7.1 Description

It was the Winter of 2007 and I had my first programming interview over the phone. The phone rang, and questions related to pointers ensued! One of the following was how to swap a data structure.

Our objectives are the following:

- You will write a generic function that will swap the values stored in two variables passed in as parameters.
- Start by seeing if you can swap two integers, that is, after the function call, the values will be appropriately swapped.
- The function should also be templated, that way we can use it with any data type.
- Note: You may not use any global variables.

7.2 Files

You may use the following code to help get you started.

```cpp
#include <iostream>

// Your swap function here
```
//?? What was the template syntax again?

```cpp
void swap( ??????? ){

?????????

}

int main() {
    int a = 7;
    int b = 5;
    std::cout << "a before: " << a << std::endl;
    std::cout << "b before: " << b << std::endl;
    swap<??????>(a, b);
    std::cout << "a after: " << a << std::endl;
    std::cout << "b after: " << b << std::endl;
    return 0;
}
```

Listing 7.1: Starter Code

### 7.3 Refresher

Refer to some of the examples in the slides from the lecture on pointers lectures. It will be useful to draw pictures before coding in this lab.

### 7.4 Submission

```bash
   provide compl1 lab7 lab7.cpp README
```

Listing 7.2: Submit Assignment

### 7.5 Going Further

Did you enjoy this lab? Want to try out some additional commands to go further?

- Build a struct and try passing it around!