

First Name:

Last Name:

Mid term

- 1- (20 pts) Write a program that uses the variables below and MOV instructions to copy the value from **Var1** to **Var2** reversing the order of the bytes.

.data

Var1    DWORD 78563412h

Var2    DWORD?

- 2- (20 pts) Write a program that uses the variables below and inverses the value from name to reverseName (reversing the order of the name to aznA eD).

.data

name1    BYTE "De Anza"

reverseName    BYTE ?

- 3- (20 pts) Write a program with a loop and indexed addressing that exchanges every pair of values in an array with an **even number of elements**. Therefore, item  $i$  will exchange with item  $i+1$ , and item  $i+2$  will exchange with item  $i+3$ , and so on.

- 4- (10 pts) Use the following variable definitions

```
.data
var1  SBYTE    -4, -2, 3, 1
var2  WORD     1000h, 2000h, 3000h, 4000h
var3  SWORD    -16, -42
var4  DWORD    1,2,3,4,5
```

What will be the value of the destination operand after each of the following instructions? execute in sequence

mov	edx, var4	; a.
movzx	edx, var2	; b.
mov	edx, [var4+4]	; c.
movsx	edx, var1	; d.

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