ACS Applied Computer Science

THE UNIVERSITY OF WINNIPEG

APPLIED COMPUTER SCIENCE

ACS-2906-070
Computer Architecture and System Software

Fall 2024

Laboratory 8

Due date: November 13th, 11:59 PM **Total marks: 10**

Motivation

The goal of this laboratory is to reinforce Assembly Language Programming Concepts.

Questions

1. (10 points) Write an assembly file that uses a **stack** to check if a word is palindrome. The input word will contain at most 20 characters (use a buffer string to store the input). A palindrome is a word that reads the same backward or forward. It derives from Greek roots that literally mean "running back" (palin is "again, back," and dromos, "running."). Some examples are:

   - kayak
   - deified
   - rotator
   - repaper
   - civic

   Sample Output:
   Case 1:

   ```
   Input a word: :
   hello
   The word is NOT a palindrome
   ```

   Case 2:

   ```
   Input a word: :
   rotator
   The word is a palindrome
   ```

Evaluation:

- Solution without using **stack** will receive **no** mark.

Submission instructions

Submit your laboratory solutions via Nexus.