

176. Given a string s, return the longest palindromic substring in S.
PROGRAM:

class Solution:

```
def longestPalindrome(self, s: str) -> str:
```

```
    if len(s) < 1:
```

```
        return ""
```

```
    start = 0
```

```
    end = 0
```

```
    for i in range(len(s)):
```

```
        len1 = self.expandAroundCenter(s, i, i)
```

```
        len2 = self.expandAroundCenter(s, i, i + 1)
```

```
        max_len = max(len1, len2)
```

```
    if max_len > end - start:
```

```
        start = i - (max_len - 1) // 2
```

```
        end = i + max_len // 2
```

```
    return s[start:end+1]
```

```
def expandAroundCenter(self, s: str, left: int, right: int) -> int:
```

```
    while left >= 0 and right < len(s) and s[left] == s[right]:
```

```
        left -= 1
```

```
        right += 1
```

```
    return right - left - 1
```

Test cases

```
sol = Solution()
```

```
print(sol.longestPalindrome("babad")) # Output: "aba" or "bab"
```

```
print(sol.longestPalindrome("cbbd")) # Output: "bb"
```

OUTPUT:

```
aba
```

```
bb
```

```
=== Code Execution Successful ===
```

TIME COMPLEXITY: $O(N^2)$