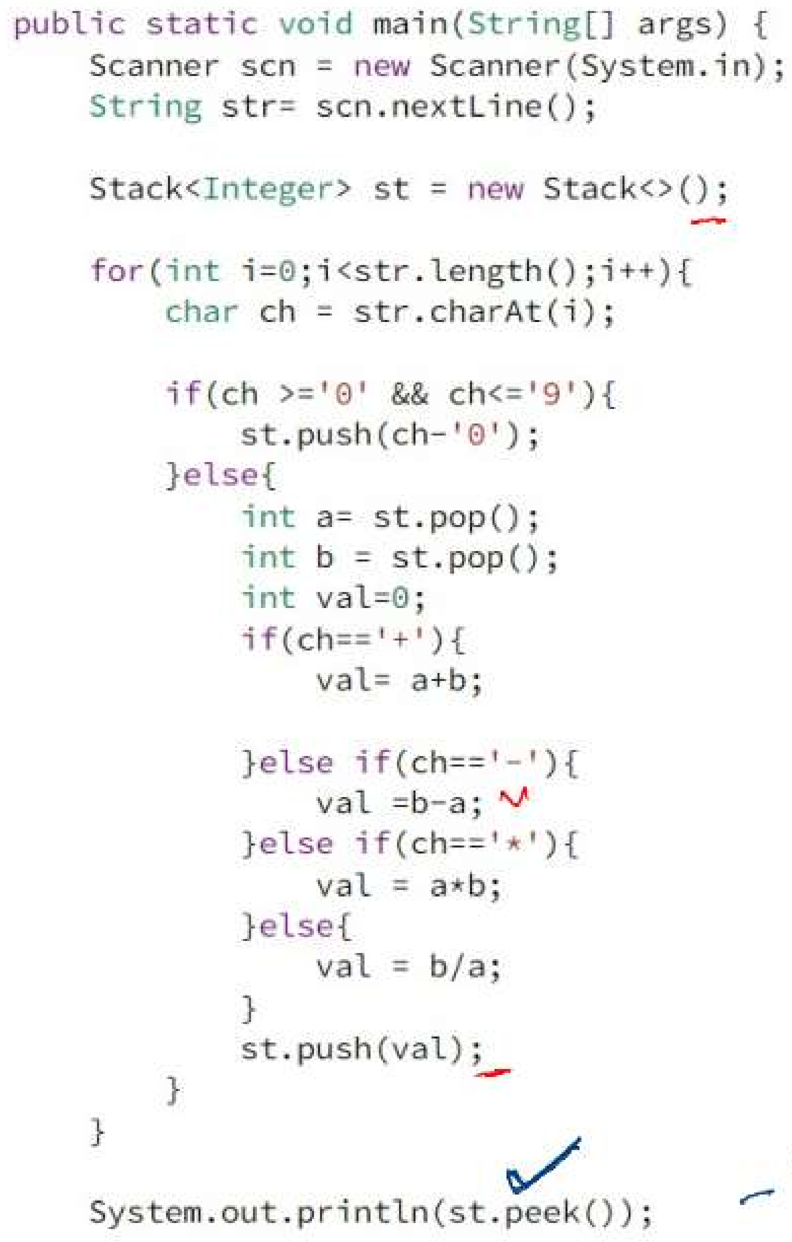
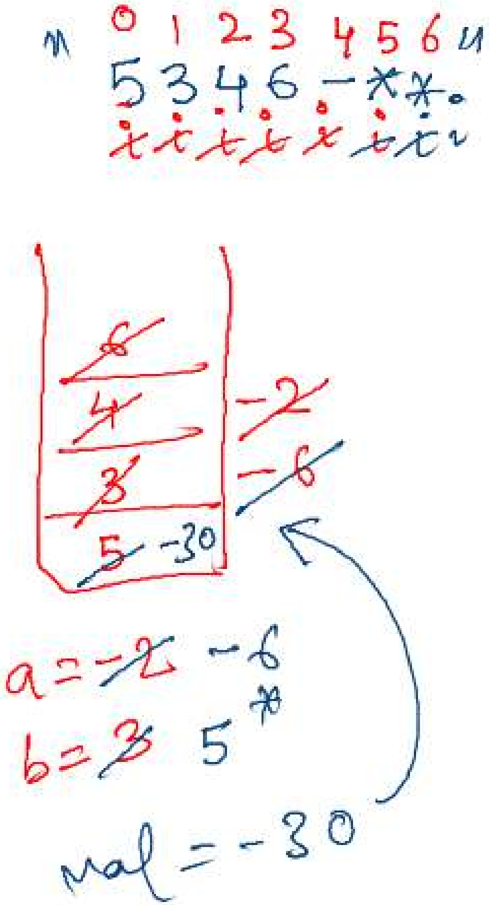
Ques Postfix Evaluation



