Solve any one of the below problems. Create a github account and upload all your source code and share the link. Use basic OOPS principles and code for modularity.

A thief, Jack Sparrow plans to escape from a jail. Jack Sparrow is a monkey man and is able to jump over a wall. Jack has practiced well and succeeds in jumping 'X' meters. However, because the wall is slippery, he also slides down 'Y' meters for each jump. To escape from jail, he has to cross 'N' number of walls, where the height of each wall is given in an array.  
Write a program to find out the total number of jumps Jack needs to make to escape from the jail.

**Input Specification:**Your program must read 4 arguments (climbUp, climbDown, noOfWalls,wallHeights[ ]) where:  
input1: climbUp, is the number of meters he can jump (1 <= climbUp <= 104)  
input2: climbDown, is the number of meters he slides down (1<=climbDown<=104)  
input3: noOfWalls, is the number of walls he needs to jump to escape (1 <= noOfWalls <= 104)  
input4[ ]: wallHeights[ ], is a single dimensional array where the height of each wall is provided, the ithelement is (1 <= i <= 1000)  
  
**Output Specification:**  
Return the total number of jumps. 

**Example 1:**  
input1: 10

input2: 1

input3: 1

input4: {10}

Output: 1

**Explanation:**

Here, Jack Sparrow can jump a height of 10 meters, but slides down by 1 meter. He has 1 wall to jump and the height of the wall is 10 meters. Since he jumps 10 meters in the first attempt he cross the wall easily in the first attempt.

**Example 2:**  
input1: 5

input2: 1

input3: 2

input4: {9, 10}

Output: 5

**Explanation:**

Here, Jack Sparrow can jump a height of 5 meters, but slides down by 1 meter. He has 2 walls to jump and the height of each wall is 9 and 10 meters, respectively.

While crossing the first wall, Jack Sparrow makes 2 attempts, because at the first attempt he jumps 5 meters,but slides down by 1 meter, and does not cross the wall. In the next attempt, he jumps 5 more meters from that position, and this time he doesn't slide because he crossed the wall in this attempt because 4+5=9 and 9meters is the actual height of the wall.

Similarly, while crossing the second wall, Jack Sparrow takes 3 attempts because at the second attempt on this wall, he slides down by 1 meter. So, 4+5=9, and the height of the wall is 10 meters. At his third attempt, Jack Sparrow is able to escape from the jail.

Q2. Given a string 'X' and a character 'y', give the largest distance between any two occurrences of the given character in the string.

The distance is given by the number of distinct characters between two occurrences (excluding whitespaces and the character being searched). If there is no occurrence or only one occurrence of the given character, the function should return -1.

**Example 1**

input1: my name is granar

input2: a

Output: 7

**Explanation:** The largest substring that contains all the occurrences of 'a' is - 'ame is grana', and the distinct characters between the two occurrences of 'a' are - m,e,i,s,g,r and n.

**Example 2**

input1: the capital of minnesota is saint paul

input2: y

Output: -1

**Explanation:** The character y does not occur in the given string