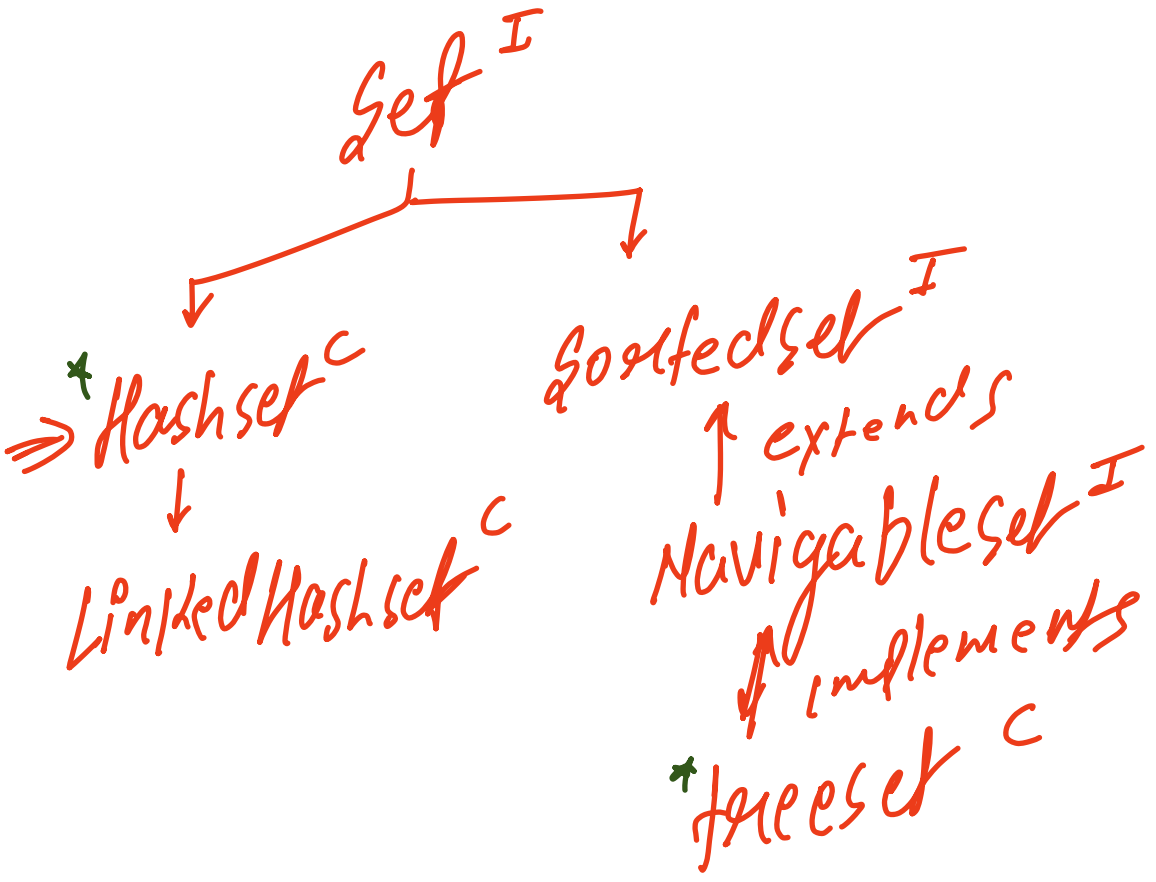
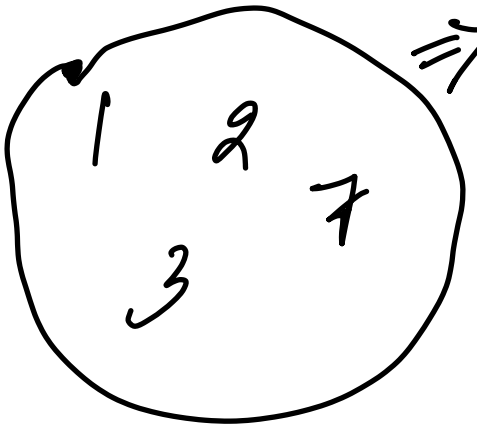


A = {1, 2, 3, 1, 7, 3}



⇒ set.size().

