**Java program to check palindrome string using Stack, Queue, for or while loop**

In this tutorial we will see **programs to check whether the given String is Palindrome or not**. Following are the ways to do it.  
1) Using Stack  
2) Using Queue  
3) Using for/while loop

**Program 1: Palindrome check Using Stack**

import java.util.Stack;

import java.util.Scanner;

class PalindromeTest {

public static void main(String[] args) {

System.out.print("Enter any string:");

Scanner in=new Scanner(System.in);

String inputString = in.nextLine();

Stack stack = new Stack();

for (int i = 0; i < inputString.length(); i++) {

stack.push(inputString.charAt(i));

}

String reverseString = "";

while (!stack.isEmpty()) {

reverseString = reverseString+stack.pop();

}

if (inputString.equals(reverseString))

System.out.println("The input String is a palindrome.");

else

System.out.println("The input String is not a palindrome.");

}

}

Output 1:

Enter any string:abccba

The input String is a palindrome.

Output 2:

Enter any string:abcdef

The input String is not a palindrome.

**Program 2: Palindrome check Using Queue**

import java.util.Queue;

import java.util.Scanner;

import java.util.LinkedList;

class PalindromeTest {

public static void main(String[] args) {

System.out.print("Enter any string:");

Scanner in=new Scanner(System.in);

String inputString = in.nextLine();

Queue queue = new LinkedList();

for (int i = inputString.length()-1; i >=0; i--) {

queue.add(inputString.charAt(i));

}

String reverseString = "";

while (!queue.isEmpty()) {

reverseString = reverseString+queue.remove();

}

if (inputString.equals(reverseString))

System.out.println("The input String is a palindrome.");

else

System.out.println("The input String is not a palindrome.");

}

}

Output 1:

Enter any string:xyzzyx

xyzzyx

The input String is a palindrome.

Output 2:

Enter any string:xyz

The input String is not a palindrome.

**Program 3: Using for loop/While loop and String function charAt**

import java.util.Scanner;

class PalindromeTest {

public static void main(String args[])

{

String reverseString="";

Scanner scanner = new Scanner(System.in);

System.out.println("Enter a string to check if it is a palindrome:");

String inputString = scanner.nextLine();

int length = inputString.length();

for ( int i = length - 1 ; i >= 0 ; i-- )

reverseString = reverseString + inputString.charAt(i);

if (inputString.equals(reverseString))

System.out.println("Input string is a palindrome.");

else

System.out.println("Input string is not a palindrome.");

}

}

Output 1:

Enter a string to check if it is a palindrome:

aabbaa

Input string is a palindrome.

Output 2:

Enter a string to check if it is a palindrome:

aaabbb

Input string is not a palindrome.

If you wanna use **While Loop** in above program then replace the for loop with this code:

int i = length-1;

while ( i >= 0){

reverseString = reverseString + inputString.charAt(i);

i--;

}