How to implement the sorted part:

Two choises:

Inserting in order:

Pros:

When inserting in order, the elements remains in order, and iteration is natural in sorted order.

Cons:

The insertion operation may be slower since it need to find the correct pacement in a set.

Separate function for iterating in sorted order:

Pros:

If you insert and remove many elements, it may be faster to do this

Cons:

You need to sort the set each time you are working with it

Conclusion: Look at the rate between insertion and iterations. If the first one biggest, do sorted insert, else, sort when iterate.