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\* Unit 1 Activity 2 Program/Question 4

\* This program can print the user's inputed sentence words backward and declare if the word is a palindrome (spelt the same backwards as forward)

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import javax.swing.JOptionPane;

import java.util.Scanner;

public class Palindrome2

{

public static int palindromeCount;

public static void main(String[] args)

{

int restart = 1;

while(restart == 1)

{

//Variable Declarations and Initializations

String sentence, palindromeWords[], palindromes = "";

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 sentence(do not include a punctuation mark):", "Input", JOptionPane.QUESTION\_MESSAGE);

palindromeWords = sentence.split(" ");// to split up the sentence by every space into the array

palindromeCount = 0;//to reset the palindrome count

//loop a palindrome check for each word

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

{

palindromes += palindromeCheck(palindromeWords[i]) + " ";

}//end loop

System.out.println("Palindrome 2: Sentences\n===========================");

System.out.println("In the following sentence:\n" + sentence);

System.out.println("There are " + palindromeCount + " palindromes which are:\n" + palindromes.replaceAll("\\s+"," ")/\*this is to get rid of the excess spaces made from the code above\*/);

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

restart = sc.nextInt();

}//end while

}//end main

public static String 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

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

{

palindromeCount++;

return word;

}//end if

else

{

return "";

}//end else

}//end method palindromeCheck

}//end class