Problem 3143: Maximum Points Inside the Square

Problem Information

Difficulty: Medium
Acceptance Rate: 38.81%
Paid Only: No
Tags: Array, Hash Table, String, Binary Search, Sorting

Problem Description

You are given a 2D**** array `points` and a string `s` where, `points[i]` represents the coordinates of point `i`, and `s[i]` represents the **tag** of point `i`.

A **valid** square is a square centered at the origin `(0, 0)`, has edges parallel to the axes, and **does not** contain two points with the same tag.

Return the **maximum** number of points contained in a **valid** square.

Note:

* A point is considered to be inside the square if it lies on or within the square's boundaries. * The side length of the square can be zero.

Example 1:

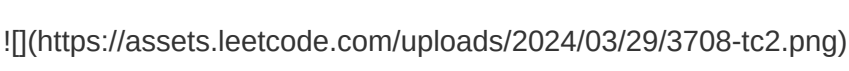
Input: points = [[2,2],[-1,-2],[-4,4],[-3,1],[3,-3]], s = "abdca"

Output: 2

Explanation:

The square of side length 4 covers two points `points[0]` and `points[1]`.

Example 2:



Input: points = [[1,1],[-2,-2],[-2,2]], s = "abb"

Output: 1

Explanation:

The square of side length 2 covers one point, which is `points[0]`.

Example 3:

Input: points = [[1,1],[-1,-1],[2,-2]], s = "ccd"

Output: 0

Explanation:

It's impossible to make any valid squares centered at the origin such that it covers only one point among `points[0]` and `points[1]`.

Constraints:

* `1 <= s.length, points.length <= 105` * `points[i].length == 2` * `-109 <= points[i][0], points[i][1] <= 109` * `s.length == points.length` * `points` consists of distinct coordinates. * `s` consists only of lowercase English letters.

Code Snippets

C++:

```
class Solution {
public:
int maxPointsInsideSquare(vector<vector<int>>& points, string s) {

}
```

```
};
```

Java:

```
class Solution {
public int maxPointsInsideSquare(int[][] points, String s) {

}
}
```

Python3:

```
class Solution:
def maxPointsInsideSquare(self, points: List[List[int]], s: str) -> int:
```