SortedSetADT

Write a Java Program to handle the exceptions to the SortedSet which you have implemented yesterday.

Following are the other methods which you need to implement:

- **subSet(int fromElement, int toElement)** : Returns a view of the portion of this set whose elements range from fromElement, inclusive, to toElement, exclusive. If fromElement is greater than toElement, then throw a new InvalidSubsetSelectionException with message "Invalid Arguments to Subset Exception".
- **headSet(int toElement)** : Returns a view of the portion of this set whose elements are strictly less than toElement.If there are no elements in that portion,then Throw a new Set Empty Exception with message “Set Empty Exception”.
- **last()** : Returns the last (highest) element currently in this set. If set is Empty, then throw a new SetEmptyException with message "Set Empty Exception".
- **addAll(int[])** : which adds all the elements of the given array into the sorted set.

Create a class SortedSetADT and a constructor SortedSetADT(int[]) which takes a int[] as parameter and initialize the global int Array.

1) int[] subSet(int fromElement, int toElement) : returns int[]
2) int[] headSet(int toElement) : returns int[]
3) int last() : returns int
4) void addAll(int[]) : returns nothing

Input Format :

● The first line contains the number of operations

● Each line contains the method name and values separated by space.

Output Format :

● After each operation, display the set or the values returned by the method based on the operation performed.

Note : Check the input and output files

Sample Input #01:

```
15
addAll -1,-2,3,-7,-9,6,9
print
subSet -2,6
subSet -6,9
subSet -2,10
subSet 4,10
subSet 10,4
headSet 6
headSet 100
```

headSet -10
print
last
addAll 3,19,-9,-2,-1,2,3,3,2
last
print

Sample Output #01 :

{-9, -7, -2, -1, 3, 6, 9}
{-2, -1, 3}
{-2, -1, 3, 6}
{-2, -1, 3, 6, 9}
{6, 9}
Invalid Arguments to Subset Exception
{-9, -7, -2, -1, 3}
{-9, -7, -2, -1, 3, 6, 9}
Set Empty Exception
{-9, -7, -2, -1, 3, 6, 9}
9
19
{-9, -7, -2, -1, 2, 3, 6, 9, 19}