

# 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 iterating through the string and building a new string without alphanumeric. In programming languages like Java should be a good idea to think about using mutable objects like StringBuilder to save memory instead of 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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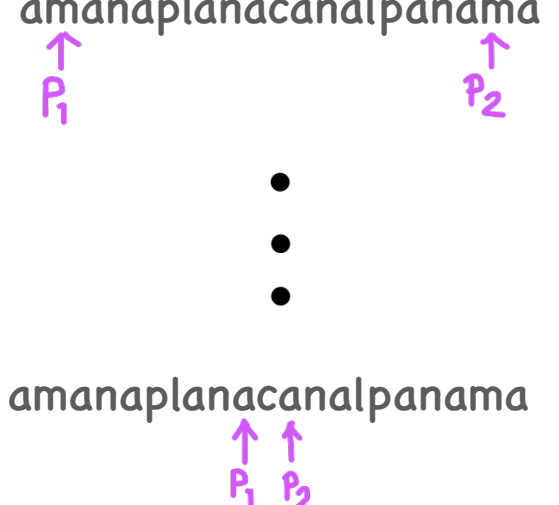
While  $p1 < p2$  we'll keep reviewing each letter to check if it is a palindrome in case the letters are not equal return false

```
while p1 < p2:
```

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

```
    p1 += 1
    p2 -= 1
```

```
return True
```

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