

# Algorithm

## **Task 1**

Count the number of letters in the *input* box and place the number in the *sequence-length* box.  
Give the environment to Task 2.

## **Task 2**

Copy the first letter in the *input* box and place it in the *first-nucleotide* box.  
Give the environment to Task 3.

## **Task 3**

Copy the last letter in the *input* box and place it in the *last-nucleotide* box.  
Give the environment to Task 4.

## **Task 4**

Call the COMPLEMENT-OF function. Tell that function the value in the *last-nucleotide* box.  
Write the response from that function in the *last-complemented* box  
Give the environment to Task 5.

## **Task 5**

If the value in the *first-nucleotide* box is the same as the value in the *last-complemented* box,  
a. then write True in the *terminal-nucleotides-complementary* box  
b. otherwise write False in the *terminal-nucleotides-complementary* box  
Give the environment to Task 6.

## **Task 6**

If the value in the *terminal-nucleotides-complementary* box is False  
a. then cry out "Not a palindrome!" [END OF TASKS]  
b. otherwise give the environment to Task 7.

## **Task 7**

If the value in the *sequence-length* box is less than 3  
a. then cry out "Is a palindrome!" [END OF TASKS]  
b. otherwise give the environment to Task 8.

## **Task 8**

Extract from the value in the *input* box the letters from position 2 to *sequence-length* - 1 and write them/it in the *input* box.  
Give the environment to Task 1.

## **COMPLEMENT-OF function**

If you are told "A", then say "T"  
If you are told "C", then say "G"  
If you are told "G", then say "C"  
If you are told "T", then say "A"

## ENVIRONMENT: Variables in your package

*input* (string)

*sequence-length* (integer)

*first-nucleotide* (letter)

*last-nucleotide* (letter)

*last-complemented* (letter)

*terminal-nucleotides-complementary* (True/False)

*counter* (integer)

*too-small* (True/False)