Introduction to DSA

Data

↓

information

↓

Water → Bucket
Water → Glass
Water → Bottle

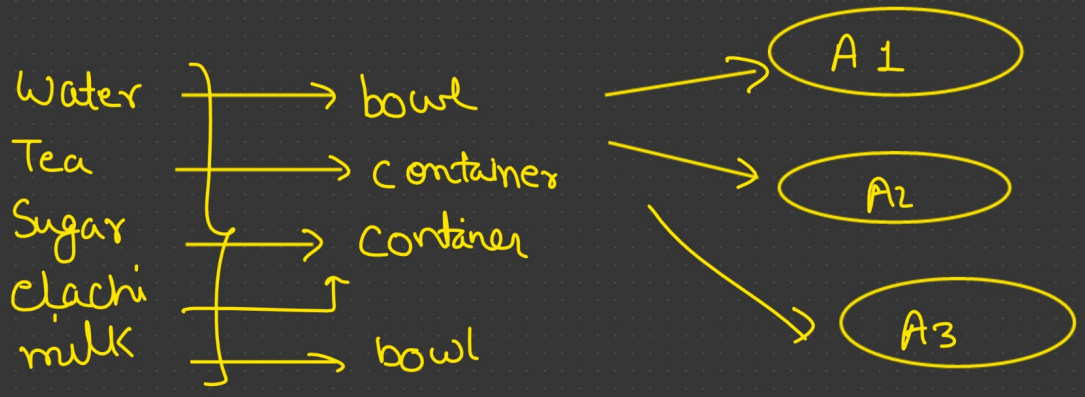
5+10 ↑

Data Structure

Algorithm

↓

Set of instruction to perform a specific task



```
public Class Abc
{   public static void main (String args[])
    {
        System.out.println ("Hello");
    }
}
```

