Terminal Tip of the Week: You can type CTRL-R in the terminal to reverse search your previous commands. Try it out!

Warm Ups - macros/sizeof

What does the following code print?

```c
int a = 0;
size_t a_size = sizeof(a++);
printf("size: %zu, a: %d\n", a_size, a);
```

Why does the code print that? Is the sizeof operator actually being evaluated?

Is something wrong with the following snippet?

```c
#define swap(a, b) temp = a; \n    a = b; \n    b = temp;

void selection_sort(int* a, size_t len) {
    size_t temp = len - 1;
    for (size_t i = 0; i < temp; ++i) {
        size_t min_index = i;
        for (size_t j = i+1; j < len; ++i) {
            if(a[j] < a[i]) min_index = j;
        }
        if (i != min_index)
            swap(a[i], a[min_index]);
    }
}
```

Give an English description for why the code doesn’t work. What should you look out for with preprocessors? (That’s why we try to use them sparingly.)
Compound Inequality/Assignment

When does the following code not work?

```c
void positive_under_ten(int input) {
    if (0 < input < 10) {
        printf("Input is in the range\n");
    } else {
        printf("Input is not in the range\n");
    }
}
```

List out the order of operations when input = -1 and 3:

Here's an incorrect example for input = -1:

1. The if is evaluated. The condition 0 < input < 10 is evaluated and returns false.
2. The if statement is false, so it'll jump to the else, and print “Input is not in the range”.

Switch-Cases

What is wrong with the following switch-case code?

```c
int print_error(int err_num) {
    switch(err_num) {
    case ENOENT:
        printf("No such file or entry\n");
    case EINTR:
        printf("Interrupted\n");
    default:
        break;
    }
}
```

What does break actually mean? When is it used?