CSC105 – Programming Logic

**Palindrome Integer:**

Create a Python source file called “PalindromeInteger.py” that has a main function and two user defined functions, ***reverse***, and ***isPalindrome***, to determine if a number is a palindrome (same as its reversal. E.g. 123454321). The two called user defined functions should have the following headers:

*reverse***(number) #** return the reversal of the number

*isPalindrome***(number) #** return a Boolean value True if number is a palindrome, False if not.

The program should ask the end user to enter an integer. The ***isPalidrome*** function is to call the ***reverse*** function, and report whether the integer is a palindrome. Any one-digit integer or negative integer should be rejected with the specific error message (negative or one digit), and then the program should ask the user to re-enter the integer. If the entry is a one-digit, negative integer (i.e. -3), it should be rejected with a “negative integer” message (see sample run below).

Hint: To reverse the digits of a number, try this routine:

result = 0

while (number != 0) : ## e.g. number = 123

## *Iteration 1 Iteration 2 Iteration 3*

remainder = number % 10 ## remainder = 3 remainder = 2 remainder = 1

result = result \* 10 + remainder ## result = 3 result = 32 result = 321

number = number // 10 ## number = 12 number = 1 number = 0

## result contains the reverse of number

Sample output:

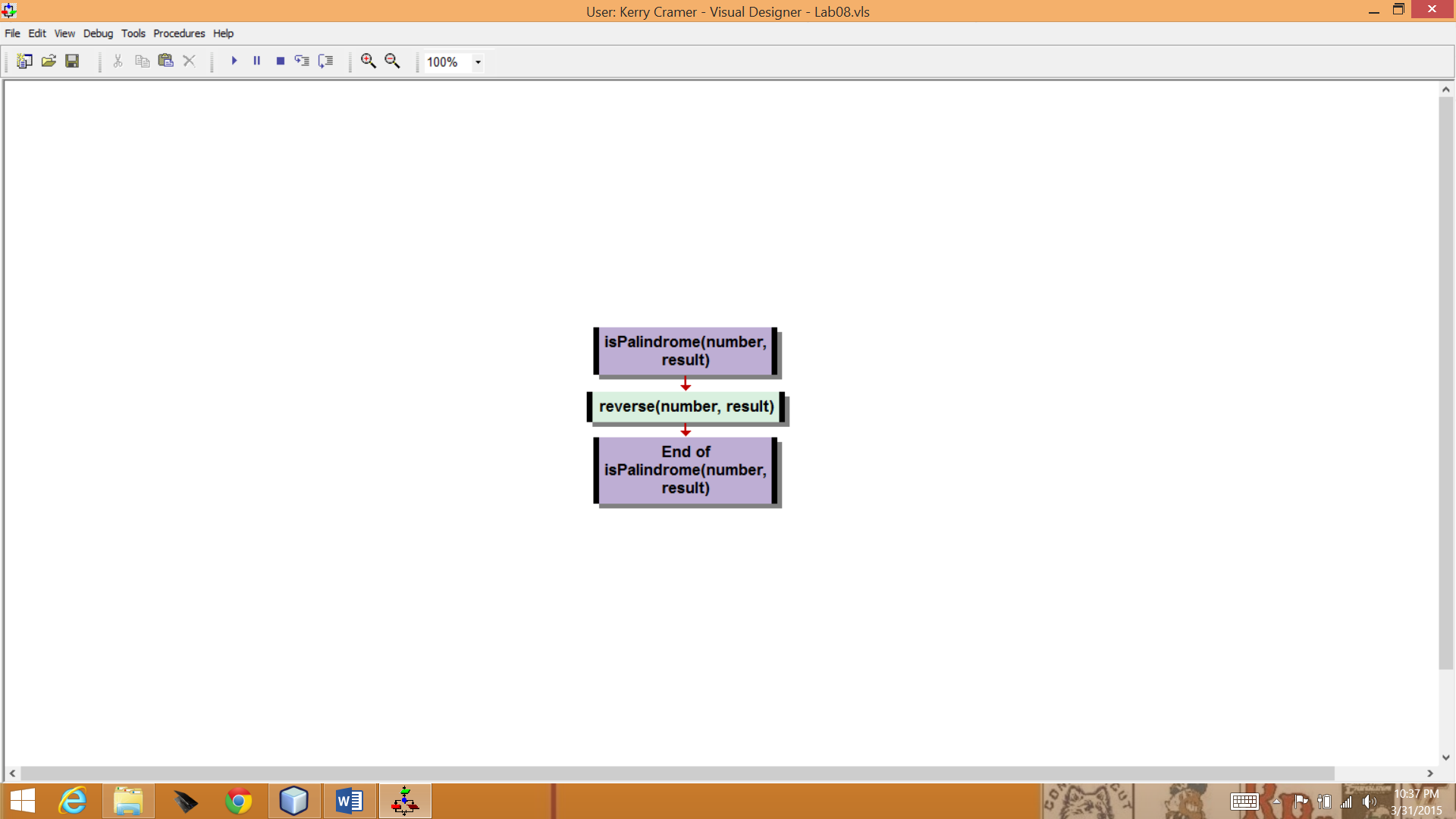
Text

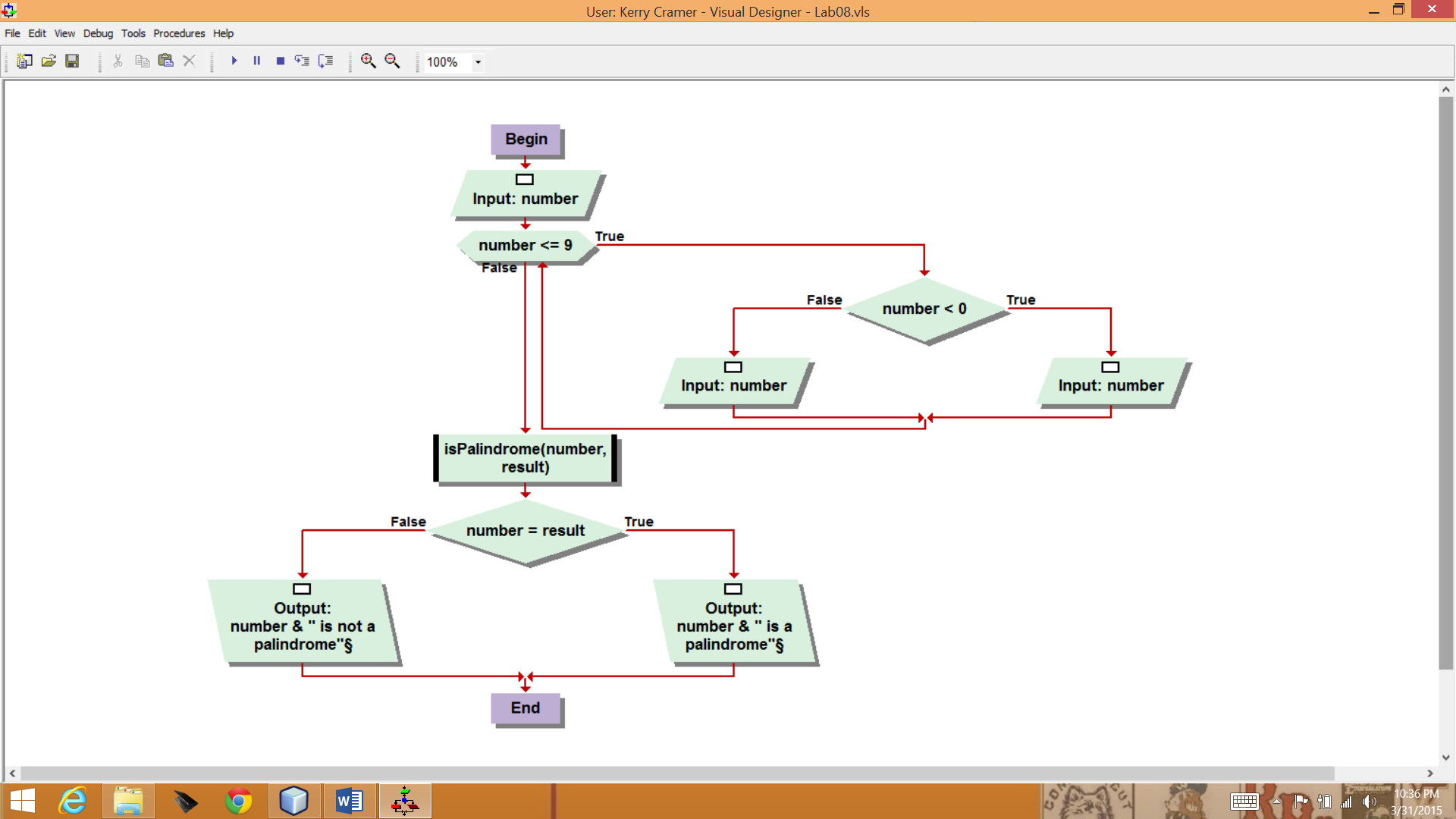
Description automatically generated with medium confidence

