# Lab 2.O

## DESCRIPTION

This lab is concerned with program relocatable code. PC relative addressing modes are useful here. In a multiple user environment, a user’s program should be capable of residing anywhere in memory. That is, user programs should be address independent.

Your assignment here is to reverse the elements of a vector. The procedure is as follows:

1. Create a vector of the ASCII characters ‘A ... J’ at location $004AC4.
2. Construct a sequence of operations beginning at location $004ACE which will reverse the elements of the vector.
3. Display both the ASCII vector and the instructions.
4. Execute your program.
5. Display the vector to insure that it was indeed reversed.
6. ~~Perform a~~ **~~Block Move (BM)~~** ~~of the entire package (vector and instructions) to a new location at $002000.~~
7. ~~Display your program in its new location and then execute it.~~
8. ~~Display the vector to insure that it was again reversed. The vector should now be as it was initially, only in a new location.~~

In order for all of this to work, references to data must be PC relative. Turn in all items which you were asked to display along with your evaluation of the lab. Consider the consequences of not being able to relocate your programs or having to specify a particular memory address to ensure proper program execution.