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

    Stack<Integer> st = new Stack<>();

    for(int i=0;i<str.length();i++){
        char ch = str.charAt(i);

        if(ch >='0' && ch<='9'){
            st.push(ch-'0');
        }else{
            int a= st.pop();
            int b = st.pop();
            int val=0;
            if(ch=='+'){
                val= a+b;

            }else if(ch=='-'){
                val =b-a;
            }else if(ch=='*'){
                val = a*b;
            }else{
                val = b/a;
            }
            st.push(val);
        }
    }

    System.out.println(st.peek());
```

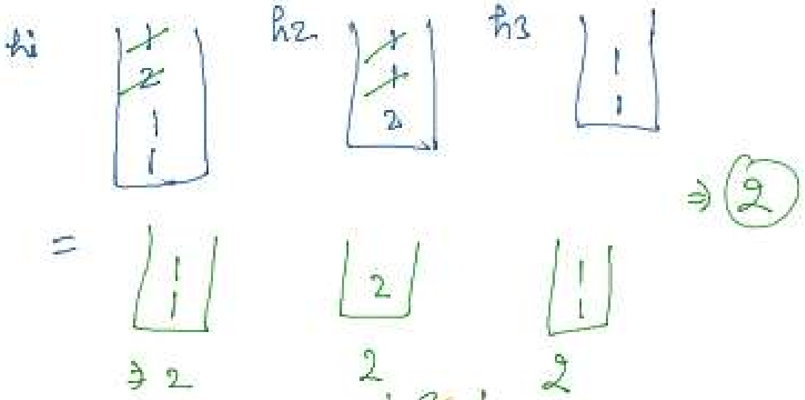
-30



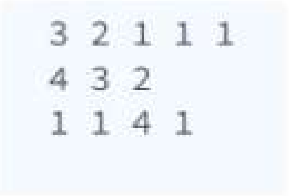
Question

Example

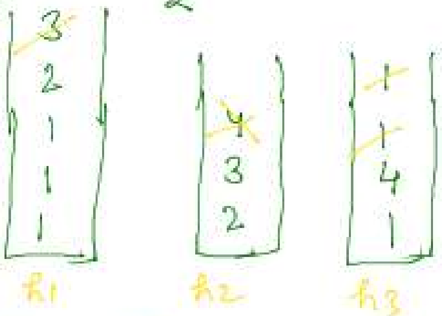
$h1 = [1, 2, 1, 1]$
$h2 = [1, 1, 2]$
$h3 = [1, 1]$



② ⇒



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



~~8~~ 5 ~~9~~ 5 ~~7~~ ~~6~~ 5 ⇒ 5 ans

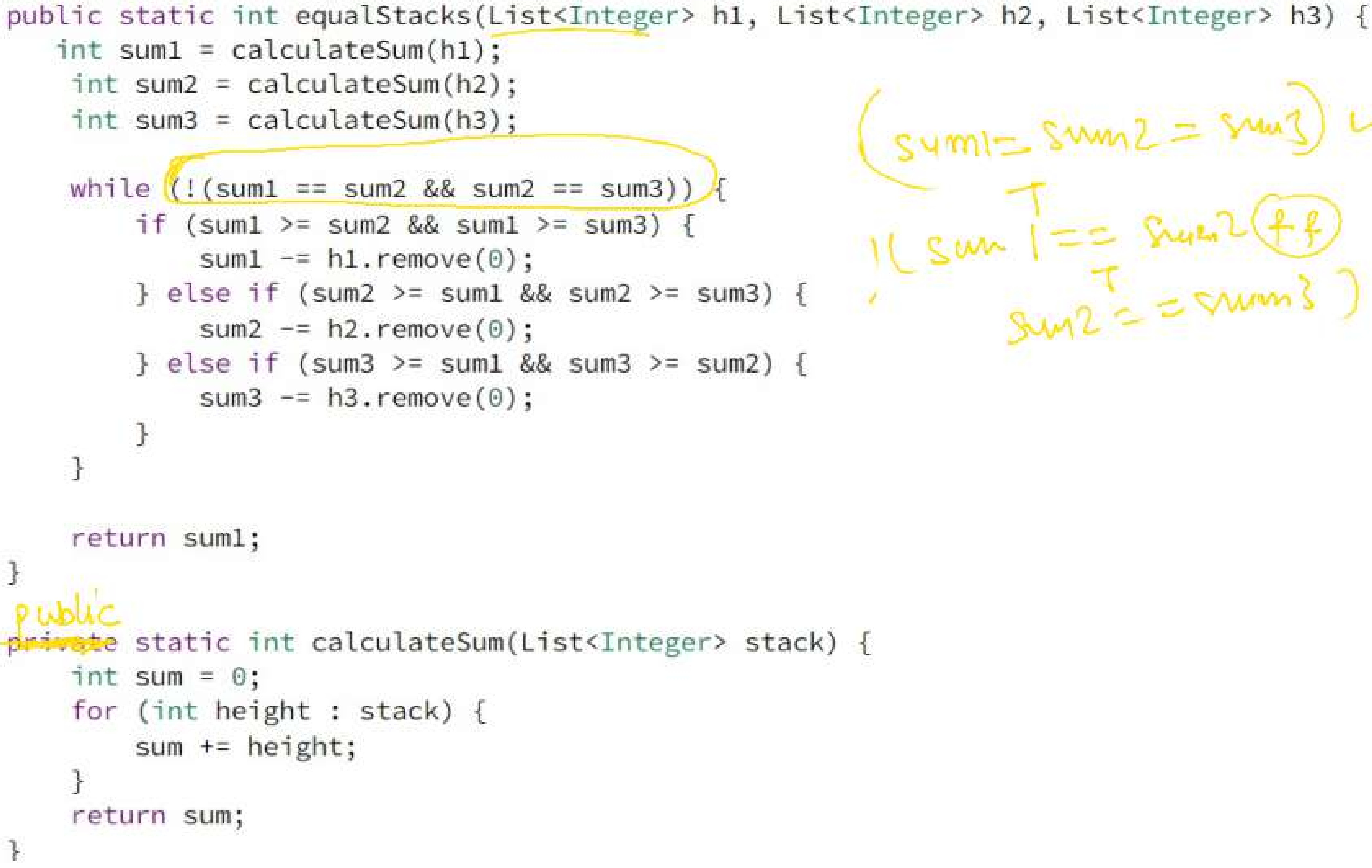
0 1 2 3 4
arr = [1, 2, 3, 4, 5]

arr.sublist(st, end); arr.sublist(1, arr.size());

⇓ 1 3

[2, 3, 4, 5]

= [2, 3]



