Data Structure and Algorithm Analysis---COP3530

Module 10 – Programming Assignment

Total Points: 25

Write a program that contains two recursive and one non-recursive functions:

1. A recursive boolean function called palindrome that accepts one string argument (for the user) and returns true if the string reads the same forward as it does backwards. For example madam, 463364, and "ABLE WAS I ERE I SAW ELBA" are all palindromes. (10 pts)
2. A recursive function called printReverse that accepts one string argument(for the user) and returns the reverse of that string. (10 pts)
3. A non-recursive function called printIterReverse that accepts one string argument(from the user) and returns the reverse of that string. (5 pts)

Consider the following prototypes for the functions:

bool palindrome(string & s);

string printReversel(string & s);

string printIterReverse(string & s);

Submission of Assignment:

Name the program recursive_functions.cpp. Your program should ask the user for a string and run each function on that string, and produce the appropriate output (messages); it should also ask the user if they wish to continue. Submit the program to Canvas in the Assignments Area before the due date and time. Only assignments submitted through Canvas will be graded.