

TDT4200 - Problem Set 1A - Nicolai H. Brand

1

Pros:

- Makes the notation look more similar to math notation. Might make it easier to read.
- Less typing
- Encapsulates the idea of a "ghost pointer" meaning we don't have to think about it

Cons:

- From a programmers point of view we have made it less clear what is going on.
- If we are not careful, we may end up accessing an invalid access. Since the array access is "abstracted" away, this may not be immediately obvious.

2

From a math course I have taken earlier I have heard about Dirichlet boundary conditions.

3

The buffers are all NULL (pointers to 0x00). When we later try to access the buffers, for example at offset 0, 1 and 2, we will try to access the memory at 0x00, 0x01, 0x02. Since we have not allocated this particular segment of memory we get a segmentation fault. Technically I believe this is undefined behaviour.

4

The first is a pointer to a constant float, the second is a constant pointer to a float. So for the first example, the value at a cannot change, but the pointer can point to another memory address. For the second, the pointer cannot point anywhere else, but the value it points to can change.