

# PALINDROME



# What is Palindrome

A sequence of characters that reads the same either from backwards or forward is known as Palindrome. Not necessarily characters, but words, sentences, numbers etc, can also be Palindrome.

Example:

```
1. LEVEL // isPalindrome: true
2. 12321 // isPalindrome: true
3. JAVA  // isPalindrome: false
```



# Find Palindrome

## Palindrome Algorithm:

- Take the input from the user
- Use a temporary variable (say temp) to store the input
- Find the reverse of temp
- Compare the given input with temp
- If temp and the input is the same, return True
- If they are not the same, return False

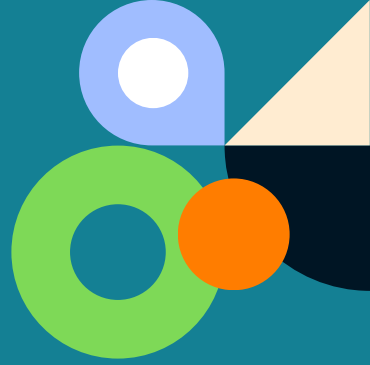


# Approach - 1

```
const checkPalindrome = str => {  
  
  const len = str.length;  
  for (let i=0; i < len/2; i++) {  
    if (str[i] !== str[len - 1 - i]) {  
      return 'it is not Palindrome';  
    }  
  }  
  
  return 'it is Palindrome';  
}  
  
const value = checkPalindrome('12321');  
console.log('value', value); //its Palindrome
```



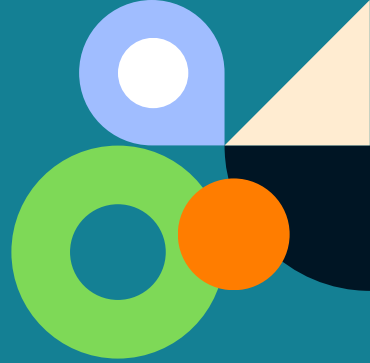
# Approach - 2



```
function checkPalindrome(str) {  
  if (str.length === 1) return true;  
  if (str.length === 2) return str[0] === str[1];  
  
  if (str[0] === str.slice(-1))  
    return checkPalindrome(str.slice(1, -1))  
  
  return false;  
}  
  
console.log(checkPalindrome('levelup')) // false  
console.log(checkPalindrome('madam')) // true  
console.log(checkPalindrome('01010')) // true
```



# Approach - 3



```
const checkPalindromeFunc = str => {  
  const split = str.split('');      // [ m,a,d,a,m]  
  const rvrsStr = split.reverse();  // [ m,a,d,a,m]  
  const joinedStr = rvrsStr.join(''); // madam  
  
  // str = madam  
  // joinedStr = madam  
  
  if (str === joinedStr) return 'its Palindrome';  
  return 'its not Palindrome'  
}  
  
const result = checkPalindromeFunc('madam');  
console.log('result', result); // its Palindrome
```





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