Softnerve Technical Assessment

1. Leaders in the Array

**import** java.util.ArrayList;

**public** **class** Leaders {

**public** **static** **void** main(String[] args) {

**int** a[] = {7, 10, 4, 10, 6, 5, 2};

**int** n = a.length;

*leaders*(a, n);

}

**private** **static** **void** leaders(**int**[] a, **int** n) {

ArrayList<Integer> ans = **new** ArrayList<>();

**int** curr = a[n - 1];

ans.add(curr);

**for**(**int** i = n - 2; i >= 0; i--) {

**if**(a[i] > curr) {

curr = a[i];

ans.add(curr);

}

}

**for**(**int** i = ans.size() - 1; i >= 0; i--) {

System.***out***.print(ans.get(i) + " ");

}

}

}

Output : 10 6 5 2

1. Stock Buy and Sell

**public** **class** StockBuySell {

**public** **static** **void** main(String[] args) {

**int** arr[] = {7, 6, 4, 3, 1}, n = 5;

System.***out***.println(*maxProfit*(arr, n));

}

**static** **int** maxProfit(**int** price[], **int** n) {

**int** profit = 0;

**for**(**int** i = 1; i < n; i++) {

**if**(price[i] > price[i - 1])

profit += price[i] - price[i -1];

}

**return** profit;

}

}

OUTPUT : 0

1. Sum of All Subset XOR totals

**class** SubsetXor {

**static** **int** *ans*=0;

**public** **static** **int** subsetXORSum(**int**[] arr) {

*req*(arr,0,0);

**return** *ans*;

}

**public** **static** **void** req(**int**[] arr,**int** index,**int** n){

*ans*+=n;

**for**(**int** i=index; i<arr.length; i++){

*req*(arr,i+1,n^arr[i]);

}

}

**public** **static** **void** main(String[] args) {

**int** arr[] = {5, 1, 6};

System.***out***.println(*subsetXORSum*(arr));

}

}

OUTPUT : 28