```
public static int equalStacks(List<Integer> h1, List<Integer> h2, List<Integer> h3) {
    int sum1 = calculateSum(h1);
    int sum2 = calculateSum(h2);
    int sum3 = calculateSum(h3);

    while (!(sum1 == sum2 && sum2 == sum3)) {
        if (sum1 >= sum2 && sum1 >= sum3) {
            sum1 -= h1.remove(0);
        } else if (sum2 >= sum1 && sum2 >= sum3) {
            sum2 -= h2.remove(0);
        } else if (sum3 >= sum1 && sum3 >= sum2) {
            sum3 -= h3.remove(0);
        }
    }

    return sum1;
}
public
~~private~~ static int calculateSum(List<Integer> stack) {
    int sum = 0;
    for (int height : stack) {
        sum += height;
    }
    return sum;
}
```

(sum1 = sum2 = sum3) ✓

T

!(sum 1 == sum2 ff

T

sum2 == sum3)

Ques ✓ Next greater element to left

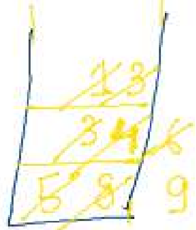
arr = [3 4 3 2 1]

ans[] = {-1,-1,4,3,2]

arr = [5,8,3,4,1,3,6,9]

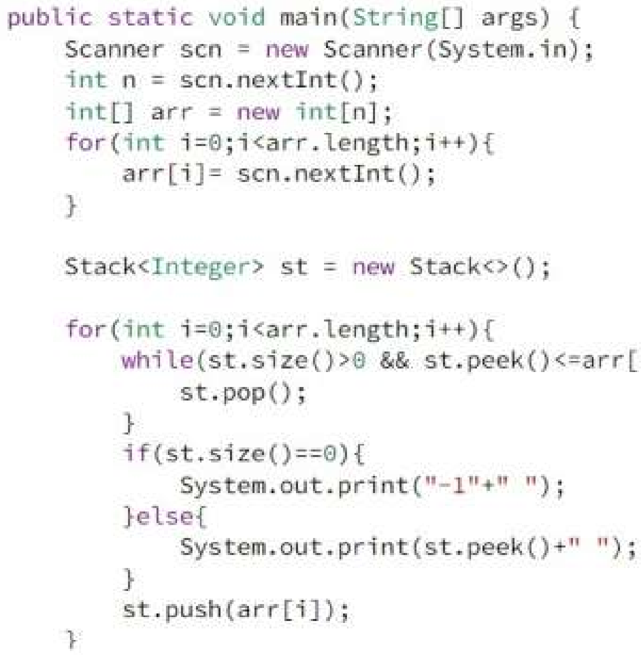
ans[] = [-1,-1,8,8,4,4,8,-1]

→ [-1,-1,8,8,4,4,8,-1] ✓



for(i=0 to arr.length)

while(st.size()>0 && st.peek()< arr[i]){
st.pop(); ✓
}
if(st.size()==0){
syso(-1);
}
else{
syso(st.peek());
}
st.push();



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

    Stack<Integer> st = new Stack<>();

    for(int i=0;i<arr.length;i++){
        while(st.size()>0 && st.peek()<=arr[i]){
            st.pop();
        }
        if(st.size()==0){
            System.out.print("-1"+" ");
        }else{
            System.out.print(st.peek()+" ");
        }
        st.push(arr[i]);
    }
```

