

LA Worksheet #16

1. struct ucla { \rightarrow size=14, align=16
 char blue[6] \rightarrow size=6, align=1
 union { \rightarrow size=8, align=4
 int gold \rightarrow size=4, align=4
 char joe[8] \rightarrow size=8, align=1
 } brin
 } arr[4]
 4x16 = 64 bytes

5. Move strlen(Midterm) out of the loop

Move strlen(grade) out of the innermost loop

2. $0x40 = 64$ bytes

64 bytes are padded to the stack, the address would need to be placed after 72 bytes of padding.

3. 01100000, exp=4, frac=3

$$v = (-1)^s M 2^E$$

$$s = 0$$

$$E = 12 - 7 = 5$$

$$M = 1$$

$$v = 1(1)2^5$$

$$\boxed{v = 32}$$

$$0x42040000$$

$$s = 0$$

$$E = 10000100 = 132 - (2^7 - 1)$$

$$E = 57$$

$$\text{frac} = 0000100$$

$$m = 1 + 2^{-5}$$

$$v = 1(1 + 2^{-5})(2^5)$$

$$\boxed{v = 33}$$

$$-13.1875$$

$$0.1875 = \frac{3}{16} \rightarrow .0011$$

$$17 = 1101$$

$$\boxed{0xc1530000}$$