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CMSC 21 STL

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CODE:

```
int isPalindrome(char *word) {  
    int word_index = strlen(word) - 1;  
    for (int i = 0; i <= (strlen(word) / 2); i++) {  
        if (word[i] != word[word_index])  
            return 0;  
        } else {  
            word_index--;  
        }  
    }  
    return 1;  
}
```

TRACING

word = "abba"

'A'	'B'	'B'	'A'	0	?	...	?
0	1	2	3	4	5		19

word_index = 4 - 1 = 3

Loop: word[0] = 'A' word[3] = 'A' ✓

word[1] = 'B' word[2] = 'B' ✓

word[2] = 'B' word[1] = 'B' ✓

return 1

word = "aba"

'A'	'B'	'A'	0	?	?	...	?
0	1	2	3	4	5		19

word_index = 3 - 1 = 2

Loop: word[0] = 'A' word[2] = 'A' ✓

word[1] = 'B' word[1] = 'B' ✓

return 1

word = "baa"

'B'	'A'	'A'	0	?	?	...	?
0	1	2	3	4	5		10

word_index = 3-1 = 2

Loop: word[0] = 'B'

word[2] = 'A' X

return 0

word = "babb"

'B'	'A'	'B'	'B'	0	?	...	?
0	1	2	3	4	5		10

word_index = 4-1 = 3

Loop: word[0] = 'B'

word[3] = 'B' ✓

word[1] = 'A'

word[2] = 'B' X

return 0