

```

import java.util.*;
public class MainProgram {
    static int kthSmallest(ArrayList<Integer> list, int k) {
        Collections.sort(list);
        return list.get(k-1);
    }
}

static void wordFrequency() {
    String text = "Java is easy and java is powerful";
    TreeMap<String, Integer> map = new TreeMap<String, Integer>();
    for (String w : text.split(" ")) {
        map.put(w, map.getOrDefault(w, 0) + 1);
    }
    System.out.println(map);
}

static class StackPO {
    static class E {
        int v, p;
        E(int v, int p) {
            this.v = v;
            this.p = p;
        }
    }
}

```

```
int c = 0;
```

```
PriorityQueue<E> pq = new PriorityQueue<>((a,b)→b.p-a.p);  
void push (int n){pq.add (new E(n,c++));}  
int pop () {return n, pq.poll().v; }  
}
```

```
static void studentTreeMap () {
```

```
TreeMap<Integer, String> map = new TreeMap<X>;  
map.put (101, "Alice");  
map.put (102, "Bob");  
System.out.println (map);  
}
```

```
static void linkedListEqual () {
```

```
LinkedList<Integer> a = new LinkedList<>();
```

```
LinkedList<Integer> b = new LinkedList<>();
```

```
a.add (1); a.add (2);
```

```
b.add (1); b.add (2);
```

```
System.out.println (a.equals (b));
```

```
}
```

```
static void employHashMap() {
    HashMap<Integer, String> map = new HashMap<>();
    map.put(1, "HR");
    map.put(2, "IT"); // IT-24018
    map.put(3, "Finance");
    System.out.println(map);
}

public static void main(String[] args) {
    ArrayList<Integer> list = new ArrayList<>
        (Arrays.asList(12, 5, 8, 20, 1));
    System.out.println(kthSmallest(list, 3));
    wordFrequency();
    StackPQ s = new StackPQ();
    s.push(10); s.push(20); s.push(30);
    System.out.println(s.pop());
    QueuePQ q = new QueuePQ();
    q.enqueue(10); q.enqueue(20); q.enqueue(30);
    System.out.println(q.dequeue());
    StudentTreeMap();
    linkedListEqual();
    employeeHashMap();
}
```