1. countArithmeticMeans:  
   Given an integer array and count arithmetic mean.  
   arithmetic mean : array[i] = (array[i-1] + array[i+1]) / 2  
   array[i] = 0 if i < 0 or i >= len(array)  
   Ex:  
   Input: [1,2,3]   
   Output: 2
2. workingButtons:  
   Given integer array and string array. Integer array represents working buttons(phone buttons). Return true if the string in array can be typed by the working buttons.  
   Ex1:  
   Input:[2,3], [“abc”,”cde”]  
   Output: true  
     
   Ex2:  
   Input: [2,3], [“abc”, “cde”, ”edg”]  
   Output: false
3. pushAndFall:  
   Given matrix of string. “#” represents box, “.”represents idle, “\*” represents obstacles.  
   Push boxes to the rightmost and fall.  
   Ex1:   
   Input:  
   [[“#”, “.”, “.”, “.”],  
    [“#”, “#”, “.”, “.”],  
    [“#”, “.”, “.”, “#”],  
    [“#”, “#”, “#”, “.”]]  
   Output:  
   [[“.”, “.”, “.”, “#”],  
    [“.”, “.”, “#”, “#”],  
    [“.”, “.”, “#”, “#”],  
    [“.”, “#”, “#”, “#”]]  
   Ex2:  
   Input:  
   [[“#”, “.”, “\*”, “.”],  
    [“\*”, “.”, “#”, “.”],  
    [“.”, “\*”, “.”, “#”],  
    [“#”, “.”, “\*”, “.”]]  
   Output:  
   [[“.”, “.”, “\*”, “.”],  
    [“\*”, “#”, “.”, “.”],  
    [“.”, “\*”, “.”, “#”],  
    [“.”, “#”, “\*”, “#”]]
4. numerJumps2:  
   One jump:   
   jump from index i to index j where array[i] == array[j] and j – i > diff  
   can start from any index  
   return the maximum jump  
     
   Ex:  
   Input: [1, 2, 3, 2, 4, 1, 2, 4], diff = 1  
   Output: 3 (jump from index 1)  
     
   Input: [1, 2, 3, 2, 4, 1, 2, 4], diff = 4  
   Output: 2 (jump from index 0)