Arraylist :-

9

```
int arr[] = new int[90];
```

90

↑ pre-defined the size of an array.

1

→

→

Arraylist → independent of size

→ Syntax of Arraylist -

```
ArrayList < datatype > arraylist_name = new ArrayList<>();
```

ex:- String :

```
Arraylist < String > arr = new Arraylist<>();
```

↑

→ int

```
Arraylist<int> arr = new Arraylist<>();
```

✗

Arraylist → class

does not work with primitive datatype

ie int, char, boolean, double, etc.

↓

wrapper class

→

Integer, Character, Boolean, Double, ——

ex :-

```
Arraylist < Integer > arr = new Arraylist <>();
```

arr.size() → function

arr.length → property

str.size() → function

str.length → property

class

↓

property

1) add → for inserting an element into the list.

```
ArrayList<Integer> arr = new ArrayList<>();
arr.add(2);
arr.add(4);
```

2) Printing a list → types (—) → `System.out.println(arr);` → [2, 4]

→ through loops →

```
for(int i=0;i<arr.size();i++){
    System.out.println(arr.get(i));
}
```

2
4

3) length → size() →

```
System.out.println("Size of the arrayList is: " + arr.size());
```

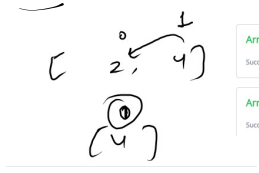
4) Get an element → arr.get(index)

Valid index

```
System.out.println("Element at zero index is: " + arr.get(0));
```

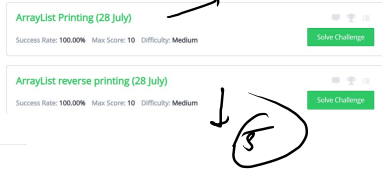
5) Remove an element → arr.remove(index)

```
arr.remove(0);
System.out.println(arr);
```



5+

10 minutes



ArrayList Printing (28 July)

Problem | Submissions | Leaderboard | Discussions

Declare an ArrayList as arr. Take N as an integer input. Take N elements inside the ArrayList. Print the ArrayList from the starting

Input Format

Single Integer N. N Integers

Constraints

1<= N <= 10^5 0<= arr[i] <= 10^5

Output Format

N Integers

Sample Input 0

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

5 → N
1 2 3 4 5 → N elements.

Sample Output 0

```
1 2 3 4 5
```

```java
public static void printArrayList(ArrayList<Integer> arr){
    for(int i=0;i<arr.size();i++){
        System.out.print(arr.get(i) + " ");
    }
}
```

```java
ArrayList<Integer>arr = new ArrayList<>();

int n =scn.nextInt();
for(int i=0;i<n;i++){
    arr.add(scn.nextInt());
}

printArrayList(arr);
```

ArrayList reverse printing (28 July)

Problem | Submissions | Leaderboard | Discussions

Declare an ArrayList as arr. Take N as an integer input. Take N elements inside the ArrayList. Print the ArrayList from the ending to start (reverse order)

for(int i = arr.size()-1; i>=0; i--)

n = 5

1 2 3 4 5

Sample Input 0

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

Sample Output 0

```
5 4 3 2 1
```

5 4 3 2 1

```java
public class Solution {

    public static void reversePrinting(ArrayList<Integer> arr){
        for(int i=arr.size()-1;i>=0;i--){
            System.out.print(arr.get(i) + " ");
        }
    }

    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be nam
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        ArrayList<Integer> arr = new ArrayList<>();

        for(int i=0;i<n;i++){
            arr.add(scn.nextInt());
        }

        reversePrinting(arr);
    }
}
```

[2, 4, 5, 6]

for-each loop :-

accessing / reading

```
for (int ele : arr)
{
    Sysо(ele);
}
```

```
for (int i=0; i<n; i++) {
    arr.set(i, 2);
}
```

left to right dirn.

right to left dirn not allowed

```
public static void reversePrinting(ArrayList<Integer> arr){

    ArrayList<Integer> reverseArr = new ArrayList<>();
    for(int i=arr.size()-1;i>=0;i--){
        reverseArr.add(arr.get(i));
    }


    for(Integer ele : reverseArr){
        System.out.print(ele + " ");
    }
}

public static void main(String[] args) {
    /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class sh
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();
    ArrayList<Integer> arr = new ArrayList<>();

    for(int i=0;i<n;i++){
        arr.add(scn.nextInt());
    }


    reversePrinting(arr);
}
```

Remove Primes (28 July)

Problem | Submissions | Leaderboard | Discussions

1. You are given an ArrayList of positive integers.
2. You have to remove prime numbers from the given ArrayList and return the updated ArrayList.