Arguments

Abc.java

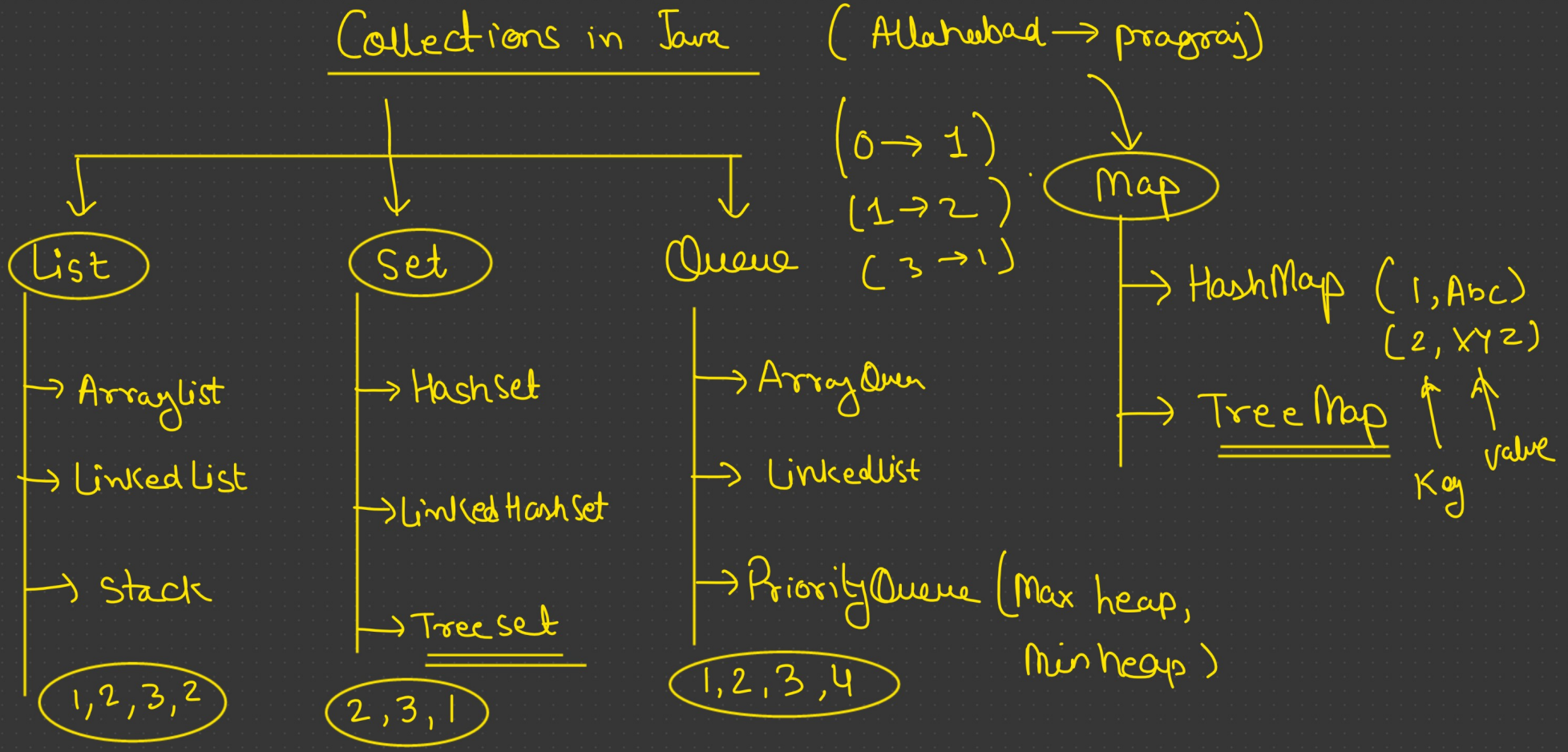
```
public class Abc
{


}
```

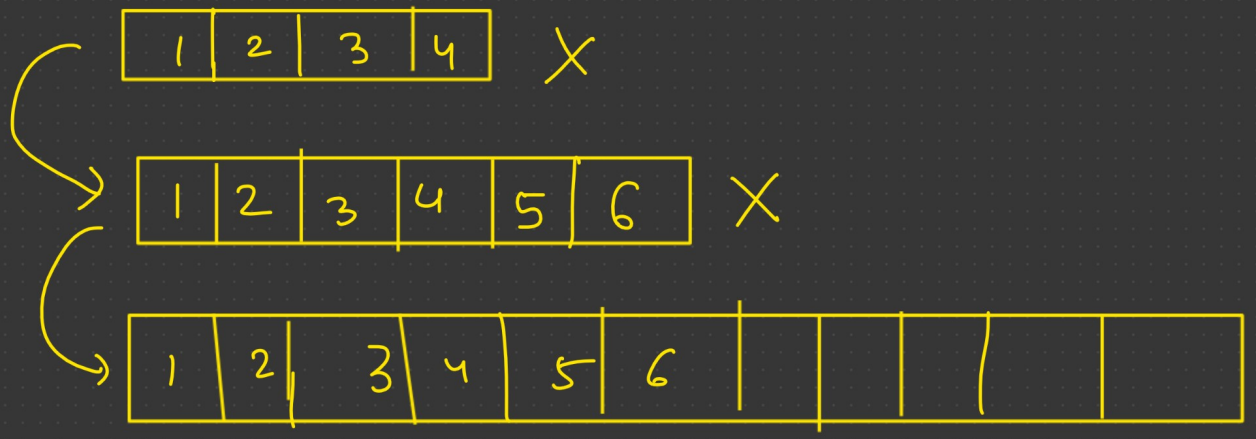
Data + Operation

Class → [variables + add( ), sub( )]

object.add()
object.sub()


Collections in Java
(Allahabad → prayagraj)
(0 → 1)
(1 → 2)
(3 → 1)
List
Set
Queue
Map
Arraylist
Linked List
Stack
1,2,3,2
Hashset
LinkedHashSet
Treeset
2,3,1
ArrayQueue
LinkedList
PriorityQueue (Max heap, Min heap)
1,2,3,4
HashMap (1, Abc) (2, XYZ)
TreeMap
Key
value

ArrayList Vs LinkedList

↓ Dynamic Array

↓ Runtime allocation