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\* Unit 1 Activity 2 Program/Question 3

\* This program will print the user's inputed word 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 Palindrome

{

public static void main(String[] args)

{

int restart = 1;

while(restart == 1)

{

//Variable Declarations and Initializations

String backward = "", palindrome;

Scanner sc = new Scanner(System.in);

palindrome = 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 word.", "Input", JOptionPane.QUESTION\_MESSAGE);

System.out.print(palindrome.toLowerCase() + " backwards is ");

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

{

backward += palindrome.charAt(i);

}//end for

System.out.print(backward);

if (palindromeCheck(palindrome) == true)

{

System.out.println("\nTherefore, " + palindrome + " IS a palindrome!");

}//end if

else

{

System.out.println("\nClearly, " + palindrome + " is NOT a palindrome.");

}

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

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

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