

POINTERS

Pointers store address of variables or a memory location.

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|----|----|----|----|----|---|---|----|---|---|
| 0 | 7 | 1 | 2 | 2 | 4 | C | 3 | 8 | |
| 4 | 11 | 5 | 10 | 6 | 3 | | 7 | 5 | B |
| 8 | 10 | 9 | 8 | 10 | 2 | x | 11 | 6 | |
| 12 | 1 | 13 | 0 | 14 | 0 | | 15 | 0 | |

Int x

x = 2;

By calling just x - we mean the value stored in this location.

&x - to tell us the address of x.

(B) But what if we do not have a named int, how will we call whats in the cell?

- Basically it is the cell or value located @ address 7
- In C : *7;

(C) What would printf("%d", *x) give you?

- It is the contents at address x and since x is 2, we would get 4 from the above statement.

WHY USE POINTERS

- (1) Function calls take up a lot of memory and therefore are expensive. It is inefficient to copy the array data in terms of both memory and time; and most of the times, when we pass an array our intention is to just tell the array we interested in, not to create a copy of the array. Therefore by using pointers (/indirect referencing) it saves memory.
- (2) Ft_swap (messing around with variables in main).