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# Week 7

Pointers

Help Sessions!

How was Assignment 1?

Check in week



#### Pointers



#### Pointers

#### How do we:

- Initialise a variable
- Initialise a pointer
- Change the value of the variable
- Print the value of the variable



#### Pointers

#### Instructions

1. int $n = 42$
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2. int \*p;

3. int \*q;

4. p = &n;

5. \*p = 5;

6. \*q = 17;

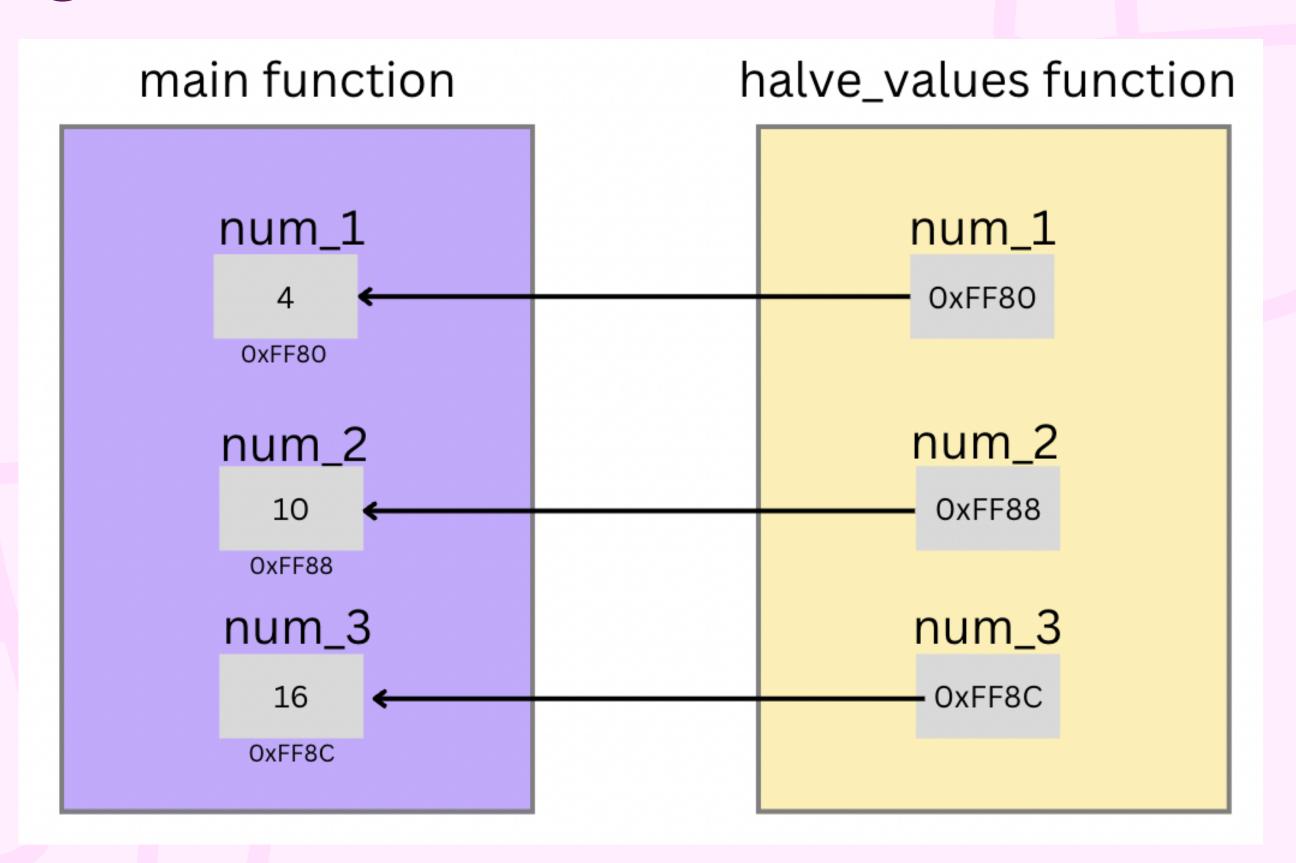
7. q = p;

8. \*q = 8;

Address	Variable	
0xFF80	Type: ??? Name: ??? Value: value	
0xFF84	Type: int  Name: n  Value: value	
0xFF88	Type: int * Name: p Value: value	
0xFF8C	Type: int * Name: q Value: value	
0xFF90	Type: ??? Name: ??? Value: value	

### Coding with Functions and Pointers

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#### **Struct Pointers**

# EOF Loops

```
// Change this program so it reads in
// input line by line
#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;
```

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## Command Line Arguments

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./program good morning everyone!
int main(int argc, char \*argv[])

	0	1	2	3	4	5	6	7	8	9
0	р	r	0	g	r	a	m	\0		
1	g	0	0	d	\0					
2	m	0	r	n	i	n	g	\0		
3	е	v	е	r	У	0	n	е	!	\0

### Lab Time!