Java - The SortedMap Interface

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The SortedMap interface extends Map. It ensures that the entries are maintained in an ascending key order.

Several methods throw a NoSuchElementException when no items are in the invoking map. A ClassCastException is thrown when an object is incompatible with the elements in a map. A NullPointerException is thrown if an attempt is made to use a null object when null is not allowed in the map.

The methods declared by SortedMap are summarized in the following table −

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| **Sr.No.** | **Method & Description** |
| 1 | **Comparator comparator( )**  Returns the invoking sorted map's comparator. If the natural ordering is used for the invoking map, null is returned. |
| 2 | **Object firstKey( )**  Returns the first key in the invoking map. |
| 3 | **SortedMap headMap(Object end)**  Returns a sorted map for those map entries with keys that are less than end. |
| 4 | **Object lastKey( )**  Returns the last key in the invoking map. |
| 5 | **SortedMap subMap(Object start, Object end)**  Returns a map containing those entries with keys that are greater than or equal to start and less than end. |
| 6 | **SortedMap tailMap(Object start)**  Returns a map containing those entries with keys that are greater than or equal to start. |

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| import java.util.\*;  public class TreeMapDemo {  public static void main(String args[]) {  // Create a hash map  TreeMap tm = new TreeMap();    // Put elements to the map  tm.put("Zara", new Double(3434.34));  tm.put("Mahnaz", new Double(123.22));  tm.put("Ayan", new Double(1378.00));  tm.put("Daisy", new Double(99.22));  tm.put("Qadir", new Double(-19.08));    // Get a set of the entries  Set set = tm.entrySet();    // Get an iterator  Iterator i = set.iterator();    // Display elements  while(i.hasNext()) {  Map.Entry me = (Map.Entry)i.next();  System.out.print(me.getKey() + ": ");  System.out.println(me.getValue());  }  System.out.println();    // Deposit 1000 into Zara's account  double balance = ((Double)tm.get("Zara")).doubleValue();  tm.put("Zara", new Double(balance + 1000));  System.out.println("Zara's new balance: " + tm.get("Zara"));  }  } | Ayan: 1378.0  Daisy: 99.22  Mahnaz: 123.22  Qadir: -19.08  Zara: 3434.34  Zara's new balance: 4434.34 |