Set

```
for(i=0; i<N; i++){
    set.add(A[i]);
}
print(Set)
```

LinkedHashSet → 1.4 V

↳ child class of HashSet

→ LinkedList + HashTable

India
Pak
China
nepal
Bangladesh -

HashTable

HashSet

1. HashTable
2. Insertion order ✗
3. 1.2V

LinkedHashSet

1. HashTable + DLL
2. Insertion order
3. 1.4V

SortedSet

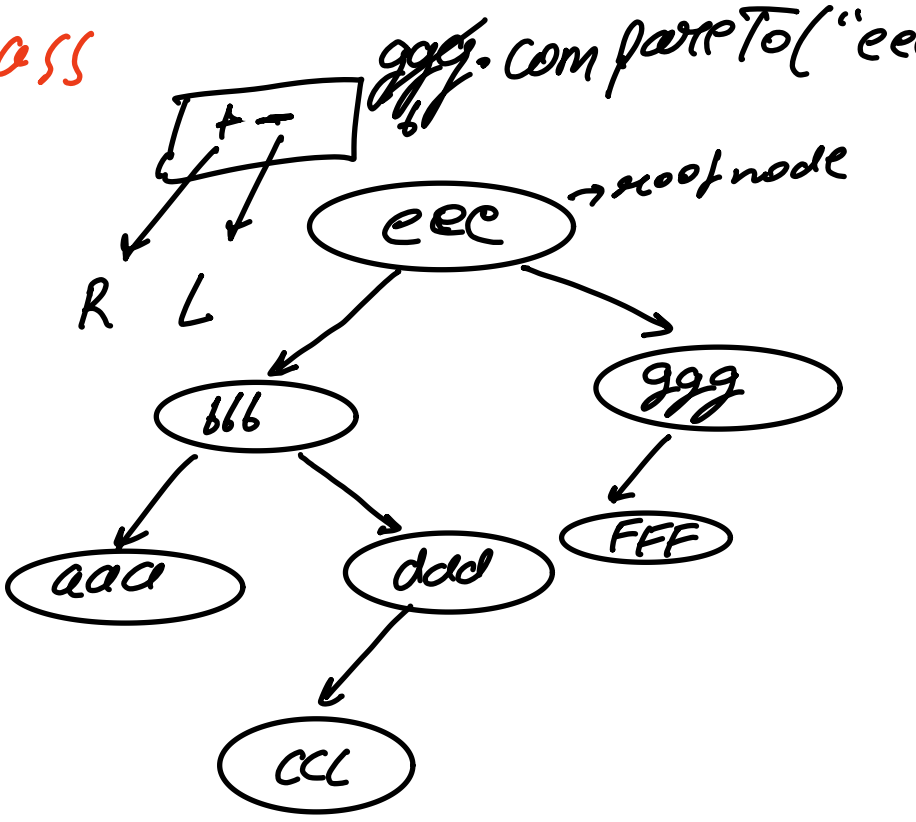
methods

1. first()
2. last()
3. headSet()
4. tailSet()
5. subSet()

TreeSet

↳ class

```
set.add("eee") ;
set.add("ggg") ;
set.add("bbb") ;
set.add("ddd") ;
```



O/P ⇒ Left ~~Root~~ Right

aaa bbb ccc ddd

eee FFF ggg

#

	0	1	2	3	4
0 →	1	2	3	4	5
1	16	17	18	19	6
2	15	24	25	20	7
3	14	23	22	21	8
4	13	12	11	10	9

i=0 j=0 1 2 3 4

1 2 3 4 5
16 17 18 - -

o/p: 1 2 3 4 5 6 7 8 9 10 11 - - - 25

```
int[][] A = new int[5][5]
```

```
int[] A = { 1, 2, 3, 4, 5 };
```

```
int[][] A = { {1,2,3,4}, {5,6,7,8} };
```

