

| | | |
|---|---|-----|
| | 0 | 201 |
| K | 1 | 3 |
| K | 2 | 4 |
| K | 3 | 79 |
| | 4 | 27 |
| | 5 | 35 |
| | 6 | 94 |
| | 7 | 26 |
| | 8 | 69 |

for example: $t=2$, $k=2$

Step1: Add 201 to BST.

Step2: check Range, $3-t \leq x \leq 3$

$3 \leq x \leq 3+t$
 if any x exists, if "yes", return "True"
 in BST
 Add 3 to BST.

Step3: check Rang. $4-t \leq x \leq 4$

$$4 \leq x \leq 4+t$$

if any x exists in BST.

if "yes" return "True"

add. 4 to BST.

only let the BST contains k elements before.
 So remove, the elements before k , from BST.

this means, if $k=2$, there is only 3 elements in BST.