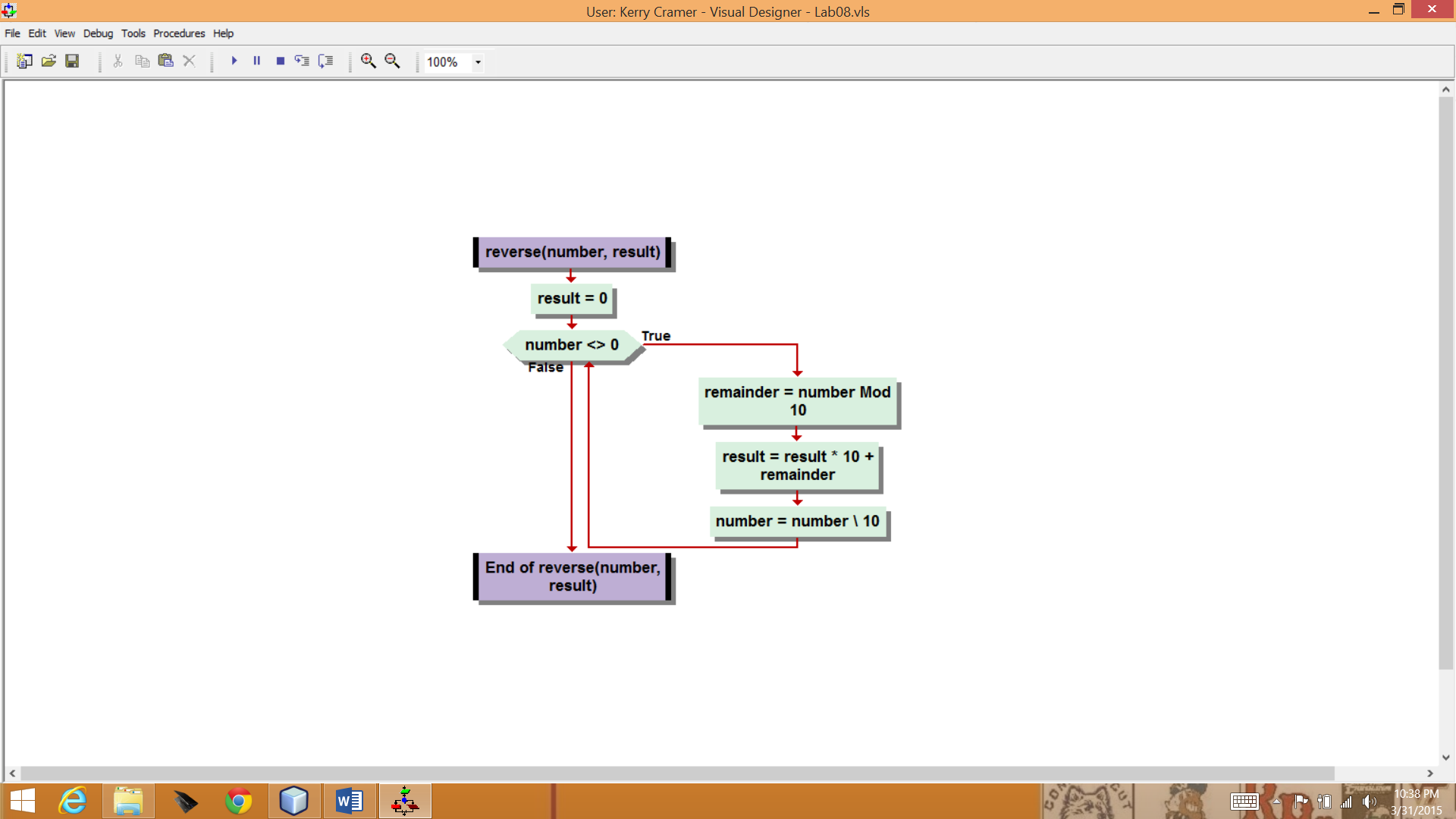
A picture containing diagram

Description automatically generated

Flowchart:







Please rename your source file to “Your Name Lab05A.py” (e.g. Joe Student Kab05A.py) and send it to me as an attachment in a Blackboard message.