1858. Longest Word With All Prefixes

Description

Given an array of strings `words`, find the **longest** string in `words` such that **every prefix** of it is also in `words`.

- For example, let `words = ["a", "app", "ap"]`. The string `"app"` has prefixes `"ap"` and `"a"`, all of which are in `words`.

Return *the string described above. If there is more than one string with the same length, return the* ***lexicographically smallest*** *one, and if no string exists, return* `""`.

Example 1:

```
Input: words = ["k","ki","kir","kira", "kiran"]
Output: "kiran"
Explanation: "kiran" has prefixes "kira", "kir", "ki", and "k", and all of them appear in words.
```

Example 2:

```
Input: words = ["a", "banana", "app", "appl", "ap", "apply", "apple"]
Output: "apple"
Explanation: Both "apple" and "apply" have all their prefixes in words.
However, "apple" is lexicographically smaller, so we return that.
```

Example 3:

```
Input: words = ["abc", "bc", "ab", "qwe"]
Output: ""
```

Constraints:

- `1 <= words.length <= 10^5`
- `1 <= words[i].length <= 10^5`
- `1 <= sum(words[i].length) <= 10^5`