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\* Palindrome

\* This program takes a word in from the user and then tests if the word is a palindrome or not

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**import** java.util.Scanner;

**public** **class** Palindrome {

**public** **static** **int** *counter*=0;

**public** **static** String *word*;

/\*\*

\* This is the main method. It takes in a word from the user and tests if it is a palindrome or not

\* **@param** args

\*/

**public** **static** **void** main(String[] args)

{

**boolean** loop = **true**;

// initiate the scanner

Scanner scn=**new** Scanner(System.***in***);

System.***out***.println("Please enter a word.");

// take in the word

*word*=scn.next();

// sends in the word to the method reverseWord

String wordBackwards=*reverseWord*(*word*);

// compares the letters one by one to see if the word is a palindrome

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

{

**if** (*word*.charAt(i)!=wordBackwards.charAt(i))

{

System.***out***.println("The word you entered is not a palindrome.");

**break**;

}

**if** (i==*word*.length()-1)

System.***out***.println("The word you enterd is a palindrome");

}

}

/\*\*

\* This method takes a word and reverses the order of the letters

\* **@param** x

\* **@return** backwards

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**public** **static** String reverseWord(String x){

// take the letters one by one and reverses them

**char** backwards = x.charAt(x.length()-1);

**if**(x.length() == 1)

**return** Character.*toString*(backwards);

**return** backwards + *reverseWord*(x.substring(0,x.length()-1));

}

}