N → rows
M → Column

```
for( i=0; i< N; i++){
    for( j=0; j<M; j++){
        cout (A[i][j] );
    }
    cout<<endl;
}
```

Q:

A =

1	2	7
5	4	6
7	2	9

B =

9	5	1
2	8	6
7	12	15

O/P

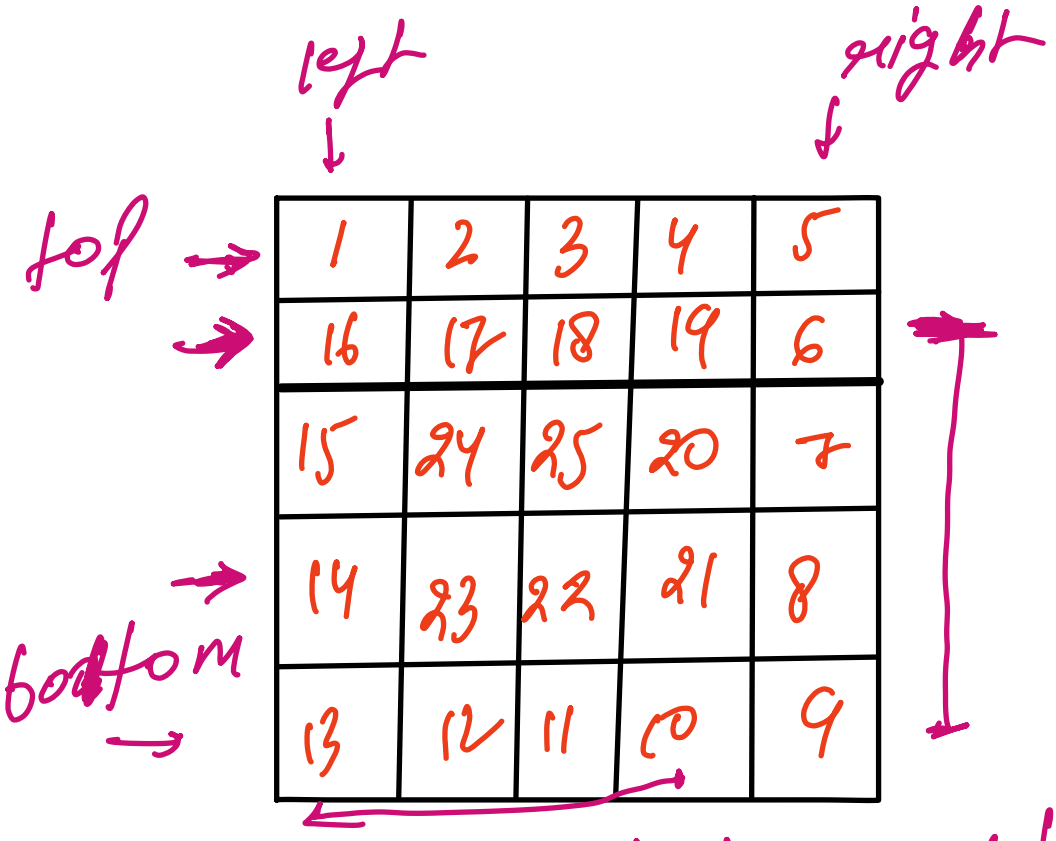
10	7	8
7	12	12
14	14	24

int[][] ans = new int[N][M];

0		

log

```
for(i=0;i<N;i++){
    for(j=0;j<M;j++){
        ans[i][j] = A[i][j] + B[i][j];
    }
}
```



top = 0 right = N-1

left = 0 Bottom = N-1

left to right ⇒ top++

top to bottom ⇒ right--

right to left ⇒ bottom--

bottom to top ⇒ left++

Set → HashSet
→ TreeSet

2D → question

Comparable & Comparator

```
class Student {
    int rollno;
    String name;
    // Constructor
}
```

```
main {
    psvm() {
        Student s1 = new Student(101, "Arun");
                s2
                s3
                s4
                s5

        TreeSet set = new TreeSet();
                set.add(s1);
                set.add(s2)
                    !
                set.add(s5);
        Print(set);
```