

# ADDS Prac 1 Design

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## UML Diagram

Palindrome
-_phrase: string -_length: int
+ palindrome(string) + setPhrase(string): void + getPhrase(): string + findLength(): void + removeNonLetters(): void + lowerCase(): void + isPalindrome(): bool

## Description

### Palindrome

Contains the phrase and length of the phrase which should be checked for palindromes.

setPhrase() - Sets the active phrase.

getPhrase() - Returns the active phrase.

findLength() - A function that finds the length of the string and updates the length variable.

removeNonLetters() - A function which removes all characters that are non alphanumeric.

lowerCase() - A function which converts uppercase letters to lowercase letters.

isPalindrome() - A function which checks if the string has the same letters forward and backwards, returning false if it does not.

## Main

The main function will request input for the active phrase, then it will remove the non-letters from the phrase and make the phrase lower case and finally proceed to check if the phrase is a palindrome and output “yes” or “no” depending on whether it is a palindrome or not.

## Testing

Input: Race Car

Expected Output: Yes

Input: Hello World

Expected Output: No

Input: 12345 54321

Expected Output: No

Input: OAsjhlfdjshdo923490lsnlkfej

Expected Output: No