Z5188675 Zijian Yue

Q4.

Idea : h_i needs to be at least i to make sure the rule is followed.

0.Assume all the stacks need to have at least one block(before or after the movement).

1.Given Array A of size n to held n stacks so that A[i] = h_i.

2.The variable possible_transfer will be used to stored the maximum stacks that can be transferred from $h_{0..i}$ to h_{i+1} without breaking the rule.The initial value of possible_transfer = 0.

3. variable counter will be used to record the number of iteration starting from 1.

4. assume Array A starts with A[1].

5.Having n iterations where n is the number of stacks(mentioned in 1)

5.1 Let cur = A[i]

5.2 If possible_transfer <= 0

2.2.1 return false ------> that is there does not exists such movements

5.3 possible_transfer = possible_transfer +cur – counter

5.4 counter += 1

6.If the output is not false, then there exist such movements.