Palindrome String Check Program in Java

This Java program asks the user to provide a string input, and checks it for the Palindrome String.

* Scanner class and its function nextLine() is used to obtain the input, and println() function is used to print on the screen.
* Scanner class is a part of java.util package, so we required to import this package in our Java program.
* We also required to create object of Scanner class to call its functions.

import java.util.Scanner;

class ChkPalindrome

{

public static void main(String args[])

{

String str, rev = "";

Scanner sc = new Scanner(System.in);

System.out.println("Enter a string:");

str = sc.nextLine();

int length = str.length();

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

rev = rev + str.charAt(i);

if (str.equals(rev))

System.out.println(str+" is a palindrome");

else

System.out.println(str+" is not a palindrome");

}

}

Program Output:

Enter a string:

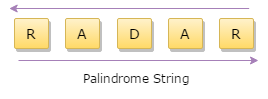
radar

radar is a palindrome

Explanation:

To check if a string is a palindrome or not, a string needs to be compared with the reverse of itself.

Consider a palindrome string: radar,



—————————  
index: 0 1 2 3 4

value: r a d a r  
—————————

# Write a method to check if input string is palindrome

## Question:

Write a method to check if input String is Palindrome?

## Answer:

A String is said to be Palindrome if it is value is same when reversed. For example "aaabbbaaa" is a Palindrome String. String class does not provide any method to reverse the String but StringBuffer and StringBuilder class has reverse method that we can use to check if String is palindrome or not.   
  
Here is a java example that shows how to test if a string is palindrome:

## Source: (Example.java)

**public** **class** Example {

**public** **static** **void** main(String a[]) {

System.out.println(isPalindrome("aaabbbaaa"));

System.out.println(isPalindrome("aaabbbccc"));

}

**public** **static** **boolean** isPalindrome(String str) {

**if** (str == **null**) {

**return** **false**;

}

StringBuilder strBuilder = **new** StringBuilder(str);

strBuilder.reverse();

**return** strBuilder.toString().equals(str);

}

}

This Java program is used to print on the screen input by the user.

This Java program asks the user to provide a string, integer and float input, and prints it.

* Scanner class and its functions are used to obtain inputs, and println() function is used to print on the screen.
* Scanner class is a part of java.util package, so we required to import this package in our Java program.
* We also required to create a object of Scanner class to call its functions.
* There are different functions is available to obtain integer, float and string inputs:  
  nextInt() function for integer input,  nextFloat() function for float input and nextLine()function for string input.

import java.util.Scanner;

class GetInputs

{

public static void main(String args[])

{

int a;

float b;

String s;

Scanner obj = new Scanner(System.in); /\* create a object \*/

System.out.println("Enter a string:");

s = obj.nextLine(); /\* Take string input and assign to variable \*/ System.out.println("You entered string "+s); /\* Print \*/

System.out.println("Enter an integer:"); a = obj.nextInt(); /\* Take integer input and assign to variable \*/ System.out.println("You entered integer "+a); /\* Print \*/ System.out.println("Enter a float:"); b = obj.nextFloat(); /\* Take float input and assign to variable \*/ System.out.println("You entered float "+b); /\* Print \*/

}

}

Program Output:

Enter a string:

w3schools

You entered string w3schools

Enter an integer:

15

You entered integer 15

Enter a float:

12.5

You entered float 12.5