

125. Valid Palindrome!

I/P: $s =$ "A man, a plan, a canal: panama"

O/P: true

Explanation: "amanaplanacanalpanama" is a palindrome.

constraints:

1. Ignore cases ($A = a$)
2. Remove everything except letters and numbers.
3. Check if cleaned string reads the same forward and backward.
If yes \rightarrow return true
If no \rightarrow return false.

optimized approach (two pointers):

we don't create a new string
we use two pointers:

left = 0

right = s.length - 1

while left < right:

* move left forward until it hits a letter/number

* move right backward until it hits a letter/number

* compare both

* If not equal → return false

* otherwise, keep going.

class Solution {

public boolean isPalindrome (String s) {

int left = 0;

int right = s.length() - 1;

while (left < right) {

char cLeft = s.charAt(left);

char cRight = s.charAt(right);

if (!Character.isLetterOrDigit(cLeft)) {

left++;

continue;

} if (!Character.isLetterOrDigit(cRight)) {

right--;

continue;

- }

if (Character.toLowerCase(cLeft) != Character.toLowerCase(cRight)) {

return false;

}

left++;

right - -;

}

return true;

}

}

space \rightarrow 0(1)