

Write the following classes in java.

Class Name: MySet – which represents a set of integers

Instance Variables(attributes):

private int[] elements; (This array represents set of integers, so this array should not contain duplicate elements.)

Constructor1: default constructor which represents empty set.

Constructor2: Parameterized constructor

When user passes an array of integers, constructor function should assign only the non duplicate values of the array to elements[] array instance variable. Exactly sufficient memory should be allocated to elements[] array in the constructor.

Example:

If argument array = {23, 45, 56, 23, 45, 17, 27, 27, 10, 9, 9}

Size of argument array = 11

Number of non duplicate elements in the array: 7

Size of instance variable array elements [] = 7

And the array should be elements [] = {23, 45, 56, 17, 27, 10, 9}

Methods(behaviour): Add the following behaviour to the object

- **getCardinality()**
- **toString() method**
- **isElementInTheSet()** – checks if an element is part of the set
- **Union()**

Class Name: MySetTest

To Test the functionality of the MySet class