

4. (i) Find the kth smallest element in an ArrayList.

```
import java.util.*;
```

```
public class KthSmallest {
```

```
    public static void main ( ) {
```

```
        ArrayList<Integer> list = new ArrayList<> (
```

```
            Arrays.asList ( 10, 4, 7, 2, 15, 9));
```

```
        int k = 3; // kth smallest element
```

```
        Collections.sort (list);
```

```
        System.out.println ("Sorted list: " + list);
```

```
        System.out.println (k + "nd smallest element = " + list.get(k-1));
```

```
    }
```

```
}
```

(v) check if two LinkedLists are Equal

```
import java.util.*;
```

```
public class LinkedListEqual {
```

```
    public static void main ( ) {
```

```
        LinkedList<Integer> list1 = new LinkedList<> (
```

```
            Arrays.asList ( 1, 2, 3));
```

```
LinkedList<Integer> list2 = new LinkedList<>()
```

```
Arrays.asList(1, 2, 3));
```

```
if (list1.equals(list2))
```

```
    sout("Lists are equal");
```

```
else
```

```
    sout("Not equal");
```

```
}
```

```
}
```

(ii) TreeMap - Word frequency counter

```
import java.util.*;
```

```
public class WordFrequency {
```

```
    public () {
```

```
        String text = "java is easy and powerful";
```

```
        TreeMap<String, Integer> map = new TreeMap<>();
```

```
        String words[] = text.split(" ");
```

```
        for (String word : words) {
```

```
            map.put(word, map.getOrDefault(word, 0) + 1);
```

```
        }
```

```
        sout("Word frequencies:");
```

```
        sout(map);
```

```
}
```