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\* Unit 1 Activity 2 Program/Question 5

\* This program will print the user's inputed phrase backwards and declare if the phrase is a palindrome (spelt the same backwards as forward)

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import javax.swing.JOptionPane;

import java.util.Scanner;

public class Palindrome3

{

public static void main(String[] args)

{

int restart = 1;

while(restart == 1)

{

//Variable Declarations and Initializations

String sentence;

Scanner sc = new Scanner(System.in);

sentence = JOptionPane.showInputDialog(null,"Words that are the same forwards and backwards are called palindromes.\nThis program determines if a word is a palindrome.\n\nEnter a phrase(do not include a punctuation mark):", "Input", JOptionPane.QUESTION\_MESSAGE);

System.out.println("Palindrome 3: Whole Phrases\n================================");

if(palindromeCheck(sentence.replaceAll("\\s+", "")) == true)//give the user input without the spaces to check if the letters together make a palindrome

{

System.out.println(sentence + " IS a palindrome!");

}//end if

else

{

System.out.println(sentence + " is NOT a palindrome.");

}//end else

System.out.println("\nPress 1 to try another sentence!");

restart = sc.nextInt();

}//end while

}//end main

public static boolean palindromeCheck(String word)

{

String backward = "";

for (int i = word.length() - 1; i >= 0; i--)//loop to have the word backwards

{

backward += word.charAt(i);

}//end for

System.out.println(backward);

if(backward.toLowerCase().equals(word.toLowerCase()))//the word is palindrome if it is the same backwards

{

return true;

}//end if

else

{

return false;

}//end else

}//end method palindromeCheck

}//end class