

comp1511 week 07

admin

- congrats on finishing **assignment 1!**

agenda for today

- pointers
- struct pointers
- eof loops

pointers

pointers

what are pointers?

how do we declare and initialise pointers?

what is dereferencing?

how do we print the address of a variable?

pointers example

Fill in the values of each variable in the below visual at each point in the code execution.

Address	Variable
0xFF80	Type: ??? Name: ??? Value: <input type="text" value="value"/>
0xFF84	Type: int Name: n Value: <input type="text" value="value"/>
0xFF88	Type: int * Name: p Value: <input type="text" value="value"/>
0xFF8C	Type: int * Name: q Value: <input type="text" value="value"/>
0xFF90	Type: ??? Name: ??? Value: <input type="text" value="value"/>

01: int n = 42;

02: int *p;

03: int *q;

04: p = &n;

05: *p = 5;

06: *q = 17;

07: q = p;

08: *q = 8;

Next Instruction

Note: Address lengths have been reduced for brevity.

<https://cgi.cse.unsw.edu.au/~cs1511/22T3/tut/07/questions>

struct pointers

what's wrong with
this code?

```
struct person {  
    char character_name[100];  
    int num;  
};  
  
// Swaps the numbers of each struct  
void swap_numbers(struct person member1, struct person member2) {  
    int temp_num = member1.num;  
  
    member1.num = member2.num;  
    member2.num = temp_num;  
}
```

EOF loops

```
#include <stdio.h>

#define MAX_LETTERS 100

int main (void) {

    char my_var;
    while (scanf(" %c", &my_var) == 1) {
        printf("Input: %c\n", my_var);
    }

    return 0;
}
```


EOF loops

how can we read input line by line until EOF?

any questions?