COMP20005 Week 7

Revise

- Array
- Pointer arithmetic

Discuss

- Exercise 7.1, 7.2 & 7.3.
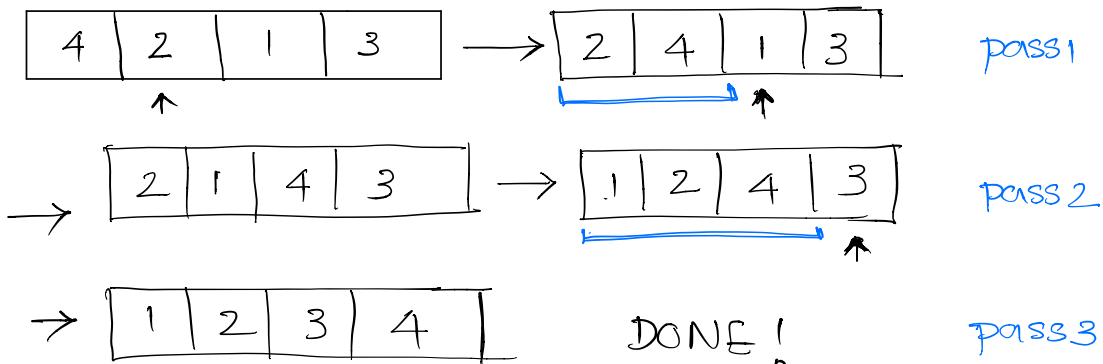
Array

int A[5];

$*(A+0)$ $*(A+1)$ $*(A+2)$ $*(A+4)$

A[0]	A[1]	A[2]	A[3]	A[4]

$A \equiv \& A[0]$

A[0]

4005
4004
4003
4002
4001
4000
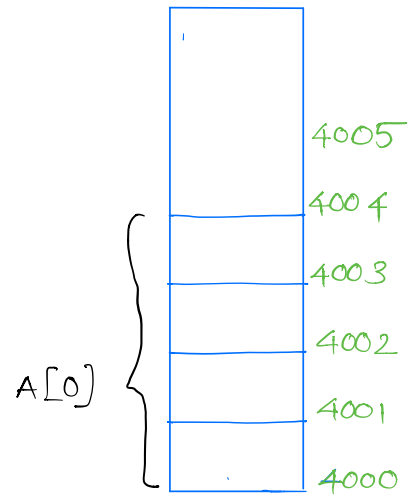
$A+1 \equiv A + 1 * sizeof(int)$ A

*const. pointer

Insertion Sort

| 4 | 2 | 1 | 3 | → | 2 | 4 | 1 | 3 | pass 1

| 2 | 1 | 4 | 3 | → | 1 | 2 | 4 | 3 | pass 2

| 1 | 2 | 3 | 4 | DONE! pass 3

reduce_int_array (int A[ ], int n)

newn

| 1 | 1 | 2 | 3 | 3 |

↑ i

→

newn

| 1 | 1 | 2 | 3 | 3 |

↑ i

→

newn

| 1 | 2 | 2 | 3 | 3 |

↑ i

→

newn

| 1 | 2 | 3 | 3 | 3 |

‿‿‿‿‿ unique   ↑ i