✓

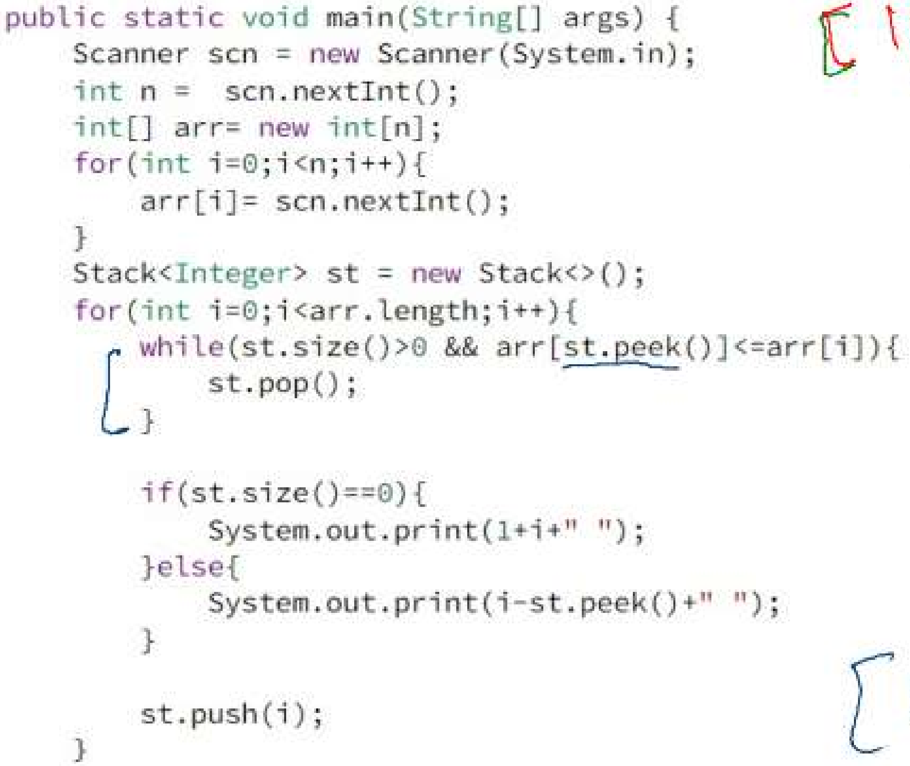
Qus span of stock

arr [100, 80, 60, 70, 60, 75, 85]
0 1 2 3 4 5 6

arr[i] = stock price of today.

ans = [1, 1, 1, 2, 1, 4, 6]

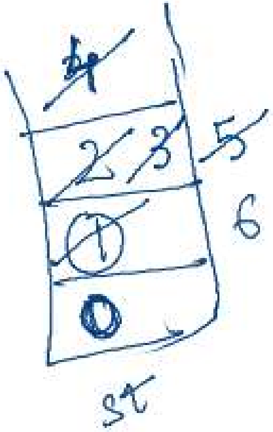
(# of day in which my stock price is just greater to left)



```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n =  scn.nextInt();
    int[] arr= new int[n];
    for(int i=0;i<n;i++){
        arr[i]= scn.nextInt();
    }
    Stack<Integer> st = new Stack<>();
    for(int i=0;i<arr.length;i++){
        while(st.size()>0 && arr[st.peek()]<=arr[i]){
            st.pop();
        }

        if(st.size()==0){
            System.out.print(1+i+" ");
        }else{
            System.out.print(i-st.peek()+" ");
        }

        st.push(i);
    }
```

[100, 80, 60, 70, 60, 75, 85]
0 1 2 3 4 5 6 i
~~i~~ ~~i~~ ~~i~~ ~~i~~ ~~i~~ ~~i~~ ~~i~~

6 − 0
= 6



[1 1 1 2 1 4 6]