125. Valid Palindrome

A man, a plan, a canal: panama

It's a palindrome

First lowercase all the string

```
s.lower()
```

a man, a plan, a canal: panama

Then remove non alphanumeric characters iterating through the string and building a new string with just alphanumeric characters. In programming languages like Java it is a good idea to think about using mutable objects like StringBuilder to save memory instead of thinking about concatenate strings

```
s."".join(char for char in s if char.isalpha())
```

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We'll use the two pointers technique one at the beginning of the string and one at the end.

```
p1 = 0
p2 = len(s) - 1
```

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P1 P2

While p1 < p2 we'll keep reviewing each letter to check if it is a palindrome in case the letters are not equal return false

```
while p1 < p2:

    if s[p1] != s[p2]:
        return False

    p1 += 1
    p2 -= 1

return True
```

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P1 P2

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P1 P2

We just iterate the string once and the time complexity of the solution is O(n)