

Week 4 in-class exercise. Pointers

Exercise 1. Complete the following program by correctly implementing and calling function *swap* which swaps values in 2 integer variables:

```
#include <stdio.h>

void swap ( , ) {

}

int main() {
    int a=1, b=2;
    printf("a=%d,b=%d\n", a, b);

    swap ( , );
    printf("After swap a=%d,b=%d", a, b);
    return 0;
}
```

Exercise 2. Trace through the following program by hand to see why lying about your age doesn't last. Fix the program by changing the signature of the function to use a pointer.

```
#include <stdio.h>

void lie(int age) {
    printf("You were %d years old\n", age);
    age += 1;
    printf("You are now %d years old\n", age);
}

int main() {
    int age = 18;
    lie ( age );
    printf("But your age is still %d\n", age);
    return 0;
}
```

Exercise 3. Implement function *statistics* which takes as an input an integer array and the size of this array, and computes min, max and average of the elements in the array. How would you make the calling function to get all 3 values back?