

2353. Design a Food Rating System

Description

Design a food rating system that can do the following:

- **Modify** the rating of a food item listed in the system.
- Return the highest-rated food item for a type of cuisine in the system.

Implement the `FoodRatings` class:

- `FoodRatings(String[] foods, String[] cuisines, int[] ratings)` Initializes the system. The food items are described by `foods` , `cuisines` and `ratings` , all of which have a length of `n` .
 - `foods[i]` is the name of the `ith` food,
 - `cuisines[i]` is the type of cuisine of the `ith` food, and
 - `ratings[i]` is the initial rating of the `ith` food.
- `void changeRating(String food, int newRating)` Changes the rating of the food item with the name `food` .
- `String highestRated(String cuisine)` Returns the name of the food item that has the highest rating for the given type of `cuisine` . If there is a tie, return the item with the **lexicographically smaller** name.

Note that a string `x` is lexicographically smaller than string `y` if `x` comes before `y` in dictionary order, that is, either `x` is a prefix of `y` , or if `i` is the first position such that `x[i] != y[i]` , then `x[i]` comes before `y[i]` in alphabetic order.

Example 1:

Input
["FoodRatings", "highestRated", "highestRated", "changeRating", "highestRated", "changeRating", "highestRated"]
[[["kimchi", "miso", "sushi", "moussaka", "ramen", "bulgogi"], ["korean", "japanese", "japanese", "greek", "japanese", "korean"], [9, 12, 8, 15, 14, 7]], ["korean"], ["japanese"], ["sushi", 16], ["japanese"], ["ramen", 16], ["japanese"]]

Output
[null, "kimchi", "ramen", null, "sushi", null, "ramen"]

Explanation
FoodRatings foodRatings = new FoodRatings(["kimchi", "miso", "sushi", "moussaka", "ramen", "bulgogi"], ["korean", "japanese", "japanese", "greek", "japanese", "korean"], [9, 12, 8, 15, 14, 7]);
foodRatings.highestRated("korean"); // return "kimchi"
// "kimchi" is the highest rated korean food with a rating of 9.
foodRatings.highestRated("japanese"); // return "ramen"
// "ramen" is the highest rated japanese food with a rating of 14.
foodRatings.changeRating("sushi", 16); // "sushi" now has a rating of 16.
foodRatings.highestRated("japanese"); // return "sushi"
// "sushi" is the highest rated japanese food with a rating of 16.
foodRatings.changeRating("ramen", 16); // "ramen" now has a rating of 16.
foodRatings.highestRated("japanese"); // return "ramen"
// Both "sushi" and "ramen" have a rating of 16.
// However, "ramen" is lexicographically smaller than "sushi".

Constraints:

- `1 <= n <= 2 * 104`
- `n == foods.length == cuisines.length == ratings.length`
- `1 <= foods[i].length, cuisines[i].length <= 10`
- `foods[i]` , `cuisines[i]` consist of lowercase English letters.
- `1 <= ratings[i] <= 108`
- All the strings in `foods` are **distinct** .
- `food` will be the name of a food item in the system across all calls to `changeRating` .
- `cuisine` will be a type of cuisine of **at least one** food item in the system across all calls to `highestRated` .
- At most `2 * 104` calls **in total** will be made to `changeRating` and `highestRated` .

