1656. Design an Ordered Stream

Description

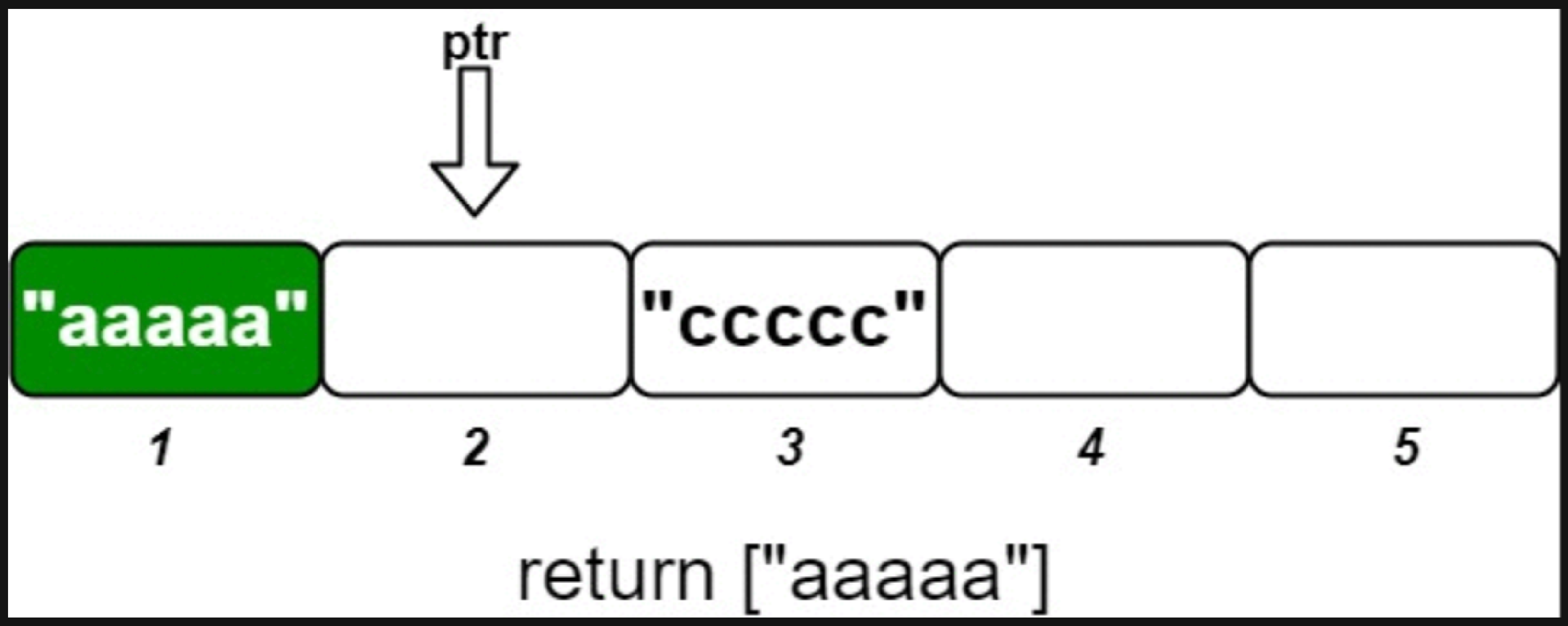
There is a stream of `n` `(idKey, value)` pairs arriving in an **arbitrary** order, where `idKey` is an integer between `1` and `n` and `value` is a string. No two pairs have the same `id`.

Design a stream that returns the values in **increasing order of their IDs** by returning a **chunk** (list) of values after each insertion. The concatenation of all the **chunks** should result in a list of the sorted values.

Implement the `OrderedStream` class:

- `OrderedStream(int n)` Constructs the stream to take `n` values.
- `String[] insert(int idKey, String value)` Inserts the pair `(idKey, value)` into the stream, then returns the **largest possible chunk** of currently inserted values that appear next in the order.

Example:



```
Input
["OrderedStream", "insert", "insert", "insert", "insert", "insert"]
[[5], [3, "ccccc"], [1, "aaaaa"], [2, "bbbbb"], [5, "eeeee"], [4, "ddddd"]]
Output
[null, [], ["aaaaa"], ["bbbbb", "ccccc"], [], ["ddddd", "eeeee"]]

Explanation
// Note that the values ordered by ID is ["aaaaa", "bbbbb", "ccccc", "ddddd", "eeeee"].
OrderedStream os = new OrderedStream(5);
os.insert(3, "ccccc"); // Inserts (3, "ccccc"), returns [].
os.insert(1, "aaaaa"); // Inserts (1, "aaaaa"), returns ["aaaaa"].
os.insert(2, "bbbbb"); // Inserts (2, "bbbbb"), returns ["bbbbb", "ccccc"].
os.insert(5, "eeeee"); // Inserts (5, "eeeee"), returns [].
os.insert(4, "ddddd"); // Inserts (4, "ddddd"), returns ["ddddd", "eeeee"].
// Concatentating all the chunks returned:
// [] + ["aaaaa"] + ["bbbbb", "ccccc"] + [] + ["ddddd", "eeeee"] = ["aaaaa", "bbbbb", "ccccc", "ddddd", "eeeee"]
// The resulting order is the same as the order above.
```

Constraints:

- `1 <= n <= 1000`
- `1 <= id <= n`
- `value.length == 5`
- `value` consists only of lowercase letters.
- Each call to `insert` will have a unique `id.`
- Exactly `n` calls will be made to `insert`.