CST8216 Assessment: Assignment 4

Student Name(s) and Student Number(s)

Group 3  
Isha Gadani 041085940

Ayan Satani 041089567

Guntas Singh Chugh 041091309

Lab Professor Name: Khadiidja Taouch

Lab Section Number: 312

Precoding:

1. **FlowChart for Sort\_String\_Driver:**

A diagram of a flowchart

Description automatically generated

1. **Find\_Two\_Strings:**

Pseudocode:

Subroutine Find\_Two\_Strings:

A <- Value at the address pointed to by X, then increment X

Repeat:

B <- Value at the address pointed to by X, then increment X

If B is not equal to space (ASCII value 20)

Continue the loop

Else

Break the loop

B <- Value at the current address pointed to by X

Return

1. **Swap\_Two\_Strings:**

Pseudocode:

Subroutine Swap\_Two\_Strings:

Declare TEMP as a 20-byte memory storage

Declare START as a 2-byte memory storage

X points to the start of the first string

Store the value of START in X

Y points to address of TEMP

Swap\_Loop:

Repeat:

A <- Value at the address pointed to by X, then increment X by 1

Store A at the address pointed to by Y, then increment Y by 1  
 Compares if the value of A is a blank space  
 If A is not equal to space (ASCII value 20)

Continue the loop

Else

Break the loop

Y points to START

First\_Word:

Repeat:

A <- Value at the address pointed to by X, then increment X by 1

Store A at the address pointed to by Y, then increment Y by 1

If A is not equal to space (ASCII value 20)

Continue the loop

Else

Break the loop

X points to address of TEMP

Second:

Repeat:

A <- Value at the address pointed to by X, then increment X

Store A at the address pointed to by Y, then increment Y

If A is not equal to space (ASCII value 32)

Continue the loop

Else

Break the loop

Return from the function

1. **Test Plan**

|  |  |
| --- | --- |
| Starting Address | Content |
| $1000 | Amose |
| $1006 | Ambrose |
| $100E | Amos |
| $1013 | Burke |
| $1019 | Cowan |
| $101F | Cowan |
| $1025 | Dewey |
| $102B | Dempsey |
| $1033 | Elwood |
| $103A | Englebert |
| $1044 | Ferguson |
| $104D | Franklin |
| $1056 | Gamble |
| $105D | Green |
| $1063 | Hawkins |
| $106B | Huston |
| $1072 | Laken |
| $1078 | Monday |
| $107F | Morrisey |
| $1088 | Monday |
| $108F | Rulloda |
| $1097 | Rolleston |
| $10A1 | Stockton |
| $10AA | Sheldon |
| $10B2 | Stoney |
| $10B9 | Woodson |
| $10C1 | Zhao |