Aim: Recursive Programming.

Create a new Eclipse project for Lab23.

Write a recursive method that will determine if a given String is a palindrome (a string that reads the same forwards and backwards (except for spaces, etc.).

For example,

```java
isPalindrome("noon");
```

would return true.

Remember, you need a base case (the empty String is a palindrome, the null String is not.)

Recursive case: A String is a palindrome if the first and last letters are the same, and the String that remains after removing the first and last letters is a palindrome.

For example, "noon" -> "noon" -> "oo" -> ""

Hint: To break up the String, substring("noon",1,4) is "oo".

What about the spaces? Ignore them by proceeding to the next recursive call.

"Madam, I'm Adam"
"adam, I'm Ada"
"dam, I'm Ad"
"am, I'm A"
"m, I'm "
"m, I'm"
", I"
", I"
", I"
""

You may also find these methods from the wrapper class Character helpful:

Character.isLetter(char ch)
Character.toUpperCase(Char ch)

Character.toUpperCase('M') is equal to Character.toUpperCase('m')

Try your program on strings that are not palindromes, as well as the following:

"noon", "Madam I'm Adam", "A man, a plan, a canal, Panama", "A Toyota"

For some other great palindromes, go to http://www.fun-with-words.com/palin_example.html