

## Station

## Solution

This problem can be solved by a greedy method. Everyday Jia-Jian just chooses the farthest station with lodge service that he can reach. It is easy to see that this greedy approach takes only  $O(n)$  time, where  $n$  is the number of stations. It is also easy to see that if an optimal solution does not chose the farthest station at the first step, then we can replace this first step with the first step from the greedy algorithm, and then go on to the second station picked by the optimal solution, without increasing the total number of days. As a result the greedy method is optimal.