

WEEK 2 PROGRAMS

```
import java.util.Scanner;
import java.util.Arrays;

public class Finalsearch{
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        int n = scanner.nextInt();

        int[] nums = new int[n];

        for (int i = 0; i < n; i++) {
            nums[i] = scanner.nextInt();
        }

        int original = scanner.nextInt();

        Arrays.sort(nums);

        while (true) {
            if (Arrays.binarySearch(nums, original) >= 0) {
                original *= 2;
            } else {
                break;
            }
        }

        System.out.println(original);
        scanner.close();
    }
}
```

```
D:\230701126>javac Finalsearch.java
```

```
D:\230701126>java Finalsearch
```

```
5
5
3
6
1
12
3
24
```

WEEK 2 PROGRAMS

```
import java.util.*;

public class Max{

    public static void main(String[] args){

        Scanner sc=new Scanner(System.in);

        int n=sc.nextInt();

        int[] arr=new int[n];

        for(int i=0;i<n;i++){

            arr[i]=sc.nextInt();

        }

        int minPrice=arr[0];

        int maxProfit=0;

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

            if(arr[i]<minPrice){

                minPrice=arr[i];

            }

            else{

                int profit=arr[i]-minPrice;

                if(profit>maxProfit){

                    maxProfit=profit;

                }

            }

        }

        System.out.println(maxProfit);

    }

}
```

WEEK 2 PROGRAMS

```
D:\230701126>javac Max.java  
D:\230701126>java Max  
6  
7 1 5 3 6 4  
5
```

WEEK 2 PROGRAMS

```
import java.util.Scanner;

public class Sortarray {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        int n = scanner.nextInt();

        int[] arr = new int[n];

        for (int i = 0; i < n; i++) {
            arr[i] = scanner.nextInt();
        }

        int low = 0, mid = 0, high = n - 1;

        while (mid <= high) {
            switch (arr[mid]) {
                case 0:

                    int temp0 = arr[low];
                    arr[low] = arr[mid];
                    arr[mid] = temp0;
                    low++;
                    mid++;
                    break;
                case 1:

                    mid++;
                    break;
                case 2:

                    int temp2 = arr[mid];
                    arr[mid] = arr[high];
                    arr[high] = temp2;
                    high--;
                    break;
            }
        }

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

        scanner.close();
    }
}
```

WEEK 2 PROGRAMS

```
D:\230701126>java Sortarray
6
0 1 2 0 1 2
0 0 1 1 2 2
```

```
import java.util.Scanner;

public class MissingNumber {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int N = scanner.nextInt();
        int[] arr = new int[N - 1];
        int sumOfArray = 0;
        for (int i = 0; i < N - 1; i++) {
            arr[i] = scanner.nextInt();
            sumOfArray += arr[i];
        }
        int sumOfN = N * (N + 1) / 2;
        int missingNumber = sumOfN - sumOfArray;
        System.out.println(missingNumber);
        scanner.close();
    }
}
```

```
D:\230701126>javac MissingNumber.java
```

```
D:\230701126>java MissingNumber
```

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

WEEK 2 PROGRAMS

```
import java.util.Scanner;

class Zeros{

    public static void main(String[] args){

        Scanner sc=new Scanner(System.in);

        int n=sc.nextInt();

        int arr[]=new int[n];

        int e;

        for(int i=0;i<n;i++){

            e=sc.nextInt();

            arr[i]=e;

        }

        int t=0;

        int s=0;

        int temp;

        for(int i=0;i<n;i++){

            if(arr[i]!=t){

                temp=arr[i];

                arr[i]=arr[s];

                arr[s]=temp;

                s++;

            } }

        for(int i=0;i<n;i++){

            System.out.print(arr[i] |);

        } } }
```

WEEK 2 PROGRAMS

```
D:\230701126>javac Zeros.java
```

```
D:\230701126>java Zeros
```

```
5
```

```
1 0 2 0 0
```

```
12000
```

```
D:\230701126>
```