Laboratory Manual

for

Computer Organization and Assembly Language

|  |  |
| --- | --- |
| Course Instructors |  |
| Lab Instructor(s) |  |
| Section |  |
| Semester |  |

**Department of Computer Science**

# COAL Lab 8 Manual

|  |
| --- |
| Objectives:  * Revision * Problems & Assignments |

## Problem(s) / Assignment(s)

|  |  |
| --- | --- |
| **Discussion & Practice** | **Estimated completion time: 1 hr, 30 mins** |

|  |  |
| --- | --- |
| **Problem 8.1:** *Reverse an Array*  Use a loop with indirect or indexed addressing to reverse the elements of an integer array in place. Do not copy the elements to any other array. Use the SIZEOF, TYPE, and LENGTHOF operators to make the program as flexible as possible if the array size and type should be changed in the future. Display the modified array by calling the DumpMem. | **Estimated completion time:20 mins** |

|  |  |
| --- | --- |
| **Problem 8.2:** *Reversing a String*  Write a program using the LOOP instruction with indirect addressing that copies a string from source to target, reversing the character order in the process. Use the following variables:  **source BYTE "This is the source string",0**  **target BYTE SIZEOF source DUP('#')**  Use DumpMem to display the string. If your program works correctly, it will display the following sequence of hexadecimal bytes:  67 6E 69 72 74 73 20 65 63 72 75 6F 73 20 65 68  74 20 73 69 20 73 69 68 54 | **Estimated completion time:15 mins** |

**You are done with your exercise(s), make your submission ☺**