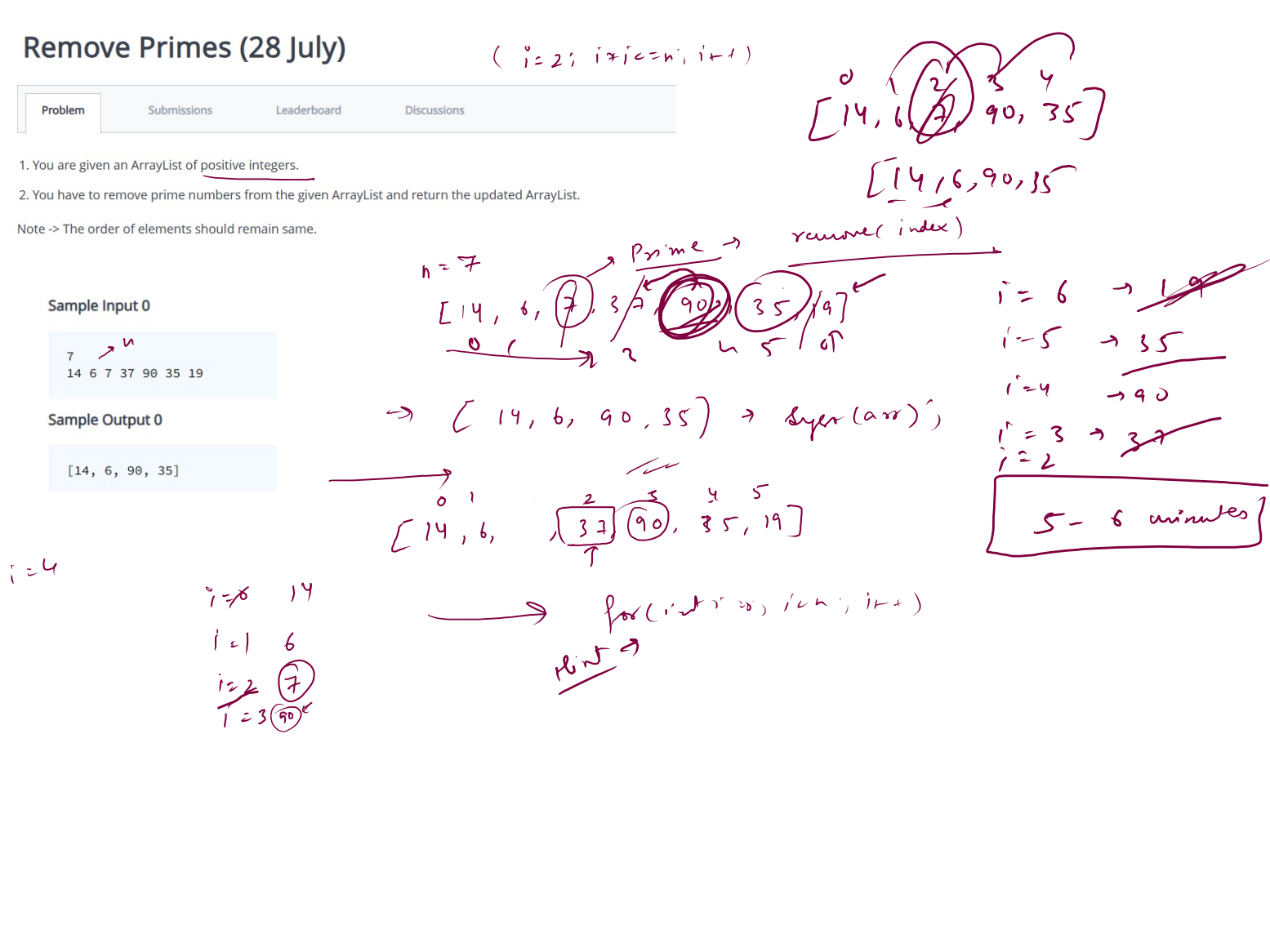
Note -> The order of elements should remain same.

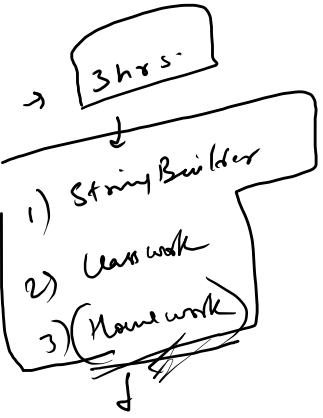
Sample Input 0

```
7
14 6 7 37 90 35 19
```

Sample Output 0

```
[14, 6, 90, 35]
```






```java
public class Solution {
    public static boolean checkPrime(int x){
        for(int i=2;i*i<=x;i++){
            if(x%i == 0){
                return false;
            }
        }

        return true;
    }

    public static void removePrimes(ArrayList<Integer> arr){
        for(int i=arr.size()-1;i>=0;i--){
            if(checkPrime(arr.get(i)) == true){
                arr.remove(i);
            }
        }

        System.out.print(arr);
    }

    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be n
        Scanner scn = new Scanner(System.in);
        int n =scn.nextInt();
        ArrayList<Integer> arr = new ArrayList<>();

        for(int i=0;i<n;i++){
            arr.add(scn.nextInt());
        }

        removePrimes(arr);
    }
```

Array v/s Arraylist

```
System.out.println(arr);
```
→ [2, 4]

```
for(int i=0;i<arr.size();i++){
    System.out.println(arr.get(i));
}
```

Get → arr[i] → arr.get(i)

Length → arr.length → arr.size()

Add → arr[i] = x → arr.add(x);

i = 0 < 2 (T) → 2

i = 1 < 2 (T) → 4

i = 2 < 2 (F)

arr → [2, 4]

```
arr.remove(0);
arr.remove(0);
```

arr → [4]

→ [ ]

```
arr.remove(1);
arr.remove(0);
```

arr → [2]

→ [ ]

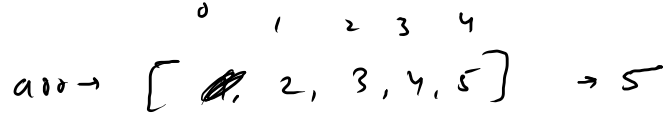
```
arr.remove(0);
arr.remove(1);
```

→ Error

arr → [4]

Taking user Input

```
for(int i=0;i<5;i++){
    // int x = scn.nextInt();
    // arr.add(x);
    arr.add(scn.nextInt());
}
```




```
while(arr.size()>0){
    arr.remove(0);
}
```