

# Chapter 5 Notes

October 30, 2017

## Introduction

So it has been a very difficult chapter with lots of new things. It's still not easy to see the right way to program. During this chapter many decisions have been made that made the code less efficient, more buggy, less maintainable and more difficult to read.

## Pointers

We have used a lot of pointers here. The most important new thing were the pointers to functions. Using them it is now possible to pass a function as argument. Without that we would have to modify the function in order to decide the right way to do. And instead of passing a function we would pass a constant that represents the action to perform.

The way pointers to functions are declared is so complicated that it is not really explained in the book and instead is an exercise for the reader so that he do no fall asleep.

One interesting thing is that they say that it is recommended to use `NULL` for pointers instead of `0` even though we have to import it from a separate library.

## Arrays

Now we there is a better way to understand arrays. If they have a specified size, they are just values of the address of the first item. That's why arrays don't have an address, just like a value `1` passed to a function doesn't have an address.

Arrays can contain different kind of values and can be of differenr sizes.

When arrays are multidimensional, it means that each of their elements is an array. So just like arrays are numbers, subarrays of multidimensional arrays are also numbers

## Command line arguments

C programs can have several command line arguments. They are stored in the second parameter of the main function.

## Programs

For this chapter I made two separate programs:

- A sort application, that depending of the command line arguments sorts the input from `stdin`,
- A declaration reader, that reads declarations of C variables and makes an attempt at understanding them.

## Conclusion

So that is what this chapter was. Further there will be even more real and interesting things according to the promises made in this chapter.