

539. Minimum Time Difference

Given a list of 24-hour clock time points in "**HH:MM**" format, return *the minimum **minutes** difference between any two time-points in the list.*

Example 1:

Input: timePoints = ["23:59","00:00"]
Output: 1

Example 2:

Input: timePoints = ["00:00","23:59","00:00"]
Output: 0

Constraints:

- $2 \leq \text{timePoints.length} \leq 2 * 10^4$
- `timePoints[i]` is in the format "**HH:MM**".

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```
/*
    Sorting
    Time complexity:  $O(n + n \log n + n) = O(n \log n)$ 
    Space complexity:  $O(n)$ 
*/
typedef std::vector<bool> vb;
typedef std::vector<int> vi;
typedef std::vector<std::string> vs;
class Solution {
public:
    int get_hours(std::string& h){
        return (h[0]-'0')*10+h[1]-'0';
    }
    int get_minutes(std::string& h){
        return (h[3]-'0')*10+h[4]-'0';
    }
    vi convert_to_minutes(vs& timePoints){
        vi minutes;
        for(auto& h: timePoints){
            int hh=get_hours(h);
            int mm=get_minutes(h);
            minutes.push_back(hh*60+mm);
        }
        return minutes;
    }
    int findMinDifference(vs& timePoints){
        int n=timePoints.size();
        vi minutes=convert_to_minutes(timePoints);
        std::sort(minutes.begin(),minutes.end());
        int ans=24*60-minutes[n-1]+minutes[0];
        for(int i=0;i<n-1;++i){
            ans=std::min(ans,abs(minutes[i]-minutes[i+1]));
        }
        return ans;
    }
};
```